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The editor of the 2026 Journal of the Speech and Theatre Association of Missouri is presently accepting manuscripts. Scholarly articles, book and resource reviews, and teaching resources are all encouraged. Scholarship from all disciplines encompassing Communication, Speech, Performance, and Theatre will be considered. These areas include, but are not limited to: Speech, Debate, Theatre Instruction and Performance, Communication Theory, Interpersonal Communication, Intercultural Communication, Health Communication, Rhetoric, Persuasion, Organizational Communication, Political Communication, Family Communications, Communication Ethics, Listening, Mediation, Public Relations, Film, Mass Media Theory, Mediated Communication, Sports Communication, and New Communication Technologies. All methodologies are encouraged.

Updated submission information for volume 57 will be available in October of 2026 at the website for the Speech and Theatre Association of Missouri – **www.speechandtheatremo.org**

All submissions should be in Microsoft Word and emailed to the editor. References should follow the latest edition of the American Psychological Association style manual. A separate page with abstract, author affiliation and bio(s) should be included. All submissions should be received by February 15, 2027, to ensure full consideration for publication.

Other inquiries can be e-mailed or sent to the editor:

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Inoculation Theory, Gender, and Image Attacks
Josh Compton

Abstract

Inoculation theory is arguably the theory of resistance to influence. Yet despite more than 60 years of research, there is still much to learn about how gender matters in the inoculation process. This paper surveys research on gender and inoculation theory, with particular attention to image attacks. The evidence is more complicated than clear. There is no conclusive evidence that gender is a boundary condition: inoculation works for both men and women, and when differences do appear, they are more likely to involve source perceptions and other components of resistance than resistance overall. Research on image attacks is especially limited, focusing largely on male political candidates and binary male/female classifications. Future work should treat gender as more than a demographic variable and examine gender identity, gendered social expectations, and gender-based attacks as part of the inoculation process. Gender may shape the receiver, the source, the target, the attack, or the image under threat. Inoculation scholarship has some catching up to do.

One of the first studies of inoculation theory included more women than men, in a 7:3 ratio (McGuire, 1961). Yet, consistent with the times, gender was not factored into the analysis. Gender wasn't mentioned in the paper beyond a brief nod in the "Design and Subjects" subsection. Even though women outnumbered men in the sample, the only gendered pronouns used throughout the study were *he* and *him*. So, women have always been part of inoculation theory's story, only more footnote than title.

Fortunately, inoculation studies began to include gender more extensively just a few years later, with research by Stone (1969) and Dean and colleagues (1971). However, it took decades from the emergence of inoculation theory in the literature for gender to appear in a title, as in Pfau and Burgoon's (1990) "Inoculation in Political Campaigns and Gender." This study found some support for gender differences in the effectiveness of inoculation, specifically that men were

more resistant than women on some dimensions of source credibility after inoculation.

Clearly, much more remains to be learned about gender and inoculation theory. The goal of this paper, then, is to provide an overview of inoculation theory as a resistance-to-influence theory and strategy, to survey key findings on gender and inoculation theory, and to propose new directions for research.

Inoculation Theory

Inoculation theory is arguably *the* theory of resistance to influence. No other theory of resistance has been studied or applied more (Compton, 2025; see Ivanov et al., 2026). If we consider the precursors to inoculation, like how it echoes ancient advice about “disproving and tearing [an opponent’s arguments] to pieces before [they] can make them” (Aristotle, 1991, p. 245), we build a case for the longevity of inoculation as a resistance paradigm that goes back even farther (Compton, 2005).

The idea of inoculation theory is deceptively simple: just as one can be made more resistant to health challenges (e.g., viruses) via exposure to weakened forms of these challenges (e.g., an attenuated virus used in a medical vaccine) through medical inoculation, one can also be made more resistant to persuasive challenges (e.g., political advertisements) via exposure to weakened forms of these challenges (e.g., a two-sided refutational message) through communication-based inoculation (McGuire, 1964). Threat is the analogical bridge. The immune system’s response to the attenuated antigen is to shore up its defenses, such as by producing antibodies. The cognitive and affective systems’ response to attenuated persuasive influence is to shore up their defenses, such as counterarguments and anger. In both cases—medical inoculation and persuasion inoculation—something motivates the production of these defenses, and in inoculation theory, that something is threat (see McGuire, 1964; Compton, 2021, 2026). In inoculation theory, threat is the recognition that a position is vulnerable—not threat as a physical thing (a risk, a danger) but threat as a response to an intervention (Compton, 2021, 2026). In this way, threat functions as the motivational force behind inoculation-conferred resistance to influence (Banas & Richards, 2017).

Once these defense mechanisms are triggered, resistance is strengthened, whether the context is a health issue, such as kids facing peer pressure to smoke cigarettes (e.g., Pfau et al., 1992; see Parker & Geegan, 2026, for a review), or a political issue, such as voters watching a political debate (e.g., An & Pfau, 2004; see Lin et al., 2026, for a review), or any other context. With an inoculation-based intervention against persuasion, one need not know every counterargument an opponent might raise; raising and refuting a few counterarguments, for example, can confer resistance to many counterarguments, including those not even mentioned in the inoculation intervention message (McGuire, 1964), a finding that Banas and Rains's (2010) meta-analysis confirmed. To date, there's no strong evidence that issue or context forms a boundary condition for inoculation's efficacy.

Gender and Inoculation Theory

In a 1995 publication, Burgoon and colleagues noted that there had been only a "few inoculation laboratory studies that incorporated gender into their designs" (p. 492). Thirty years later, we can echo a similar refrain, albeit with a caveat. There are still only a few studies that examine gender and inoculation specifically. However, more studies have treated gender as a covariate in modeling and multivariate analyses. Collectively, these studies have yielded important insights.

We have some evidence that gender matters for inoculation-based interventions against persuasion. For example, Pfau and Burgoon (1990) found "strong support for a gender effect based on receiver ratings of the source credibility of the candidate supported in the attack message" (p. 12). However, as Compton and Ivanov (2013) highlighted, they also found "no differences in terms of attitude toward the candidate supported in the attack message or attitude toward the position supported in the attack message" (p. 259), and that "*it may require more specific information* to alter women's than men's judgments about candidate credibility" (Pfau & Burgoon, 1990, p. 14; emphasis in original). Pfau and Kenski (1990) found that both women and men benefited from inoculation, although men were more resistant after the attack. Inoculation-same treatments were more effective among women, whereas inoculation-different treatments were more effective among men. Does the specific issue matter? Maybe, but the evidence is very limited. Pfau and colleagues (2006) found that women could be

inoculated against slippage in their support for U.S. involvement in war after exposure to photographs of war casualties, but not men. Li and colleagues (2024) found that inoculation messages could limit the effects of negative product reviews on product attitudes, purchase-abandonment intentions, and trust in the seller, with clearer effects among male than female consumers.

But we also have some evidence from studies that examine gender directly and from studies that include it as a covariate that gender might not matter, at least regarding inoculation's effect on overall resistance to influence across contexts and issues. Stone (1969) was among the first to find no discernible difference in resistance, although women lowered their ratings of the attack message source's credibility more than men did after exposure to a source-based inoculation message. Many studies have included gender in their analyses without providing evidence that it is a consistent boundary condition for inoculation, including research on anti-smoking efforts (Banerjee & Greene, 2006; Pfau & van Bockern, 1994; Pfau et al., 1992), computer advertising (Easley et al., 1995), crisis communication (Wan & Pfau, 2004; Wigley & Pfau, 2010), anti-binge drinking interventions (Cornelis et al., 2014), positive attitudes toward certain careers (e.g., Information Systems; Fagnot & Stanton, 2015), responses to long baggage-claim waits (Mikolon et al., 2015), reducing and reframing public speaking anxiety (Jackson et al., 2017), and online games designed to mitigate misinformation (Basol et al., 2021; Roozenbeek et al., 2020).

But what about specific components of inoculation and resistance to influence? Forewarnings, for example, might affect men and women differently in persuasive situations. Dean and colleagues (1971) found that forewarnings can nudge opinion change in women but slow it in men. On the other hand, in another study of forewarnings (and counterarguing), Hass and Linder (1972) did not find gender-based differences. In Amazeen and Bucy's (2019) study of procedural news knowledge and digital disinformation, women reported greater perceived threat and produced more counterarguments than men.

As noted earlier, studies reporting gender-based differences in inoculation theory tend to find subtle rather than overall effects on resistance (e.g., Pfau & Burgoon, 1990; Pfau & Kenski, 1990; cf. Pfau et al., 2006). Women might be more affected, as measured by perceptions of source credibility (Burgoon et al., 1995; Pfau & Burgoon, 1990), whereas men might be more resistant post-inoculation in some political

campaign contexts (Pfau & Kenski, 1990). Overall, “the few inoculation studies that included gender in their designs suggest subtle differences” (Compton & Pfau, 2005, p. 111).

And so, all in all, there is no conclusive evidence that gender is a boundary condition. Inoculation works for both men and women, with some evidence that women are more influenced in terms of source perceptions, but not in overall resistance. If the very limited evidence points to source perceptions as a potential area of gender-based inoculation differences, it may help to look a little closer at how inoculation theory has functioned against image attacks.

Inoculation Theory and Image Attacks

Several inoculation studies have tested its efficacy against image-based attacks, and we have substantial evidence that it can help mitigate such attacks on images (e.g., An & Pfau, 2004; see Compton, 2019, for a review). Most research on inoculation theory and image attacks comes from a political campaign context (see Lin et al., 2026, for a review of inoculation theory and political campaign strategy). Pfau and Burgoon (1988) were among the first to study inoculation as an alternative to conventional campaign strategies such as bolstering, attacking, and responding. They focused on a U.S. Senate race in South Dakota between Republican James Abdnor and Democrat Tom Daschle. Pfau and Burgoon tested both policy-based attacks and “character concerns” (p. 96), placing the study firmly in the realm of image attacks. (Gender, however, is less relevant; both candidates were men—the start of a theme we will find in this review of inoculation, politics, and image.) A strength of this study is that it examined potential voters in real time, using a field experiment rather than a laboratory experiment. Inoculation worked. Those who received an inoculation message preempting issue and character attacks were less likely to be influenced by them. Gender differences were not tested in this analysis.

But gender differences *were* assessed in Pfau and Burgoon’s (1990) study. Building on an uneven record of gender-based differences in persuasiveness across the decades, Pfau and Burgoon asked whether inoculation would vary by participant gender in a political campaign context and, if so, how. They revisited data from their earlier political campaign study (Pfau & Burgoon, 1988) with these questions in mind. They found no differences on two of the attitudinal measures: attitude

toward the candidate supported by the attack message and attitude toward the position supported by the attack message. However, when they examined the source credibility variables more closely, differences emerged on all five dimensions. They found a main effect for gender on composure and extroversion, which they interpreted as suggesting greater resistance among men than among women in this sample, and a triple interaction (inoculation, attack message, gender) on the dimensions of character, competence, and sociability. Inoculation messages that specifically addressed impending character attacks on preferred candidates worked better for women than for men; inoculation messages that did not directly address character attacks worked just as well for men as for women. For men, generic inoculation was more effective against character attacks than against issue attacks.

More than a decade later, An and Pfau (2004) tested inoculation before a televised debate in the 2002 U.S. Senate race between James Inhofe and David Walters. Using an undergraduate sample, they exposed participants to messages anticipating issue- and character-based attacks. Inoculated participants maintained more favorable attitudes toward their preferred candidate and rated that candidate more positively on competence and character. They did not test for gender differences, and, as in the political race studied by Pfau and Burgoon (1988), both candidates were men.

The body of research on gender, inoculation theory, and image attacks—at least in a political campaign context—is small, but it tells us a good deal about inoculation theory and character perceptions, and much less about gender. What we do know about gender—and this is from the Pfau and Burgoon (1990) follow-up—is more complicated than clear (Compton & Ivanov, 2013; Lin et al., 2026), with little evidence that gender moderates inoculation (Wigley & Haigh, 2026).

We have substantial evidence suggesting that gender is not a strong factor in the effectiveness of inoculation. Still, we know much less about how gender-based image attacks interact with inoculation theory. This focus, along with related areas of study, such as how the gender of the inoculation source or the gendered nature of the attack message might influence inoculation-conferred resistance, is a particularly promising direction for inoculation research. I explore some of these next.

Future Directions for Inoculation, Gender, and Image Research

In the 1960s, the assumption was that women were more persuadable, so Stone (1969) tested whether women would be more susceptible to source derogation as an immunizing strategy than men. But that is not what he found. Women rated the source of the attack message lower, but that did not translate into greater resistance to the source's arguments.

Another issue with Stone's male/female comparisons in the 1960s and with other work from around the same period is how gender was conceptualized and typically dichotomized. Stone (1969) assessed differences between male and female participants. The same is true of Dean et al. (1971), Pfau and Burgoon (1990), and other early work in this area. Future research should move beyond treating gender as a binary participant characteristic and examine gender identity, gendered social expectations, and gender-based attacks as part of the inoculation process (Wigley & Haigh, 2026).

We also need to treat gender as more than a demographic variable in inoculation research. For example, we do not yet know enough about how inoculation performs against gender-based attacks, including those grounded in gender stereotypes and sexism. Future work could consider, as Heuett and Westerman (2014) explored in another context, whether inoculation interventions can reduce negative attitudes and beliefs tied to social identity, broadening the scope of inoculation and image research beyond character assassination.

Relatedly, further work can examine the role of inoculation in supporting gender diversity and gender equality. Sims' (2016) study of value-in-diversity attitudes offers a useful starting point. Although inoculation "had no real bearing on preempting the influence of an anti-diversity attack" overall (p. 32), it did confer resistance among participants with higher involvement. Gans and Zhan's (2026) study of narrative-based inoculation and DEI training provides another useful direction, suggesting that inoculation may reduce reactance to DEI training assignments and foster more favorable attitudes toward DEI training. We also have limited evidence that inoculation interventions can protect the value of equality and related egalitarian attitudes. Bernard and colleagues (2003), for example, found that defenses of equality could protect both the target value and related self-transcendence values. They found no differences based on participant sex.

Clearly, there is much to learn about inoculation and its potential to promote diversity in the workplace and beyond. But the larger point is not only that gender deserves renewed attention in inoculation research. It is that gender should be studied as part of the persuasive environment in which resistance occurs. Gender may shape the receiver, the source, the target, the attack, or the image under threat.

Conclusions

I agree with Wigley and Haigh (2026): it's time to refocus on gender and inoculation theory, which "has mostly been abandoned in modern-day inoculation scholarship" (p. 77). Although gender representation has advanced since the days when women were included in studies but then represented only with *he* and *him* pronouns, there is still a long way to go. Gender research in general, and gender and communication in particular, has made significant strides since inoculation was introduced in the early 1960s. Inoculation scholarship still has some catching up to do.

Acknowledgment

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Josh Compton, Professor of Speech at Dartmouth College, has published more than 90 peer-reviewed studies, many exploring inoculation theory's adaptability in unexpected places. His work has examined topics as varied as nicotine vaping and conspiracy messaging, Stephen King adaptations, loyalty among struggling hockey teams, and communication about stochastic terrorism. Alongside more traditional studies in health, politics, and education, this breadth highlights inoculation's wide reach and ongoing relevance. His research has sparked dialogue with audiences from NATO officials to medievalists, and he continues to welcome collaboration, treating inoculation as an open and evolving conversation across fields.

The Effect of Superior Perceived Mentoring on Subordinate Organizational Identification and Workplace Outcomes

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Abstract

The purpose of this study was to examine whether organizational identification acts as a mediator between superiors' provision of mentoring functions and subordinates' job satisfaction and communication satisfaction with their superiors. Participants were 300 full-time employees recruited using Amazon's online labor market Mechanical Turk who completed a series of instruments about their current organizational position. Through a series of mediation analyses, it was found that the effect of subordinate perceptions of superior enactment of five career development mentoring functions and four psychosocial development mentoring functions on both subordinate job satisfaction and communication satisfaction with their superior was mediated by subordinate organizational identification. Future research should identify and address the individual differences that may play a role in mentoring and organizational identification.

Within the workplace, individuals may feel a strong sense of connection and identification with the goals and needs of their organization. Organizational members who connect and identify with their organization typically are more committed to the organization, which increases employee retention rates and promotes employee decision making that benefits the organization (Bullis & Tompkins, 1989; Cheney, 1983a; Mael & Ashworth, 1992; Scott & Stephens, 2009). Furthermore, as organizational members who identify with their organization feel connected with, and committed to, the organization, they also promote a positive external image of the organization to others (Cheney & Christensen, 2001). For these reasons, organizational identification generally is beneficial for the success of the organization, and many organizations strive to promote organizational identification among its employees.

Although many factors within an organization influence organizational members' degree of identification, the relationships and

social ties individuals make directly impact the extent to which organizational members identify with their organization (Cheney et al., 2014). One specific type of relationship that can impact organizational members' organizational identification is the superior-subordinate relationship, which is conceptualized as a relationship in which one organizational member has the formal authority to direct and evaluate another organizational member's behavior within the organization (Jablin, 1979). In a review of the research conducted on the superior-subordinate relationship to date, Sias (2009) summarized the functions of the superior-subordinate relationship for both superiors and subordinates: to exchange information, to provide feedback and appraisal, to exert power and influence, and to engage in mentoring and leadership. Mentoring relationships help socialize subordinates to their organization as well as enhance the development of their careers and provide psychosocial support (Baugh & Fagenson-Eland, 2007; Kram, 1983), which then can positively affect subordinates' organizational identification (Bullis & Bach, 1989). As such, this study examines specifically the mentoring subordinates receive from their superiors and the extent to which superior mentoring increases their organizational identification.

Investigating mentoring within the superior-subordinate relationship and subordinate organizational identification is important for extending existing organizational communication research and for practical use within the workplace. Extant research overwhelmingly demonstrates the importance of organizational identification to organizational productivity and the well-being of protégés and mentors (Kram, 1983), as well as organizational members upholding the values and goals of the organization and promoting these values and goals to others outside of the organization (Cheney & Christensen, 2001). However, much of this research examines mentoring without considering the superior as a possible mentor. This study extends extant mentoring research by suggesting that superiors who serve mentoring functions to their subordinates directly (a) influence subordinates' organizational identification and (b) improve subordinates' overall affect toward their job and superior as a result of their increased identification.

Organizational Identification

Understanding organizational identification is important for the vitality of an organization as promoting a strong positive external identity is difficult among organizations without strongly identified individuals within them (Cheney & Christensen, 2001). For individuals within the organization, organizational identification can fulfill the innate desire to create and maintain interpersonal connections with others (Baumeister & Leary, 1995) and membership in, or belonging to, a collective (Mael & Ashforth, 1992; Patchen, 1970). For most individuals, much of their working lives is spent within an organization. As such, they often rely on their employment, or their status or role within their workplace, as a form of identity (Levinson, 1965), which can result in their using attributes of the organization's identity to define themselves as organizational members (Cheney et al., 2014).

The process by which individuals establish their identity as members of an organization has been the focus of organizational research across several academic disciplines (Hall et al., 1970; O'Reilly & Chatman, 1986; Patchen, 1970). Cheney (1983a, 1983b) was the first scholar to investigate organizational identification from a communication studies perspective by conceptualizing organizational identification as the active process in which individuals define themselves based on their belongingness to an organization. Specifically, Cheney (1983a, 1983b; Cheney & Tompkins, 1987) posited that organizational identification centers on individuals' decision-making processes, such that organizational identification leads employees to consider alternatives in light of organizational interests and values when making job-related decisions. That is, those employees who highly identify with their organization consider the needs and interests of their department and organization as their own (Cheney, 1983a) and make job-related decisions based on what is best for the organization (Bullis & Tompkins, 1989). Furthermore, organizational identification among employees typically is believed to be beneficial. Highly identified individuals generally are more satisfied with their jobs and their organization (Cho et al., 2011; Myers et al., 2016; Myers & Oetzel, 2003; Scott & Stephens, 2009). These employees also report that they have assimilated into the organization and generally intend to remain within their current organization (Myers & Oetzel; Scott & Stephens). They typically perform better within their job roles, are more trusting of their

organization, engage more with their work, and, in some cases, experience lower levels of burnout (Kang, 2016; Korschun et al., 2014; Lammers et al., 2013; Myers et al.; Rapp et al., 2015).

One way in which individuals identify with their organization is through their relationships with their superiors, particularly when these superiors assume the role of mentor. Mentoring occurs when a higher-ranking organizational member (e.g., superior) provides assistance and guidance to a lower-ranking organizational member (i.e., subordinate), with the goal of providing the lower-ranking individual with career support and opportunity for professional advancement (Ragins & Cotton, 1999). Kram (1983, 1988) posited that mentors serve two functions in their relationships with a protégé: career development and psychosocial development. Career development functions are targeted toward the hierarchical or career advancement of protégés and emerge in one of five forms: sponsorship, exposure and visibility, coaching, protection, and challenging assignments. *Sponsorship* refers to mentors' public endorsement and support of protégés, *exposure and visibility* refers to assigning responsibilities that increase protégés' association with senior organizational members, *coaching* refers to providing protégés with strategies and advice for career improvement, *protection* refers to mentors guarding protégés from possible negative or adverse contact within the organization, and *challenging assignments* refers to assigning tasks that increase protégés' skills and competencies for future development.

Psychosocial development functions assist protégés' cognitive and social development by increasing their confidence—enabling them to feel more competent in the workplace—and increasing their effectiveness as organizational members. Whereas career development functions are important for career advancement and success, psychosocial functions are more personal and essential for protégés' self-worth, both within and outside of the organization, and specifically help protégés learn job tasks and gain information pertaining to formal and informal power structures within the organization (Allen et al., 1999). These psychosocial functions are role modeling, acceptance and confirmation, counseling, and friendship. *Role modeling* refers to mentors serving as an individual protégés aspire to imitate, which can include aspiring to attain a similar organizational role as the mentor or aspiring to mirror mentors' behaviors and values; *acceptance and confirmation* refers to mentors encouraging and supporting protégés as

they advance within their organization and throughout their careers; *counseling* refers to providing opportunities for protégés to discuss and resolve personal and professional problems that negatively affect them in the workplace; and *friendship* refers to interacting informally and fostering mutual liking between mentors and protégés.

The fulfillment of career development and psychosocial development functions by mentors is associated with a positive effect on protégés. In addition to increasing protégés' satisfaction with the mentor-protégé relationship (Waldeck et al., 1997), the benefits of the provision of both mentoring functions extend outside of the relationship. For example, protégés with mentors who fulfill career development and psychosocial development functions experience positive job outcomes, such as increased promotion rate, improved compensation, growth in salary, and increased job and career satisfaction (Allen et al., 2004; Scandura, 1992). Both career development and psychosocial development functions also enable the integration of workers into the organizational culture (Allen et al., 1999), alleviate protégés' job-related stress (Sosik & Godshalk, 2000), and foster perceptions that the organization has protégés' best interests and needs in mind (Hu et al., 2014).

Purpose of the Study

The purpose of this study is to examine whether organizational identification acts as a mediator between superiors' provision of mentoring functions and subordinates' job satisfaction [i.e., subordinates' general affect for, or attitude toward, either their work or a specific aspect of their job (Brayfield & Rothe, 1951; Wheelless et al., 1983)] and communication satisfaction with their superiors [i.e., an individual's overall affective response to upward and downward communication with a superior (Downs & Hazen, 1977; Hecht, 1978)]. Because mentoring functions are associated positively with a host of workplace outcomes, including subordinate job satisfaction and communication satisfaction with superiors (Aryee & Chay, 1994; Chao et al., 1992; Madlock & Kennedy-Lightsey, 2010), it is possible that this association is mediated by subordinate organizational identification; that is, subordinates who are mentored by their superiors subsequently have their need to belong and more strongly identify with their organization fulfilled by the superiors. Their increased identification, in turn, should promote a more positive

workplace experience, which will be evidenced by increased job satisfaction and communication satisfaction with their superiors (see Figure 1). To examine this idea, the following hypothesis is proposed:

H: The effect of subordinate perceptions of superiors' enactment of (a) the five career development mentoring functions (i.e., sponsorship, exposure and visibility, coaching, protection, and challenging assignments) and (b) the four psychosocial mentoring functions (i.e., role modeling, acceptance and confirmation, counseling, and friendship) on subordinate (a) job satisfaction and (b) communication satisfaction with their superior is mediated by subordinates' organizational identification.

Method

Participants

Participants were 300 (179 male, 121 female) full-time employees between the ages of 20 and 72 years ($M = 36.43$, $SD = 10.54$). One hundred and sixty-one participants ($n = 161$) reported their ethnicity as white/Caucasian, 104 participants reported their ethnicity as Asian/Asian American, 17 participants reported their ethnicity as Black/African American, 13 participants reported their ethnicity as Hispanic, 4 participants reported their ethnicity as Native American, and 1 participant failed to report his or her ethnicity. The majority of participants ($n = 212$) worked in the United States.

On average, these participants had 15 years ($M = 15.20$, $SD = 10.90$, range = 1–56 years) of work experience across a variety of industries, had worked within their organization for six years ($M = 6.41$, $SD = 5.02$, range = 6 months–27 years), and had worked in their current position for almost five years ($M = 4.95$, $SD = 3.75$, range = 6 months–22 years). Using Kassing's (2000a, 2000b) classification of management levels, 7 participants identified their current organizational position as top management, 128 participants identified their current organizational position as management, and 162 participants identified their current organizational position as nonmanagement. Three participants did not specify their level of management. Of the 300 participants, 94 (31.3%) reported that they telecommute to their workplace.

Participants reported working for 185 male and 115 female supervisors. The majority of supervisors ($n = 172$) was identified as White/Caucasian, with 89 supervisors identified as Asian/Asian American, 16 supervisors identified as Hispanic, 14 supervisors identified as Black/African American, 5 supervisors identified as Native American, and 3 supervisors identified as Middle Eastern. (One participant did not specify his or her supervisor's ethnicity.) On average, participants and their supervisors had worked together for four years ($M = 4.12$, $SD = 3.02$; range = 4 months–18 years).

Procedures and Instrumentation

Upon receiving Institutional Review Board approval, data were collected using Amazon's online labor market, Mechanical Turk (MTurk). Due to the length of the questionnaire used in this study, participants were compensated 50 cents to complete the questionnaire. This rate is a suggested compensation rate for lengthy surveys, as it provides enough monetary incentive for workers to complete the survey (Buhrmester et al., 2011).

Participants first were presented with an advertisement for the study on MTurk. Following the procedures utilized in prior organizational communication studies to be included in the study, individuals had to be organizational workers over the age of 18 who had a direct supervisor and who were not currently enrolled as a college student on either a part- or full-time basis (Myers et al., 1999; Myers & Johnson, 2004; Sollitto & Myers, 2015). Individuals who met this inclusion criteria and who agreed to participate were directed to a cover letter explaining the nature of the study. They then were directed to a Qualtrics online questionnaire that included the 12-item Shortened Organizational Identification Questionnaire (Miller et al., 2000); the sponsorship, exposure, coaching, protection, challenging assignments, role modeling, acceptance, counseling, and friendship subscales of the Mentor Role Instrument (27 items; Ragins & McFarlin, 1990); the 8-item Abridged Job in General Scale (Russell et al., 2004); and the 19-item Interpersonal Communication Satisfaction Inventory (Hecht, 1978). All items on the questionnaire were measured using a 7-point Likert scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). Cronbach reliability coefficients ranged from .86 to .98 for the measures used in this study (see Table 1).

Participants then reported demographic information previously assessed in organizational communication research (Kassing, 2000a, 2000b), including their sex, age, ethnicity, years of work experience, length of employment at their current organization, the length of employment in their current position, their level of management, and whether they telecommute to work. Participants also identified the industry within which they work and the country in which their organization was located as well as their direct supervisor's demographics (i.e., sex, age, and ethnicity) and the length of their work relationship with their superior.

Data Analysis

To address the hypothesis, two series of simple mediation models using Ordinary Least Squares path analysis were conducted. Model 4 of Hayes's (2013) PROCESS macro for SPSS with a 95% percentile bootstrapped confidence interval for 10,000 bootstrap estimates determined evidence of an indirect effect; a confidence interval completely excluding 0 indicated evidence of an indirect effect of mentoring functions on subordinate outcomes through the effect of mentoring on organizational identification. Path coefficients represented the estimate of the effect of mentoring functions on organizational identification (a), the effect of organizational identification on subordinate outcomes controlling for mentoring functions (b), and the effect of mentoring functions on subordinate outcomes controlling for organizational identification (c'). The total effect of mentoring functions on subordinate outcomes (c) indicated the extent to which subordinate outcomes were impacted by a one unit change in mentoring functions, and the indirect effect (ab) and the completely standardized indirect effect (ab_{cs}) indicated the extent to which subordinate outcomes were impacted by changes in mentoring functions through organizational identification.

Results

The hypothesis predicted that the effect of subordinate perceptions of superiors' enactment of (a) the five career development mentoring functions (i.e., sponsorship, exposure and visibility, coaching,

protection, and challenging assignments) and (b) the four psychosocial mentoring functions (i.e., role modeling, acceptance and confirmation, counseling, and friendship) on subordinate (a) job satisfaction and (b) communication satisfaction with their superior would be mediated by subordinates' organizational identification. Controlling for length of time working with their current supervisor, telecommuter status, and country in which their organization is located, this hypothesis was supported.

Job satisfaction

Nine simple mediation model analyses were conducted, with each analysis testing the indirect effect of the mentoring function on job satisfaction through organizational identification. For the indirect effect of the *sponsorship career development mentoring function* on job satisfaction through organizational identification, the 95% bias-corrected bootstrap confidence interval provided evidence of mediation as it was entirely above zero [.521, .731], with an indirect effect of $ab = .624$ and a completely standardized indirect effect of $ab_{cs} = .667$, 95% CI [.579, .757]. The direct effect of the sponsorship career development mentoring function on job satisfaction was not significant ($c' = .022$, $p = .557$) and the total effect of the sponsorship career development mentoring function on job satisfaction was .646 ($p < .001$).

For the indirect effect of the *exposure and visibility career development mentoring function* on job satisfaction through organizational identification, the 95% bias-corrected bootstrap confidence interval provided evidence of mediation as it was entirely above zero [.517, .726], with an indirect effect of $ab = .620$ and a completely standardized indirect effect of $ab_{cs} = .704$, 95% CI [.606, .804]. The direct effect of the exposure and visibility career development mentoring function on job satisfaction was not significant ($c' = -.015$, $p = .685$) and the total effect of the exposure and visibility career development mentoring function on job satisfaction was .605 ($p < .001$).

For the indirect effect of the *coaching career development mentoring function* on job satisfaction through organizational identification, the 95% bias-corrected bootstrap confidence interval provided evidence of mediation as it was entirely above zero [.485, .678], with an indirect effect of $ab = .581$ and a completely standardized indirect effect of $ab_{cs} = .644$, 95% CI [.559, .728]. The direct effect of

the coaching career development mentoring function on job satisfaction was not significant ($c' = .012, p = .721$) and the total effect of the coaching career development mentoring function on job satisfaction was .593 ($p < .001$).

For the indirect effect of the *protection career development mentoring function* on job satisfaction through organizational identification, the 95% bias-corrected bootstrap confidence interval provided evidence of mediation as it was entirely above zero [.453, .655], with an indirect effect of $ab = .554$ and a completely standardized indirect effect of $ab_{cs} = .589$, 95% CI [.493, .680]. The direct effect of the protection career development mentoring function on job satisfaction was not significant ($c' = -.053, p = .100$) and the total effect of the protection career development mentoring function on job satisfaction was .501 ($p < .001$).

For the indirect effect of the *challenging assignments career development mentoring function* on job satisfaction through organizational identification, the 95% bias-corrected bootstrap confidence interval provided evidence of mediation as it was entirely above zero [.473, .687], with an indirect effect of $ab = .579$ and a completely standardized indirect effect of $ab_{cs} = .605$, 95% CI [.514, .694]. The direct effect of the challenging assignments career development mentoring function on job satisfaction was not significant ($c' = .064, p = .080$) and the total effect of the challenging assignments career development mentoring function on job satisfaction was .643 ($p < .001$).

For the indirect effect of the *role modeling psychosocial mentoring function* on job satisfaction through organizational identification, the 95% bias-corrected bootstrap confidence interval provided evidence of mediation as it was entirely above zero [.468, .656], with an indirect effect of $ab = .560$ and a completely standardized indirect effect of $ab_{cs} = .689$, 95% CI [.599, .782]. The direct effect of the role modeling psychosocial mentoring function on job satisfaction was not significant ($c' = .003, p = .921$) and the total effect of the role modeling psychosocial mentoring function on job satisfaction was .564 ($p < .001$).

For the indirect effect of the *acceptance and confirmation psychosocial mentoring function* on job satisfaction through organizational identification, the 95% bias-corrected bootstrap

confidence interval provided evidence of mediation as it was entirely above zero [.595, .816], with an indirect effect of $ab = .701$ and a completely standardized indirect effect of $ab_{cs} = .633$, 95% CI [.550, .720]. The direct effect of the acceptance and confirmation psychosocial mentoring function on job satisfaction was not significant ($c' = .023$, $p = .589$) and the total effect of the acceptance and confirmation psychosocial career development mentoring function on job satisfaction was .724 ($p < .001$).

For the indirect effect of the *counseling psychosocial mentoring function* on job satisfaction through organizational identification, the 95% bias-corrected bootstrap confidence interval provided evidence of mediation as it was entirely above zero [.454, .644], with an indirect effect of $ab = .547$ and a completely standardized indirect effect of $ab_{cs} = .662$, 95% CI [.572, .758]. The direct effect of the counseling psychosocial mentoring function on job satisfaction was not significant ($c' = .009$, $p = .777$) and the total effect of the counseling psychosocial mentoring function on job satisfaction was .556 ($p < .001$).

For the indirect effect of the *friendship psychosocial mentoring function* on job satisfaction through organizational identification, the 95% bias-corrected bootstrap confidence interval provided evidence of mediation as it was entirely above zero [.506, .703], with an indirect effect of $ab = .601$ and a completely standardized indirect effect of $ab_{cs} = .661$, 95% CI [.569, .757]. The direct effect of the friendship psychosocial mentoring function on job satisfaction was not significant ($c' = .002$, $p = .957$) and the total effect of the friendship psychosocial mentoring function on job satisfaction was .603 ($p < .001$).

Communication satisfaction

Nine simple mediation model analyses were conducted, with each analysis testing the indirect effect of the mentoring function on communication satisfaction through organizational identification. For the indirect effect of the *sponsorship career development mentoring function* on communication satisfaction through organizational identification, the 95% bias-corrected bootstrap confidence interval provided evidence of mediation as it was entirely above zero [.142, .316], with an indirect effect of $ab = .223$ and a completely standardized indirect effect of $ab_{cs} = .299$, 95% CI [.195, .414]. The direct effect of the sponsorship career

development mentoring function on communication satisfaction was significant ($c' = .339, p < .001$) and the total effect of the sponsorship career development mentoring function on communication satisfaction was $.562 (p < .001)$.

For the indirect effect of the *exposure and visibility career development mentoring function* on communication satisfaction through organizational identification, the 95% bias-corrected bootstrap confidence interval provided evidence of mediation as it was entirely above zero [.150, .314], with an indirect effect of $ab = .225$ and a completely standardized indirect effect of $ab_{cs} = .314$, 95% CI [.214, .428]. The direct effect of the exposure and visibility career development mentoring function on communication satisfaction was significant ($c' = .316, p < .001$) and the total effect of the exposure and visibility career development mentoring function on communication satisfaction was $.542 (p < .001)$.

For the indirect effect of the *coaching career development mentoring function* on communication satisfaction through organizational identification, the 95% bias-corrected bootstrap confidence interval provided evidence of mediation as it was entirely above zero [.154, .318], with an indirect effect of $ab = .230$ and a completely standardized indirect effect of $ab_{cs} = .318$, 95% CI [.220, .429]. The direct effect of the coaching career development mentoring function on communication satisfaction was significant ($c' = .302, p < .001$) and the total effect of the coaching career development mentoring function on communication satisfaction was $.531 (p < .001)$.

For the indirect effect of the *protection career development mentoring function* on communication satisfaction through organizational identification, the 95% bias-corrected bootstrap confidence interval provided evidence of mediation as it was entirely above zero [.205, .355], with an indirect effect of $ab = .276$ and a completely standardized indirect effect of $ab_{cs} = .371$, 95% CI [.284, .465]. The direct effect of the protection career development mentoring function on communication satisfaction was significant ($c' = .181, p < .001$) and the total effect of the protection career development mentoring function on communication satisfaction was $.457 (p < .001)$.

For the indirect effect of the *challenging assignments career development mentoring function* on communication satisfaction, the 95% bias-corrected bootstrap confidence interval provided evidence of

mediation as it was entirely above zero [.173, .360], with an indirect effect of $ab = .260$ and a completely standardized indirect effect of $ab_{cs} = .339$, 95% CI [.236, .455]. The direct effect of the challenging assignments career development mentoring function on communication satisfaction was significant ($c' = .282, p < .001$) and the total effect of the challenging assignments career development mentoring function on communication satisfaction was .542 ($p < .001$).

For the indirect effect of the *role modeling psychosocial mentoring function* on communication satisfaction, the 95% bias-corrected bootstrap confidence interval provided evidence of mediation as it was entirely above zero [.101, .233], with an indirect effect of $ab = .162$ and a completely standardized indirect effect of $ab_{cs} = .251$, 95% CI [.160, .353]. The direct effect of the role modeling psychosocial mentoring function on communication satisfaction was significant ($c' = .347, p < .001$) and the total effect of the role modeling psychosocial mentoring function on communication satisfaction was .509 ($p < .001$).

For the indirect effect of the *acceptance and confirmation psychosocial mentoring function* on communication satisfaction through organizational identification, the 95% bias-corrected bootstrap confidence interval provided evidence of mediation as it was entirely above zero [.175, .322], with an indirect effect of $ab = .245$ and a completely standardized indirect effect of $ab_{cs} = .278$, 95% CI [.202, .360]. The direct effect of the acceptance and confirmation psychosocial mentoring function on communication satisfaction was significant ($c' = .422, p < .001$) and the total effect of the acceptance and confirmation psychosocial mentoring function on communication satisfaction was .667 ($p < .001$).

For the indirect effect of the *counseling psychosocial mentoring function* on communication satisfaction through organizational identification, the 95% bias-corrected bootstrap confidence interval provided evidence of mediation as it was entirely above zero [.124, .260], with an indirect effect of $ab = .185$ and a completely standardized indirect effect of $ab_{cs} = .276$, 95% CI [.189, .377]. The direct effect of the counseling psychosocial mentoring function on communication satisfaction was significant ($c' = .328, p < .001$) and the total effect of the counseling psychosocial mentoring function on communication satisfaction was .513 ($p < .001$).

For the indirect effect of the *friendship psychosocial mentoring function* on communication satisfaction through organizational identification, the 95% bias-corrected bootstrap confidence interval provided evidence of mediation as it was entirely above zero [.106, .221], with an indirect effect of $ab = .159$ and a completely standardized indirect effect of $ab_{cs} = .219$, 95% CI [.148, .302]. The direct effect of the friendship psychosocial mentoring function on communication satisfaction was significant ($c' = .432, p < .001$) and the total effect of the friendship psychosocial mentoring function on communication satisfaction was .591 ($p < .001$).

Discussion

The purpose of this study was to examine whether organizational identification acts as a mediator between superiors' provision of mentoring functions and subordinates' job satisfaction and communication satisfaction with their superiors. The results of a series of simple mediation model analyses situating each of the five career development mentoring functions and each of the four psychosocial mentoring functions as the independent variable, organizational identification as the mediator, and job satisfaction and communication satisfaction as the dependent variables indicated that the provision of mentoring functions increase subordinates' job satisfaction and communication satisfaction with a superior through subordinates' increased organizational identification. Although these analyses identified a series of significant indirect effects, no direct effects of mentoring functions on either job satisfaction or communication satisfaction with a superior emerged.

Job Satisfaction

One possible explanation for the indirect effect of mentoring on subordinates' job satisfaction through organization identification relies on social identity theory (Tajfel & Turner, 1986). Social identity theory suggests that individuals base their self-concept on their membership within social groups. That is, social identity theory posits that individuals identify with the groups and categories to which they belong. Considering the organization as a social group, superiors often are

viewed as representative and prototypical of the group (Eisenberger et al., 2010). As mentoring serves to strengthen protégés' perceived self-efficacy and development within their career and organization, as well as provides protégés' with a strong interpersonal relationship (Kram, 1983, 1988), protégés' affiliation and connection with the organization may also increase. Through this affiliation and connection, the results of this study suggest that the extent to which an individual identifies with their organization also increases. As individuals who highly identify with their organization define themselves based on their membership to their organization (Patchen, 1970), this positive association with a group (i.e., the organization) may lead to positive affect associated with their membership and with their job, thus increasing job satisfaction.

The lack of direct effect of superiors' mentoring functions on subordinates' job satisfaction demonstrates the importance of organizational identification, which may indicate that mentoring within an organization does not necessarily increase organizational members' satisfaction with their role within the organization (i.e., their job). Although superiors often are considered representative of the organization (Eisenberger et al., 2010), perhaps if subordinates do not perceive their superior as highly identifying with their organization, subordinates also do not identify with their organization. Indeed, the perception of superiors as identifying with the organization is associated positively with subordinates' organizational identification and job satisfaction (Van Dick et al., 2007). Individuals who do not identify with their organization typically are less satisfied with their jobs than are individuals who do identify with their organization (Riketta, 2005).

Communication Satisfaction

The indirect effect of mentoring functions on communication satisfaction through increased organizational identification can perhaps be explained by the nature of communication within in-group superior-subordinate relationships. As the communication between superiors and subordinates within in-group relationships is typically of higher quality than communication within out-group superior-subordinate relationships, subordinates within in-group relationships are generally more attached to their organization (Graen & Uhl-Bien, 1995). The communication within these relationships enables subordinates to feel more supported by, satisfied with, and committed to their organization (Gerstner & Day,

1997; Wayne et al., 1997). Again, as superior-subordinate relationships are intrinsically related to both individuals' membership within the organization, the high-quality nature of these relationships in the context of the organization may lead to the subordinate associating the benefits they receive from the superior to their organization. In turn, this association may encourage organizational identification. Similarly, as subordinates' organizational identification may be linked directly with the mentoring they receive from their superiors, and as mentoring functions are largely communicative in nature, it follows that subordinates would also feel satisfied with the communication they receive from the superiors.

The simple mediation model analyses situating communication satisfaction as the dependent variables were the only analyses that provided evidence of a direct effect of mentoring functions of subordinates' workplace outcomes. This pattern is not surprising, as job satisfaction does not necessarily include affect regarding communication within the organization, whereas the mentoring functions superiors' provide inherently involve meaningful and affirming communication (Kram, 1983, 1988). Communication between superiors with whom subordinates are more satisfied is typically characterized by openness and discussion of problems (Downs & Hazen, 1977; Pincus, 1986). These characteristics resemble the mentoring functions, such as coaching and counseling (Kram, 1988). Because the mentoring functions are communicative behaviors, it follows that subordinates' who perceive their superior as providing the career development mentoring functions and the psychosocial development mentoring functions will be more satisfied with the communication they have with their superior.

Implications

Taken together, these results demonstrate that organizational identification is the one of the means by which mentoring from superiors increases subordinates' positive workplace outcomes. These results have important implications applied to the workplace, for both individuals (i.e., superiors, subordinates) and organizations. Based on the relationships obtained between superiors' use of mentoring functions and subordinates' positive outcomes, superiors should strive to foster developmental relationships with their subordinates when possible. However, as superiors typically have differential relationships with their

subordinates (Dansereau et al., 1975; Graen & Uhl-Bien, 1995), it is unlikely that superiors would be able to mentor all their subordinates. As each of the five career development mentoring functions and the four psychosocial development mentoring functions had a positive association with subordinates' organizational identification and the two workplace outcomes, superiors should strive to provide any of the nine mentoring functions to their subordinates. Furthermore, as organizational identification proved to mediate these relationships, superiors should consider promoting organizational identification among subordinates. Superiors can promote organizational identification among subordinates, for example, by demonstrating that they themselves identify with the organization (Van Dick et al., 2007). By doing so, superiors can help employees identify with their organization and experience increased job satisfaction and communication satisfaction with their superiors.

The results of this study also provide implications for subordinates, both before and after organizational entry. Because the mentoring functions employed by superiors are shown to be associated positively with subordinates' workplace outcomes, subordinates should consider these relationships before joining an organization. Prior to joining an organization (e.g., during the job search) individuals gather information about the organization and begin to envision what joining the organization will be like (Jablin, 2001). During this phase in the assimilation process, individuals may gain insight into the nature of relationships between organizational members, particularly between superiors and subordinates. By gathering this information before joining an organization, individuals may determine whether their potential superior will provide mentoring functions in future. Additionally, as receiving mentoring functions from superiors benefits subordinates by enhancing their workplace outcomes, subordinate may seek the provision of these functions from their superiors. That is, individuals initiate, develop, and maintain developmental (i.e., mentor-protégé) relationships in the workplace. By employing specific tactics to initiate and maintain mentor-protégé relationships with their superiors, subordinates can foster these relationships in order to enhance their job satisfaction, and communication satisfaction.

For organizations, these results demonstrate the importance of encouraging strong relationships between superiors and subordinates. Organizational identification, job satisfaction, and communication satisfaction typically are viewed as beneficial to management and

organizations by organizational communication researchers. Employees who are more satisfied in the workplace and committed to their organization often experience more engagement with their jobs and perform better (Shore & Martin, 1989) than individuals who are less satisfied in the workplace and less committed to their organization. Furthermore, individuals who highly identify with their organization are more likely to represent a positive organizational image to individuals outside of the organization (Cheney & Christensen, 2001).

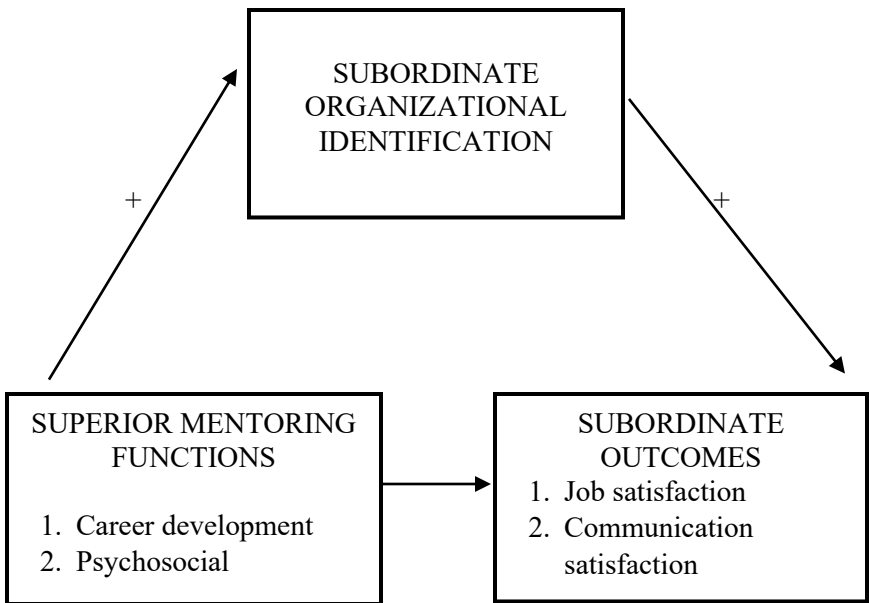
Limitations and Future Research Directions

The insight gained by this study provides useful communicative tools practitioners can employ to increase organizational identification and positive workplace outcomes among employees and ultimately reduce costly turnover rates and improve organizational output. However, one limitation of this study is that the data collected are cross-sectional in nature and do not provide a comprehensive understanding of the processes at work between mentoring, organizational identification, and workplace outcomes. Although the simple mediation model analysis tests a causal mechanism, the nature of survey data does not provide temporal ordering of study variables. However, temporally, superiors' mentoring could logically cause a change in subordinates' organizational identification, whereas it does not follow logically that a subordinates' level of organizational identification would cause a change in their superiors' use of mentoring behaviors. More to the point, as organizational identification often is considered to be a continuous process (Cheney 1983a, 1983b), the data collected in this study only provide a brief assessment of that process. That is, an individual's organizational identification may continue to change over time in response to their superiors' mentoring which could, in turn, influence the individual's workplace outcomes. Additionally, as mentor-protégé relationships tend to change over time (Kram, 1983), the extent to which superiors provide mentoring functions to subordinates also changes over time (Kram, 1988). To address this limitation, future research examining mentoring and organizational identification should consider a longitudinal approach to further solidify temporal ordering of variables and gather a more comprehensive understanding of the processes of mentoring and organizational identification.

Additionally, the focus of this study was limited to the mentoring individuals receive from their superior. Because mentoring can occur within various types of workplace relationships (Kram, 1988), it is important to determine whether mentoring within these relationships leads to the same increase in organizational identification and workplace outcomes. As superiors are often perceived as representative of the organization (Eisenberger et al., 2010), it may be that mentoring within peer workplace relationships, for example, would have a different impact on an individuals' organizational identification. Expanding the focus of this research to other workplace relationships (e.g., peer coworkers, workplace friendships) would provide insight into which relationships within the workplace have the biggest influence on an individuals' organizational identification, job satisfaction, and communication satisfaction.

Figure 1

Proposed Mediation Model



Note. + indicates a predicted positive relationship between the variables.

Table 1

Instrument Information

Instrument	<i>α</i>	<i>M</i>	<i>SD</i>
Organizational Identification	.98	5.12	1.49
<i>Superior Mentoring Functions/Career Development</i>			
Sponsorship	.91	4.87	1.42
Exposure and Visibility	.92	4.92	1.48
Coaching	.91	4.99	1.47
Protection	.86	4.5	1.40
Challenging Assignments	.91	5.28	1.38
<i>Superior Mentoring Functions/Psychosocial Development</i>			
Role Modeling	.93	4.82	1.63
Acceptance and Confirmation	.88	5.43	1.22
Counseling	.93	4.88	1.57
Friendship	.91	5.18	1.46
<i>Subordinate Outcomes</i>			
Job Satisfaction	.94	5.40	1.33
Comm Satisfaction	.93	5.05	1.00

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**When Stories Work: The Effects of Relevant vs. Irrelevant
Instructor Storytelling on Cognitive Learning, Engagement, and
Perceptions in Instructional Contexts**

Stephen M. Kromka

Abstract

Storytelling is widely recommended as an instructional strategy across both classroom and training contexts, yet relatively little research has examined when storytelling is most effective. Drawing on case-based reasoning (CBR) and the cognitive-affective theory of learning with media (CATLM), this pilot study investigates whether the relevance of instructor storytelling influences student learning and related perceptions. Undergraduate students ($N = 515$) were randomly assigned to reflect on an instructor who used either relevant or irrelevant storytelling during a recent class session. Results indicated that students in the relevant storytelling condition reported substantially higher cognitive learning ($M = 5.25$) than those in the irrelevant condition ($M = 2.19$) as well as higher sustained attention, motivation, credibility, and perceived narrative quality. Contrary to expectations based on cognitive load theory, perceived extraneous detail was higher in the relevant condition and positively associated with learning. These findings suggest that instructional storytelling is not inherently effective. Rather, its effectiveness depends on the story's relevance. Implications are discussed for instructional communication and training and development contexts.

Storytelling is frequently positioned as an effective practice in both educational and professional training environments (Alterio & McDrury, 2003). Storytelling refers to the process of communicating information through structured narratives that include characters, events, and a coherent sequence designed to convey meaning and facilitate understanding (Koenig Kellas, 2015; Schank & Berman, 2002). Instructors and trainers are often encouraged to incorporate stories to increase engagement, clarify abstract concepts, and enhance retention (Bolkan et al., 2020). Despite its widespread use, however, relatively little research has examined the conditions under which storytelling is

most effective. In particular, the role of relevance in determining the effectiveness of instructional storytelling remains underexplored. Prior instructional communication research demonstrates that narratives can increase students' recall, affect, and sustained attention (Kromka & Goodboy, 2019). However, this line of work largely compares storytelling to non-narrative examples, leaving open an important boundary condition: not all stories might be equally useful. The purpose of this study is to isolate relevance as the key explanatory factor, comparing relevant instructor storytelling to irrelevant instructor storytelling, to determine when storytelling enhances learning and when it detracts from it.

Literature Review

Storytelling as Instructional Communication

Narratives are a common instructional behavior that help organize complex information into meaningful structures (Koenig Kellas, 2015). In instructional contexts, storytelling is the use of structured narratives—typically involving characters, events, and a clear sequence—to communicate concepts in a way that enhances meaning-making, engagement, and learning (Koenig Kellas, 2015; Kromka & Goodboy, 2019). Instructors frequently use stories to connect abstract concepts to lived experience, which can improve comprehension and recall. Previous studies have demonstrated that instructor narratives can increase short-term recall and sustained attention (Kromka & Goodboy, 2019) as well benefit from being relevant (as opposed to irrelevant; Kromka et al., 2019). However, these benefits are not uniform. Research on effective teaching behaviors suggests that instructional strategies must align with students' goals and course content to be effective (Frymier & Shulman, 1995; Bolkan & Goodboy, 2019). If storytelling functions as a mechanism to connect content to meaningful experiences, then its effectiveness should depend on the degree to which the story is relevant to the material being taught. Relevant storytelling should help students better understand and retain information, whereas irrelevant storytelling may introduce distraction and cognitive interference. Thus, I propose the following hypothesis:

- H1: Students exposed to relevant instructor storytelling (compared to irrelevant instructor storytelling) will report higher cognitive learning.

Case-Based Reasoning and Narrative Relevance

Case-based reasoning (CBR) posits that individuals learn by encoding experiences as cases that can be retrieved and applied to new situations (Schank & Berman, 2002). Stories function as cognitive cases that allow learners to map abstract concepts onto concrete experiences. Critically, for case-based reasoning to function effectively, the case must be relevant to the learner's goals and the instructional content. Relevant stories provide meaningful analogs that support schema activation and transfer, whereas irrelevant stories fail to activate appropriate schemas or may even introduce competing cognitive structures. As a result, relevant storytelling should enhance students' perceptions of narrative quality and instructor credibility, as the story appears purposeful, coherent, and useful for learning. Thus, I propose the following hypotheses:

- H2: Students exposed to relevant instructor storytelling (compared to irrelevant instructor storytelling) will report higher instructor credibility.
- H3: Students exposed to relevant instructor storytelling (compared to irrelevant instructor storytelling) will report higher perceived narrative quality.

CATLM and Engagement Mechanisms

The cognitive-affective theory of learning with media (CATLM; Moreno, 2005) suggests that meaningful learning occurs when learners engage in generative processing, which is influenced by affective and motivational factors. Instructional messages that increase motivation, interest, and sustained attention are more likely to result in deeper cognitive processing and are correlated with cognitive learning (Frymier & Shulman, 1995). Relevant storytelling may function as an affective and motivational cue that enhances engagement. When stories align with students' goals and course content, they are more likely to capture and sustain attention, increase interest, and promote motivation. Thus, the following hypothesis is posited:

- H4: Students exposed to relevant instructor storytelling (compared to irrelevant instructor storytelling) will report higher (a) captured attention, (b) sustained attention, (c) interest, and (d) motivation.

Furthermore, CATLM suggests that not all forms of engagement contribute equally to learning. Sustained attention and motivation are more closely tied to generative processing than initial attention or surface-level interest. Thus, I propose the following hypotheses:

- H5: Cognitive learning will be positively predicted by sustained attention, motivation, and credibility.
H6: Captured attention and interest will not significantly predict cognitive learning when controlling for other variables.

Cognitive Load and Extraneous Detail

Cognitive load theory suggests that extraneous information can interfere with learning by consuming limited cognitive resources (Sweller et al., 2011). Narratives inherently include details such as characters, settings, and plot elements, which may function as extraneous load. From this perspective, irrelevant storytelling should increase perceptions of extraneous detail and reduce learning, whereas relevant storytelling should minimize unnecessary information and support learning. At the same time, it is possible that detail embedded within relevant narratives may function differently than traditional extraneous load, potentially supporting comprehension rather than hindering it. The present study tests these competing expectations.

- H7: Students exposed to relevant instructor storytelling (compared to irrelevant instructor storytelling) will report lower perceived extraneous detail.
H8: Extraneous detail will be negatively related to cognitive learning.

Method

Participants

Participants were 515 undergraduate students enrolled at a mid-Atlantic university. The sample consisted of 301 individuals identifying as female (58.4%) and 211 identifying as male (41.0%), with a small number of responses ($n = 3$; 0.6%) that could not be clearly categorized due to inconsistent or unclear entries. Participants represented a range of class ranks, including freshmen ($n = 183$, 35.8%), sophomores ($n = 130$, 25.4%), juniors ($n = 107$, 20.9%), seniors ($n = 89$, 17.4%), and other classifications ($n = 2$, 0.4%), with four missing responses (0.8%). In terms of cultural background, the sample was predominantly White ($n = 384$, 75.1%), followed by Hispanic ($n = 50$, 9.8%), Asian American ($n = 37$, 7.2%), Middle Eastern ($n = 14$, 2.7%), Black/African American ($n = 13$, 2.5%), mixed race ($n = 11$, 2.2%), and Native American ($n = 2$, 0.4%), with four participants (0.8%) opting not to report their cultural background. The average age of participants was 20.30 years ($SD = 3.00$), with a range from 18 to approximately 35 years. The sample included students with an average GPA of 3.09 ($SD = 0.57$). These demographics are consistent with the broader student population at the institution.

Procedure

This IRB-approved study employed a between-subjects survey in which participants were randomly assigned to evaluate either a relevant or irrelevant storytelling condition. After providing informed consent, participants were asked to “think about the professor who taught the class you attended immediately before completing this survey.” They were asked to recall an instructor who told a story during that class session. Participants were then randomly assigned to one of two conditions: (a) relevant storytelling, in which the story was perceived as directly related to course content, or (b) irrelevant storytelling, in which the story was perceived as unrelated to the material. Participants completed a questionnaire assessing their perceptions of the instructor’s storytelling, their engagement during the story, and their perceived learning. This dataset represents a subset of a larger study examining

instructional storytelling with the present analyses focusing on exploratory single-item measures for a pilot study.

Measures

All variables were assessed using single-item Likert-type scales created for the purposes of this pilot study. Note that these measures were developed as part of a larger project and were intended to be exploratory in nature. Cognitive learning was assessed as students' perceived understanding of course material ($M = 3.59$, $SD = 2.10$). Captured attention reflected the degree to which the story initially drew students' attention ($M = 4.42$, $SD = 1.96$), whereas sustained attention assessed the extent to which students maintained attention throughout the story ($M = 4.28$, $SD = 1.98$). Interest ($M = 4.35$, $SD = 2.01$) captured students' situational interest in the material, while motivation ($M = 3.84$, $SD = 2.04$) reflected their desire to engage with the content. Instructor credibility ($M = 4.07$, $SD = 1.95$) assessed perceptions of instructor competence and trustworthiness. Narrative quality was assessed through several features, including structure ($M = 4.38$, $SD = 1.73$), scene setting ($M = 4.38$, $SD = 1.75$), and realism ($M = 5.30$, $SD = 1.51$). Extraneous detail ($M = 4.29$, $SD = 1.66$) measured the extent to which the story contained unnecessary or irrelevant information.

Results

Descriptive statistics and a correlation matrix for all variables are presented in Table 1. Overall, students reported moderate to high levels of attention, narrative quality, and realism, with somewhat lower levels of motivation and perceived cognitive learning. H1 predicted that students exposed to relevant instructor storytelling, compared to irrelevant instructor storytelling, would report higher cognitive learning. This hypothesis was supported (See Table 2). Students in the relevant storytelling condition reported significantly higher cognitive learning ($M = 5.25$) than those in the irrelevant condition ($M = 2.19$), $t = 24.05$, $p < .001$. This effect was large in magnitude ($d = 2.10$), indicating a substantial difference in perceived learning between conditions. H2 predicted that students exposed to relevant instructor storytelling, compared to irrelevant instructor storytelling, would report higher instructor credibility. This hypothesis was supported. Students in the

relevant condition reported significantly higher perceptions of instructor credibility than those in the irrelevant condition ($p < .001$), with a large effect size, suggesting that relevant storytelling enhances perceptions of instructor competence and trustworthiness.

H3 predicted that students exposed to relevant instructor storytelling, compared to irrelevant instructor storytelling, would report higher perceived narrative quality. This hypothesis was supported. Students in the relevant condition reported significantly higher ratings of narrative structure, scene setting, and realism (all $p < .001$), indicating that relevant stories were perceived as more coherent, vivid, and meaningful. H4 predicted that students exposed to relevant instructor storytelling, compared to irrelevant instructor storytelling, would report higher levels of engagement, including captured attention, sustained attention, interest, and motivation. This hypothesis was supported. Students in the relevant condition reported significantly higher levels of captured attention, sustained attention, interest, and motivation (all $p < .001$). Effect sizes ranged from moderate to large, suggesting that storytelling relevance meaningfully enhances both initial and sustained engagement. H5 predicted that students exposed to relevant instructor storytelling, compared to irrelevant instructor storytelling, would report lower levels of extraneous detail. This hypothesis was not supported. Contrary to expectations, students in the relevant storytelling condition reported significantly higher levels of perceived extraneous detail than those in the irrelevant condition ($p < .001$). This finding suggests that relevant stories may include more detail, but that such detail is not necessarily perceived as detrimental to the learning experience.

To examine the mechanisms underlying cognitive learning, a multiple regression analysis was conducted (see Table 3). H6 predicted that sustained attention, motivation, and instructor credibility would positively predict cognitive learning. This hypothesis was supported. Sustained attention ($p = .018$), motivation ($p < .001$), and instructor credibility ($p < .001$) were all significant positive predictors of cognitive learning, indicating that deeper forms of engagement and perceptions of instructor quality play a central role in learning outcomes.

H7 predicted that captured attention and interest would not significantly predict cognitive learning when controlling for other variables. This hypothesis was supported. Neither captured attention nor interest emerged as significant predictors ($ps > .05$), suggesting that initial engagement alone is insufficient for promoting learning. H8

predicted that extraneous detail would negatively predict cognitive learning. This hypothesis was not supported. Instead, extraneous detail was found to positively predict cognitive learning ($p = .005$), indicating that detail embedded within relevant narratives may support, rather than hinder learning.

Discussion

The purpose of this study was to examine whether the effectiveness of instructor storytelling depends on its relevance to instructional content. Across all primary outcomes, the results consistently demonstrated that relevance plays a central role in shaping how students experience and benefit from storytelling. Students who reported on instructors using relevant storytelling indicated substantially higher levels of cognitive learning, engagement, credibility, and narrative quality compared to those reflecting on irrelevant storytelling. Taken together, these findings suggest that storytelling, as an instructional behavior, is not inherently effective; rather, its impact is contingent on how well it aligns with the content being taught.

One of the most notable findings in this study is the magnitude of the difference in cognitive learning between conditions. The effect size associated with relevant storytelling was large, indicating that students perceived meaningful differences in their understanding of course material based on whether the story was connected to the lesson. This finding reinforces the idea that students are not simply responding to the presence of a story, but to the usefulness of that story in helping them make sense of the material. In other words, stories tend to be most effective when they function as tools for understanding rather than as standalone additions to instruction (Paivio, 1986; Mayer, 2009).

The results also provide insight into how storytelling influences student engagement. Although relevant storytelling was associated with higher levels of both captured and sustained attention, as well as interest and motivation, only sustained attention and motivation emerged as significant predictors of learning. This distinction is important. It suggests that while stories may be effective at initially capturing students' attention, learning is more closely tied to the ability of the story to maintain engagement over time and motivate deeper processing. This pattern highlights the difference between surface-level engagement and engagement that meaningfully contributes to learning (Chi, 2009;

Renninger & Hidi, 2016). Another key finding relates to instructor credibility. Students who perceived stories as relevant also viewed their instructors as more credible. This suggests that storytelling may influence not only how students process information, but also how they evaluate the instructor delivering that information. When stories appear purposeful and connected to course material, they may signal preparation, expertise, and intentionality. In contrast, irrelevant stories may be perceived as distracting or unstructured, which can undermine perceptions of instructor competence (Myers & Goodboy, 2015; Witt et al., 2004).

Finally, the findings related to extraneous detail offer an important and somewhat unexpected insight. Contrary to expectations, relevant storytelling was associated with higher levels of perceived detail, and this detail was positively related to learning. Rather than detracting from understanding, detail embedded within relevant narratives may provide additional context that helps students make sense of the material. This suggests that not all detail functions as extraneous load. Instead, the impact of detail may depend on whether it is integrated into a meaningful and relevant narrative structure (Clark et al., 2006; Mayer, 2014). Together, these findings underscore the importance of considering both the content and structure of storytelling when evaluating its role in instructional and training contexts.

Theoretical Contributions

This study provides initial evidence that storytelling effectiveness depends on relevance rather than storytelling alone. Whereas prior research has demonstrated that narratives can enhance learning, the present findings clarify an important boundary condition: storytelling must be meaningfully connected to instructional content to be effective. Consistent with case-based reasoning, relevant stories appear to function as effective cognitive cases that support schema activation and transfer (Schank & Berman, 2002; Jonassen & Hernandez-Serrano, 2002). When stories align with course material, they provide concrete examples that help students encode and retrieve information more effectively. The findings also extend CATLM by demonstrating that sustained attention and motivation, rather than initial attention or interest, are more strongly associated with learning outcomes (Moreno, 2005; Mayer, 2009). This distinction offers a more nuanced

understanding of engagement in instructional contexts. Finally, the results challenge traditional interpretations of cognitive load theory (Sweller et al., 2011; Clark et al., 2006). Rather than detracting from learning, detail embedded within relevant narratives may enhance comprehension by providing richer contextual information. This suggests that the impact of extraneous detail may depend on its integration with meaningful content.

Practical Implications for Training & Development

These findings have clear implications for both classroom instruction and workplace training. First, instructors and trainers should prioritize relevant storytelling rather than assuming that all storytelling is beneficial. Stories should be explicitly connected to key concepts and learning objectives. Second, practitioners should focus on sustaining attention rather than merely capturing it. While attention-grabbing openings are valuable, learning appears to depend more heavily on maintaining engagement over time. Third, trainers should not necessarily avoid detail in storytelling. When embedded within relevant narratives, detail may enhance understanding, visualization, and retention rather than overload learners. In organizational training contexts, these findings suggest that case-based examples, scenarios, and storytelling should be carefully designed to align with real-world applications (see Alterio & McDrury, 2003). Doing so may enhance learning transfer and improve training effectiveness.

Limitations & Future Directions

This pilot study is not without limitations. First, this study relied on single-item measures, which limits reliability and precision overall. Additionally, the use of self-report data may introduce bias, especially since the students all reported on different instructors. Future research should have students report on the same instructor in a true experiment to control for confounding factors. Overall, the findings should be interpreted as exploratory and preliminary. In summary, future research should employ multi-item scales, experimental manipulations of storytelling content, and longitudinal designs to examine long-term learning outcomes. Additionally, future studies should explore how

different types of stories (e.g., personal vs. hypothetical) influence learning in training and development contexts.

Table 1

Descriptive Statistics and Correlation Matrix for Study Variables

Variable	M	SD	1	2	3	4	5	6	7	8	9	10
1. Cognitive Learning	3.59	2.10	—									
2. Captured Attention	4.42	1.96	.66**	—								
3. Sustained Attention	4.28	1.98	.71**	.88**	—							
4. Interest	4.35	2.01	.69**	.82**	.85**	—						
5. Motivation	3.84	2.04	.79**	.73**	.77**	.80**	—					
6. Credibility	4.07	1.95	.77**	.70**	.75**	.76**	.84**	—				
7. Structure	4.38	1.73	.55**	.51**	.54**	.57**	.58**	.60**	—			
8. Scene Setting	4.38	1.75	.52**	.56**	.58**	.60**	.56**	.61**	.71**	—		
9. Genuine	5.3	1.51	.39**	.48**	.47**	.50**	.44**	.50**	.45**	.46**	—	
10. Extraneous Detail	4.29	1.66	.25**	.26**	.25**	.29**	.25**	.20**	.32**	.29**	.20**	—

Note. ** $p < .01$.

Table 2

Independent Samples t-Tests Comparing Relevant vs. Irrelevant Storytelling

<i>Variable</i>	<i>Relevant M</i>	<i>Irrelevant M</i>	<i>t</i>	<i>p</i>	<i>d</i>
Cognitive Learning	5.25	2.19	24.05	<.001	2.10
Captured Attention	5.80	3.10	18.20	<.001	1.60
Sustained Attention	5.60	2.90	19.10	<.001	1.70
Interest	5.70	3.00	18.50	<.001	1.60
Motivation	5.20	2.40	19.00	<.001	1.70
Credibility	5.90	2.80	20.50	<.001	1.80
Structure	5.70	3.10	17.80	<.001	1.55
Scene Setting	5.75	3.05	17.90	<.001	1.55
Genuine	6.10	4.20	12.50	<.001	1.10
Extraneous Detail	5.10	3.50	8.20	<.001	0.70

Note. All tests are independent samples t-tests comparing relevant and irrelevant instructor storytelling conditions. Cohen's *d* represents effect size, with values of .20, .50, and .80 indicating small, medium, and large effects, respectively.

Table 3

Main Variables Regression Predicting Cognitive Learning

<i>Predictor</i>	<i>b</i>	<i>SE</i>	<i>β</i>	<i>p</i>
Sustained Attention	0.21	0.09	.10	.018
Motivation	0.48	0.04	.52	<.001
Credibility	0.18	0.05	.15	<.001
Captured Attention	0.04	0.07	.02	.56
Interest	0.06	0.06	.04	.34
Extraneous Detail	0.12	0.04	.11	.005

$R^2 = .62$

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Respecting Voices and Nurturing Self: Pursuing Balance While Teaching in Challenging Times

Scott Jensen

Abstract

Society is plagued with unprecedented divisiveness that is carried by students and teachers into teaching and learning spaces. Increasingly, perspectives are polarized and differences are threatening. This program highlights the imperatives of honoring voice, remaining objective in the face of critical discussion and debate, and discouraging inappropriate and irrelevant social commentary. It suggests strategies for incorporating debate and disagreement in respectful and pedagogically sound ways. Equally important is the need for teachers to be deliberate in their own self-awareness and crafting their own strategies for coexisting as teachers and engaged citizens. All of this comes together as a call for educators to nurture self-care and life balance within the challenges of teaching in our challenging times.

I am a big fan of the Apple TV series *Ted Lasso*. There is a scene in a first season episode simply known as “the dart scene.” Ted, a deceptively wise and unconditionally optimistic coach and human, lures a protagonist into a dart game. As the scene unfolds, Ted is faced with seemingly impossible throws needed to win. With each throw, he talks about the low expectations people had of him throughout his life, largely because he was judged by those who didn’t take the time to know him. I show this episode on day one of each of my courses each semester. No preview. No summary or explanation. I just show a four-minute television scene about being curious and not judgmental.

That scene is particularly salient given how society often treats disagreement, differences in worldviews and experiences, and difficult conversations. Increasingly, we avoid these disagreements, differences, and difficulties, choosing instead to placate situations instead of engaging others. Among the influences that can battle these tendencies are the lessons and experiences that happen every day in performance and communication teaching spaces. Students study and perform a breadth of experiences and identities. Students advocate for and debate

about the controversies that headline social media posts and news reports. That we tackle the differences that often generate discomfort among our students as part of our teaching mission increases both urgency and strain on us both professionally and personally. The need to respect our students' voices, encourage and manage discussion and debate, and take care of ourselves in the process adds unique challenges to teaching in these difficult times. What follows is a brief explanation for this paper, the realities that illustrate our current challenges, and suggestions for managing both our teaching spaces and ourselves with care.

My Story and Why This Discussion

I teach a general education senior seminar called "The Democratic Process." The course is intended as a political communication that connects political persuasion with the dynamics of campaigning and day-to-day political rhetoric. Inherent in the course is discussion of political personalities and issues that highlight examples that elicit a range of reactions. Others who taught the course have stepped away because of the challenges of navigating discussions without their own biases, as well as with the emotions of student convictions. I, too, have days when I struggle to keep my biases in check, and I often play devil's advocate when discussions lack breadth of perspectives. I teach this course because it is essential. Today, more than ever, students need to understand the importance of debate and discussion, and develop the skill to engage disagreements with confidence, respect, and reason.

I have strong political convictions and deep appreciation for civil discourse. I have dear friends—my closest friends—who often engage in political dialogue with vitriol. I've asked to be removed from countless text threads. I don't remember the last time I watched a political show on MSNBC or FOX. I reached a point a few years ago at which it was hard for me to have political discussions with several friends and family members who both share and reject many of my political views. The more I encounter dogma or refusals to engage in political exchanges, the more I appreciate teaching my seminar. At the same time, I also find increased difficulty in managing the emotions that today's political climate and my course create in me. These are the motivations for thinking about the ideas in this paper.

Challenges

Party politics and passionate advocacy for issues and candidates are not new to the democratic process and political dialogue. At the same time, polarized rhetoric has become more commonplace in typical political exchanges. Votes in congress and state legislatures are frequently cast along party lines, with deviations from party loyalty making headlines. These realities in our nation's political process make their way to our classrooms. It is important to remember that adolescents often believe and express ideas that are as much or more authority based as they are reflective of the child's independent thinking. As adolescents are exposed to ideas that challenge what they learn from their authorities, they are often motivated to reflect on what they think and why they think it. These potentially dissonance-creating experiences are healthy but challenging for individuals who open themselves to questions about what their authorities—parents, churches, and sometimes the most important people in their lives—think.

Our students' navigation of clarifying, debating, and reconsidering political convictions happens as part of our teaching. When parents and family members become audience to students struggling with their worldviews, and sometimes challenging predominant thinking at home, that audience becomes more aware of what is happening in schools. Garrett et al. (2020) write about political discussions in classrooms. They note many of the realities that complicate in-class political discussions. In particular, they identify increased pressure on schools and teachers created by course and classroom content, transparency that demands accountability of classroom teaching for communities surrounding schools, and the immediacy of issues to student experiences that may create emotional connections and reactions to what is debated and discussed.

The realities that make socio-political-cultural content in classrooms challenging lend themselves to any one of a number of reactions from teachers. As Mollenkamp (2023) notes, politics often create strain for our teachers. While well-managed political discussions have tremendous value, Mollenkamp notes that political tension often drives teachers to avoid engaging politics and any other issue that may be controversial. Teachers that do engage these controversies risk encountering increased stress and anxiety about their job. In the worst-case scenario, Mollenkamp notes that some teachers leave their

professions or change positions to lessen their direct encounters with difficult conversations in the classroom.

Double-Binds

The difficulty in having class conversations about controversial subjects is tempered with the value in these conversations. This creates double-binds for both the students and the overall classroom. In each case, the value of including these conversations in course content trades off with risks and challenges. In the end, the choice whether or not to include the conversations, and the strategy with which to incorporate them are constraints teachers must address.

For students, the double-binds are manifested in their life experience and the power of the content of the conversations. These difficult conversations are often immediate to students. Perhaps they have family members or friends who fear deportation or other legal difficulties because of citizenship status. Sexual orientations, as central as they are to identity, are not always apparent. Any one of a variety of circumstances can make governmental assistance an essential part of a student's life. These are just a handful of topics that may be debated in a classroom with language and positions that are felt deeply by participants in those debates. As disagreement surfaces, the propensity for emotional responses increases. As Garrett (2020), notes, emotions can—and often are—viewed as “facts” because of the influence they have in the minds of advocates. Additionally, both knowledge and reason-based conversations and emotional conversations have value, despite their differences. Personal and emotional connections in communication exchanges are difficult for most people to manage. That difficulty is compounded for the student with less experience debating issues through emotionally charged convictions. In the end, there is great value in the personal growth and communication skill development offered by these classroom exchanges. The frustration is often in the stress of the process that leads to enduring benefits.

There are similar double-binds for the classroom. Classroom dialogues should protect and encourage student voices, worldviews, and experiences. Student advocacy and their rhetorical choices for presenting and defending advocacy reflect spontaneity and developing communication skills that may result in disrespect, or even untenable views. This rhetorical insensitivity is not always intentional, but the

expression still risks complicating classroom management and chilling future conversations. These likely experiences co-exist with realities that must be considered when managing debate and discussion. Classroom dialogues should be free from expressions of injustice and hate. Teachers are not tabula rasa; they own their own convictions that, whether expressed or not, have the potential to influence their classroom management choices. Perhaps the reality posing the greatest tension is that the bright line for appropriateness in difficult conversations can be more blurry than bright.

Self-Care

As has already been noted, the strain of managing classroom content that includes debating and discussing difficult issues and experiences is real. The experiential and emotional immediacy felt with much of the content of these classroom experiences is not unique to students. Teachers are just as likely to have strong convictions, be triggered, or struggle with respecting disagreement as their students. Of course, the ideal situation is the teacher modeling the communication choices that are conducive to healthy discussions. It is not an exaggeration to suggest that the frequency and/or intensity of debates and discussions over critical issues can threaten a teacher's self-care. Cordova et al. (2003) define self-care as "practices applied by an individual that attend to their emotional, physical, spiritual and mental needs..." They add that it "typically requires that a teacher identify how their social and psychological needs can be met and then seek help to meet those needs" (pp 50-51).

We live in a time when headlines on social media, news reports, or expressed in daily conversations are messages we avoid. When we do engage with these messages, we are subjected to negative messaging that elicits any one of a number of emotional responses. The repetition of this dynamic from day to day may eventually yield to avoidance of the content. The teacher in the course that must address these difficult conversations not only must process the content but do so as the manager of the conversations. Their management includes unpredictability in both the content and how that content is discussed. Cordova et al. (2023) note that there are challenges to self-care manifest in teachers reaching a breaking point, often a threshold marked by repetition of experiences that threaten the needs that maintain self-care. Specifically, the authors

suggest that teachers may feel a sense of failure or shame because they demonstrate a lack of persistence in an environment that values resilience. With an expectation of student-centeredness being defining of good teaching, some instructors may feel it is inappropriate to focus on themselves over students. Peer comparisons are also challenging; the teacher feeling threats to their well-being may deny those threats because of wanting to keep pace with colleagues who do not exhibit similar challenges.

Changing the narrative of how to value and attend to self-care is an important response to any lessening of a teacher's well-being. Any one of a number of environmental factors can contribute to teacher fatigue and breakdown of self-care. The implications of our current socio-political climate and the already noted challenges of integrating that climate into a classroom curriculum are absolutely risks to self-care. Narratives can avoid the assumption that classrooms are inherently danger zones that are both irreparable and the product of poor classroom management. Cordova et al. (2023) write, "Given what can feel like the dehumanization of the teacher's inner experience, popularized self-care messages such as 'make sure you put your oxygen mask on first' become a form of gaslighting that fuels compassion fatigue in the classroom." They continue, "Teachers may be better served by questioning, 'Why am I starving for oxygen in the first place?'" (p. 51).

Preserving the Dialogue

While we might dream of a world in which respect and positivity are the norms in our politically charged communication with one another, that reality is likely more utopian than we would like. Still, there are responses to the nature of our political dialogues and classroom management of difficult conversations. Leftwich et al. (2022) argue that ethical development is an essential outcome for our collegiate students, particularly in terms of equipping them for competent democratic participation. They write, "Ethical development has been suggested as an important student outcome by professional associations representing the communication discipline...and higher education more broadly... Researchers have argued that ethical growth is an essential outcome of college to ensure students are equipped to effectively participate in democratic society" (p. 47). They actually encourage connecting course content to current events that are immediate to students and creating

classroom environments that foster dialogue. This perspective echoes the case to be made for including debate and discussion in teaching spaces. Specific attention at the organizational, classroom, and teacher levels can help create positive inclusions of these dialogues.

Organizational Level

A number of steps can be taken at institutional levels that help shape environments that can facilitate positive experiences with controversial subject matter in classrooms. Ron and Gindi (2022) suggest teacher training can equip educators with skills to manage discussions of controversial socio-political issues. In the same way that math educators are better equipped to teach quantitative literacy across a curriculum, communication and forensic education background can equip a teacher to better manage discussions and debates. Schools can encourage peers to share best practices that equip them to both teach and manage competent debate and discussion activities.

There are resources available that provide varying perspectives on controversial issues, as well as suggestions for incorporating high impact practices, such as debates, into classroom teaching. Schools should invest in these resources as ways to supplement classroom activities and perhaps influence debate and discussion norms at the organizational level. One resource is *Civics in Real Life*, a Florida-based program that provides explanations and activities intended to foster civil classroom dialogue around critical issues. Masyada and Spinale (2025) provide one such example of a post-January 6, 2021 classroom discussion. The activity includes preparation steps, pre-discussion awareness for administrators, and discussion management strategies. Quality resources have the benefit of empowering less confident or less experienced teachers with vetted approaches to activities that are essential to include in our classrooms.

These suggestions, and others to follow, rest on the most important suggestion—make engaging difficult topics part of the school's culture. The benefits of debate and critical thinking are subjects of volumes of research. Students do not become effective advocates, ethical communicators, or meaningful contributors to society without experiences that provide them with the knowledge and skill to be those things. Equipping teachers to effectively and confidently manage

difficult conversations is important, but ensuring that those conversations happen is equally important.

Classroom Management Strategies

There are a number of ways teachers can manage debate and discussion activities. Among these strategies, teachers should establish rules for discussions that ensure equal access to conversations without silencing reticent participants or minority perspectives. Students can contribute to these classroom rules and expectations, but the teacher must have a heavy hand in codifying management that is appropriate for each particular course and group of students. Similarly, the guidelines should be dynamic, open to amendments as the classroom and world outside the classroom changes.

Models of what is expected, and what meets expectations for appropriate discussion and debate are invaluable. Curricula that include debates and discussions should be grounded in an understanding of what valid, sound, fallacious, ethical, respectful arguments and communication look like. As already discussed, there is no guarantee that students will not accidentally or intentionally express ideas in inappropriate ways. At the same time, students cannot be expected to communicate in a way they do not understand.

Teachers should also consider the volatility of subjects and plan discussions accordingly. Today's range of salient socio-political issues includes a number of potentially triggering issues for students and teachers. While these triggers may be unknown, others are often apparent as a result of the demography of a classroom or world events. While volatile events do not need to be avoided, such discussions can be managed in ways that take into account the unique risks they pose as discussion and debate subjects.

The organic nature of these discussions and debates may well result in expressions of emotion, whether that be anger, sadness, or other feelings. Teachers should be aware of resources available to students. They should also strive for empathetic rationality. When expressed, emotions become part of communication exchanges. Denying those emotions does not eliminate their presence as part of the discussion. Allowing students the freedom to own their expressions in ways most comfortable to them is important. Equally important is to discuss the

nature of exchange in terms of its clear relevance to student experiences. Reasoned support and acknowledgement of emotion is an important combination.

Frisby et al. (2024) found that appropriate humor can be an effective means of lessening student stressors, likely outcomes when engaging controversial subjects in an open discussion. Humor directed at topics or people not literally subjects in difficult conversations can provide tension release that allows for a recalibration of the discussion. Obviously, some subject matter is less open to satire or other comedic framing, but moving the conversation away from the heart of the issue may allow for the humor appeal.

Preserving Self-Care

Each teacher is best equipped to understand their own vulnerabilities and coping mechanisms. The most important first step for teachers to preserve their self-care is acknowledging their thresholds. Teachers must listen to their heads and hearts and accept what limits may exist to their ability to manage and process difficult classroom conversations. While these conversations may be unavoidable, knowing risks can allow teachers to equip themselves with knowledge and skills that help navigate those risks.

There are days and conversations that may be more difficult than others. Teachers should seek ways to distance their personal feelings and thoughts from classroom content that may challenge those feelings. Daily learning outcomes can be met in several ways. Amending lesson plans or classroom activities may be the best way to cope in the classroom on days when personal challenges are harder to manage. Having alternative activities ready to incorporate on days when they may be the best choices for classroom instruction is never a bad idea.

Our society has become fond of the expression, “It takes a village.” Teaching is no different. Initiating conversations with empathetic support people can be an excellent way to debrief after difficult days. Finding these supportive individuals both at and away from school allows for empathy from both peers who understand and share your experiences, as well as others with whom you can share feelings and distance yourself from the source of those negative feelings.

When possible, teachers should be willing to avoid triggers. Finding ways of eliciting student reflections that avoid unpredictable and open conversations may be the best options for issues that are highly volatile for the classroom, and/or triggering for the teacher. Providing specific prompts or activity guidelines that direct conversations away from triggers is another way of incorporating necessary content in ways that pose less risk to teacher self-care.

Teachers also need to learn to say no. While classroom content may be unavoidable, our vulnerability to negative emotions on bad days is exacerbated by stressors outside the actual classroom. Teachers can seize any freedom they have to manage their responsibilities outside classroom teaching. Sponsoring fewer clubs or activities, delegating responsibilities at home, or other strategies for lightening one's load can equip a teacher to manage difficult classroom conversations from a perspective of being in a "better place" personally.

Perhaps the most obvious, but often the most difficult step toward self-care is to find and embrace joy. Myriad ways of bringing and highlighting joy in teaching are available to any teacher. The design and décor of offices or teaching spaces reinforce what is positive and joyful in a teacher's world. Activities that reinforce a teacher's authentic voice and are likely to encourage student engagement make teaching more comfortable, engaging, and fun. Nurturing relationships with peers and students add personal investment and positive motivation for being the best one can be in the classroom. Whatever it is for any one person, joy is the closest thing to a guarantor of a teacher who embodies self-care as part of their efforts to educate.

Concluding Thoughts

I continue to teach my general education seminar. To be honest, I find myself often "pounding the pulpit," not in terms of promoting an issue or a candidate but denouncing dogma and polarizing political exchanges. There are days when headlines give me pause before I walk into the classroom because I know there is a likelihood that conversations that day will be spirited. Despite the difficult days and the frequent course I have to decline in order to teach this one, I value my opportunity to engage in difficult conversations. I am probably most passionate in my discussion management in this seminar. We must seize opportunities to help our students understand what it means to be a

rational and assertive advocate for that they believe—and want to model that understanding in conversations they willingly engage. The challenges of incorporating difficult conversations in our teaching spaces are real. Equally as real—and essential—is the need for teachers to equip themselves with the ability to mold individuals who can influence changes in our world that lessen or eliminate our inability and refusal to engage disagreement. Teachers are charged with shaping tomorrow's advocates to lessen risks to teachers' self-care and while promoting more healthy debate. That's a balance that is difficult to achieve, but well worth the effort.

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The Impact of Generational Changes on Instruction

Gary Phillips

Abstract

Educators will benefit from a strong awareness of the generational influences on their students. This study identifies important aspects which sharpen the definition of a generation. The author uses Technology, World Events, and interactions with Organizations as key indicators to compare generations. The study then offers advice on reconceptualizing the delivery and evaluation of content. Taking account of the preferences of each generation in terms of learning styles, the author suggests using a gaming model to encourage critical thinking and persistence of effort.

I began my research into generational change to try to understand my students better and become a better teacher. To do this I felt that I needed to know who incoming students are and how they differ from me. Generational study seemed to shed some light on this. McCrindle and Fell (2021) focus on “significant life events, social markers and formative technologies” as key components in defining a generation, especially in their formative years (see page 109). While some feel that putting people into generational groups is stereotyping or too random (see Cohen, 2021 or Menard, 2021), there are changes that are visible in our actions because of what we have experienced or how we experienced it. Kinnaman and Lyons (2007) felt that every generation has a different way of seeing life” (see p. 15) and that the generational concept could be used as a tool for discussing a generation, not individuals, and that exceptions are to be expected.

We are impacted by events that changed our lives (like 911 or COVID-19) and the ways we consumed them (TV, internet, smartphone, personal experience). If we ignore these elements and their impact it is to turn a blind eye to diversity in the classroom. My goal is to gather information and gain insight to become a better teacher, then use and share this information.

One may assume that there is an organized plan for generational study, but Jean Twenge (2018) shared that “no official commission or

group decides what each generation is called and when it starts and ends. Instead, different names and birth year cutoffs are proposed, and through a somewhat haphazard process a consensus slowly develops in the media and popular parlance.” She went on to discuss how the iGen differed from Millennials in the use of this new technology, the smart phone. The significance of this pattern slowly emerged and the Millennial generation was shortened to reflect this impact. Her label, iGen, was given in reference to the iPhone, but was later dropped for the more widely accepted label of Generation Z (or Gen Z). People may refer to a generation based on an event or new technology, but the final name is unpredictable. Sometimes names change or solidify because of popular books like *Generation X: Tales for an Accelerated Culture* (Coupland, 1991) or *Millennials Rising* (Howe & Strauss, 2000). While these books tended to describe key elements that unified a generation or separated it from others, the titles gave a name and the contents often provided a date or range. Beginning and ending dates often vary between authors. Some authors even divide generations into shorter or sub-generations (like Boomers I and II, or WWII and post war). I have tended to follow the more popular, or common groupings, accepted names and dates. I have provided a chart that summarizes the generations relevant data and insight from several studies. This chart simplifies some ideas but presents them together as a starting point for discussion.

See Chart 1

I have focused on the generations currently in the educational system. Data was collected on the “Builders” who are now in their 80’s and is beginning to be collected for Generation Beta (name may change) that began in 2025, but I will begin with my generation, the oldest one I expect to be still teaching, and end with Generation Alpha who are in high school and will be coming to college soon.

I will mainly focus on shared experiences and how different groups use technology. I will also discuss some of the values of each generation, how each relates to organizations differently, and what that means to a teacher. For organizations I will primarily focus on employers and educational institutions. World and national politics have an impact, but not as much on my classroom as some others, so while they are included, they are not discussed in detail.

I should also note that while some students fit into a generation by birth date, they maintain more characteristics of their parent's or peer groups, so that an exact date doesn't always apply to an individual. Part of the goal of this work is to determine when changes appear in my students. I have noticed in my own children that even though they were all technically born in the same generation, my oldest (a male, only child for a while and having a distinctly different peer group) has different characteristics than my second two (who had essentially the same peer group, primarily female, but more diverse and liberal in political and social views). We have two daughters from Brazil in that generation, but with different technology and national experiences. In a small sample of five, there are three distinct sets of values and views. While this is a challenge for a parent, it is also a challenge for a teacher.

I will discuss some primary differences in three areas: Technology, World Events, and interaction with Organizations. After which we move to a discussion of recommendations.

Technology

As the chart demonstrates, technology has changed drastically through the progression of generations. It alters how we interact or communicate with other individuals. For Boomers, the television was the pivotal technology for communication. I can remember seeing footage live from Vietnam, on the other side of the world. We all watched the moon landing and airplanes fly into the twin towers. Television was the primary way that we received our information, and it was generally in a room with other people. While this delivery method held for Gen X members, the other people in the room were not always part of the experience, and with the rise of the internet, personal computers and smart phones, people were often isolated individuals when they received new information. The information also became more personal, as media like Facebook tailored their messages to use specific audiences. The group discussion and especially parental and elderly interpretation of content and impact was removed. For generation Alpha every news crisis is a potential personal crisis.

Cell phones began to emerge and were adopted for use by both Boomers and Gen X, but were very common for Millennials and adopted at an early age. Often Millennials used their technology for work purposes but Razors (flip phones) and Blackberrys were not used as

significant social platforms. For Gen Z, the smart phone, which appeared in 2007, quickly became a staple communication device. By 2011 three-fourths of Gen Z members had a smart phone (Twenge, 2018) and spent their developing adolescence using them. Gen Alpha has grown up knowing smartphones, tablets (often as an “educational” babysitter) and gone to college with that tablet or a laptop (rather than a desktop). The impact of tablets is increasing. Recent conversations with students, mainly Gen Z, revealed that almost half of them had a tablet before a phone, with the age being as young as five. In a recent conversation with a kindergarten teacher she said that some students know how to swipe, but not how to hold a crayon. For this generation technology has always been portable and pervasive. As Steffen (2025) put it, there was no before for them.

I recently took a freshman class to a computer lab to complete an online survey. Only two students used the computers in the lab, with the remainder using personal devices (tablet or laptop) that they had brought. I did not ask them to bring their technology, they just did. It has become part of the educational experience. I have had tablet users come to class without a pen. Once an important technology for note-taking, pens are being replaced by keyboards. These keyboards come in all shapes and sizes, so that touch typing is also becoming a thing of the past, and typewriters are now obsolete technology.

This influx of technology is not without some negative consequences. “This generation spends more time online and less time with friends in person. Given the links between screen time and unhappiness, that might also be why members of this group are less self-confident and less optimistic than millennials were as teens” (Twenge, 2018). Constant exposure to news and world events (from social media) has contributed to rising anxiety and over-use has promoted a rise in depression, anxiety and suicide. Haidt (2024) presents an image of rising teen mental health issues that closely mirrors the possession and use of cell phones by teens. He argues that this use of technology is “rewiring” the minds of our children.

Steffin (2025) proposes that increased dependence on AI integrated technology is affecting the Critical Thinking and Creativity of generation Alpha. There is also an implication for reduced persistence. If students do not realize mistakes, then try to correct them, the idea of learning because of persistence through “failure” does not implant, and students do not develop persistence. The concept of doing a draft with

revisions is difficult for many students in the current generation, and there is a feeling that they can wait until the draft is due, then turn in their final version, which will not need revision. A friend of mine observed that students who consistently use AI to complete work “do not know what they do not know.” If students do not realize where they fall short, they do not realize the need to correct the situation. It is not a lack of work ethic as much as a lack of realization.

World Events

For many of us in the generations of Boomer, X, and Millennial watching the events of 911 were an important marker in life, and a time of change. For some of our students, this wasn't an event in their lives. This was history. The change event for most of our students was COVID 19. I remember sitting at the dining room table with my daughter, both on our computers, me as a teacher, her as a student. Though this impacted my view of teaching, it helped form her ideas of being a college student. Her experience of college was different than mine. Many of our current students were in high school at the time. They lost much personal contact with peers and teachers. Many graduated without a prom, lock-in, or even a walk across the stage. Often classes were online, delivered by people who did not generally teach online. Sometimes instruction was good, sometimes not. Sometimes it didn't matter. I talked to one teacher who worked hard on her classes, just to be told at the end to “give them all the same grade if they showed up”. One must ask how this has impacted a student's view of education, and personally what are that student's current expectations of “me” as a teacher? I have seen the “if I show up I get a grade” mentality on my campus. With legislative concerns over loss of rigor, this particular concern hits close to home.

Organizations

When I was growing up, students were expected to work at various jobs during college, then graduate and start a career in your chosen field, generally with the employer you would have for life. Career changes were rare and often caused by external circumstances (e.g. a physical move). Students started at a college and graduated from there. Athletes were referred to by the university mascot, because that was part of their identity. There was a sense of loyalty to the organization,

whether school or employer, and a determination to give the organization your best at all times.

Students today often began as dual credit with one institution, begin with another, then may transfer to a third institution. They can transfer between colleges and collect the needed classes to graduate from various sources. Graduation is from the conferring institution, often based on ease of credit transfer. Star athletes may ride the transfer portal for the best deal in scholarship offers or NIL money. They join the team with the highest budget that can make the best offer. While this directly applies to the best athletes, it also impacts the rest of the team, their value of the being on the team and younger athletes who are watching.

After graduation, loyalty to an organization or employer is often seen the same as the university; people go where the benefits are the best. Increasingly salary is only part of the package. Boomers viewed benefits as a good salary with advancement potential, while Generation Z, and Alpha members are likely to look for a bigger package, health benefits, PTO, leave options, and flexible scheduling. Quality of life is automatically part of the package, and it is expected that the organization will see that too. Loyalty is not absent, but has shifted to a view of being more bidirectional. Generation Alpha wants loyalty to be clearly demonstrated to the employees as well. "Clearly demonstrated" includes an honest transparency that allows anyone to see the workings of the organization.

Application

So how do faculty incorporate all these ideas into a class? First, I think we must realize that loyalty to our school is not a strong factor, and we must focus on building a direct connection with the student individually. Then we can build on that individual connection. I will propose adding one element as an initial adaptation to begin moving our classes in the direction of future generations, without losing the current one. I propose adding a game format quiz using technology as a tool. Why? I feel that a game requires what students may need to learn. A good game is challenging and teaches persistence. If it is over too quickly it is not fun, or worth the time and money. One must complete a lower level to advance to more difficult challenges. Recognizing and analyzing these challenges requires critical thinking. Overcoming them often requires creativity. The goal for a faculty member is to organize

information into various levels of difficulty or types of processing, rather than content areas, then implant those into a game format as questions. Morgan (2026) realized that games look very different and sometimes look like a classroom, with different rules of play. Games can be added to the classroom gradually, without drastic change, but enough to require different rules. Traditional quizzes are organized by topic or chapter, but may be rearranged and stacked into a progression, or levels, which become more challenging, and have different expectations. While not a full-blown computer game experience, this does draw from the game world and change the class.

To help frame the response, I will reference a recent article of satirical comedy posted in The Babalayan Bee, “11 Effective Punishments for Gen Alpha Kids” (8/18/26) three of the humorous punishments related to items we will address: “Make them leave their room, teach them how to drive a car, and make them converse with a human being.” These are humorous because we see a hint of truth in them. In fact, students from generation Alpha often are accused of spending too much time isolated with technology not people and having a different rational of what activities are worthy of their time (like getting their driver’s license, something Boomers took for granted).

Examination Format

To appeal to the incoming students, I propose a multi-level quiz (using computer technology for delivery), where each level is more difficulty than the one before (mirroring levels of a game, promoting engagement). Students would need to score 100% to move to the next level (in the first three levels at least), but they may make multiple attempts to get 100%. This will encourage persistence, and hopefully retention. The game format will be familiar to many, and the initial questions should be simple and common-sense questions, that do not require any class knowledge. The second level would be simple questions, taken from material presented in the class, thereby testing for information comprehension and retention.

As we move to the third level, we begin to ask more complex questions that require some analysis before application of basic theory. This is the beginning of promoting critical thinking. If successful, students move to level four where they begin to synthesize multiple theories to analyze a situation, then answer analysis questions about that.

Here critical thinking is reinforced and creative responses are encouraged. By level five, the questions become so difficult that individual students are not expected to be able to answer them without more in-depth study or collaboration from other students. Collaboration and communication may be encouraged, or perhaps required at this level. The question (I suggest a case study or assignment for short answer response) should be so difficult that only the brightest students can answer it without additional study or communication. This should encourage both critical thinking to analyze, and creativity to identify and suggest a proper response.

If this format is followed and successful, students will be taught persistence, critical thinking, and creativity. My initial attempt will be for Fundamentals of Public Speaking, then Interpersonal Communication and perhaps Intercultural Communication.

Level I: Multiple choice questions based on common knowledge (or “common sense”). Reinforces commonly held concepts (that are true) and begins to engage the student. [the principle of sunk costs]. Multiple attempts are allowed, but 100% is required to proceed to the next level.

Level II: Multiple choice questions based on readings from foundational chapters, lectures, or activities which occur in chapter quizzes. These require basic content comprehension and retention skills. Multiple attempts are allowed, but 100% is required to proceed to the next level.

Level III: Multiple choice questions based on complex application (questions from application chapters, not in a quiz or level two). Some analysis may be required with the application of basic theory taught. Teaches analysis and critical thinking (problem-solving) skills. Multiple attempts are allowed, but 100% is required to proceed to the next level.

Level IV: Smaller complex cases including multiple theories to analyze and respond. Recognize and choose the best answer from multiple short answer options. This requires comparison of causes, critical thinking, and selection of the best idea(s), creativity? Multiple attempts are allowed, always open/available, but 100% is not required to proceed to the next level.

Level V: Short answer, faculty graded for credit (partial allowed).

Multiple attempts are allowed, always open/available, but 100% is not required or expected. Communication and collaboration are encouraged, maybe required. Question is open-ended and requires creation of the answer and should be too difficult for one student to answer well.

It could be one complex assignment with one answer, or multiple cases with different levels of expectation (see below).

- A) Present first Complex case (should be complex and varied enough to require consultation with other students – recommended or required?)
 - 1) Identify problem or issue (Critical Thinking)
 - 2) Suggest response to situation (Creativity)
- B) Present second Complex case in a new area (should be complex and varied enough to require consultation with other students – recommended or required?)
 - 1) Identify problem or issue (Critical Thinking)
 - 2) Suggest response to situation (Creativity)
- C) Present third Complex case (should be complex and varied enough to require consultation with other students – recommended or required?)
 - 1) Identify problem or issue (Critical Thinking)
 - 2) Suggest response to situation (Creativity)

To appeal to the incoming students, I propose a multi-level quiz (using computer technology for delivery), where each level is more difficulty than the one before (mirroring levels of a game, promoting engagement). Students would need to score 100% to move to the next level (in the first three levels at least), but they may make multiple attempts to get 100%. This will encourage persistence, and hopefully retention. The game format will be familiar to many, and the initial questions should be simple and common-sense questions, that do not require any class knowledge. The second level would be simple questions, taken from material presented in the class, thereby testing for information comprehension and retention.

As we move to the third level, we begin to ask more complex questions that require some analysis before application of basic theory. This is the beginning of promoting critical thinking. If successful,

students move to level four where they begin to synthesize multiple theories to analyze a situation, then answer analysis questions about that. Here critical thinking is reinforced and creative responses are encouraged. By level five, the questions become so difficult that individual students are not expected to be able to answer them without more in-depth study or collaboration from other students. Collaboration and communication may be encouraged, or perhaps required at this level. The question (I suggest a case study or assignment for short answer response) should be so difficult that only the brightest students can answer it without additional study or communication. This should encourage both critical thinking to analyze, and creativity to identify and suggest a proper response.

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Chart 1

*Comparing Generational Descriptors and
Changes in the Educational Setting*

Age Dates Generation Role	45-80 1946-65; 1965-80 Boomers; Gen X Teachers	30-45 1981-1996 Millennials Parents	0-30 1997-2012; 2012-25 Gen Z; Gen Alpha Students (current traditional and non- traditional, future)
Value	Strong Work Ethic Causes Freedom=Equality	Purpose Driven Work Practical Equality (pay, access, opportunity...)	Purpose for Life Technology helps work (even if not physical labor) Equity, fairness, access, sustainability
Technology	Digital Theory Digital Creation Telephone to the Internet (for Academics and military). Phones are for talking, face-to- face is preferred. Technology is a new tool (limited use)	Digital Pioneer Internet to cell phones (as teens); most students had a PC Phones are for texting, Face-to-face is an option when better. Technology is a tool (used as needed)	Digital Native; AI Native Smart phones (as preteens) tablets (as youth) laptops (rather than desktop) WIFI freely available, immediate information. Connections made virtually, not in person (more virtual friends than live ones); Links to anxiety and depression (technology is consumed often)

World Events	WWII – we won Korea – a tie Vietnam – we lost 911 – wake up; Opening diversity.	9/11 and War on Terror (enemy is an undefined, viewed with suspicion); open to diversity in school/workplace.	Afghanistan, Multiple wars and constant peace talks; (viewed with skepticism); the first Black President; acceptance of diversity.
Organizations (Employers or Colleges)	Loyalty to career organization and college	Some loyalty if reciprocated with advancement and benefits	Various jobs, whatever college is most flexible (or combination) determined by opportunity (cost, choice, perks/flexibility)
Economy	Booming, potential	Economic recession; question of future	Economic difficulty; doubt of future potential
Teaching Method	Lecture	Online (with seated, same University)	Online*, Blended, Flex; (Choice of how and from where*)

NOTE: This chart incorporates works of various researchers over time and attempts to collect generational data.

Concerns with Generation Alpha are that with AI used to correct spelling, grammar and composition, students aren't experiencing failure (gift of failure book) and will lack the learning experience and fail to develop critical thinking, creativity and persistence needed to overcome failure and learn.

Early model:

Lecture – watching on video \
Text – reading print material > Flex class offers choice of delivery
Activity – doing in classroom /

Text – reading print material – assign chapter that explains aspects of a culture

Lecture – discuss aspects of a culture (follow text but add to it), record video, upload video for students to access.

Activity – doing in classroom – show video clip and have students analyze the culture

Create topic/chapter quizzes to see if students learn the same information regardless of the format. Students who have a strong work ethic may choose all three formats. Others may flex to the format that is preferred.

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