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Classroom storytelling: using instructor narratives to increase student recall, affect, and attention

Stephen M. Kromka and Alan K. Goodboy

Department of Communication Studies, West Virginia University, Morgantown, U.S.A.

ABSTRACT

This quasi-experiment examined how incorporating an instructor narrative into teaching augmented students' recall, affect, and sustained attention. One hundred and ninety-four undergraduate students were assigned to one of two teaching conditions in a college classroom: a lecture that included an instructor narrative summarizing the lesson's key points (treatment) or the same lecture that utilized comparable examples instead, reviewing the lesson's key points (control). Results indicated that students in the narrative lecture condition liked the instructor more and indicated they were likely to take a future course with the instructor. In addition, students in the narrative condition reported more sustained attention toward the lecture and performed slightly better on a test of short-term recall compared with students in the examples condition. Finally, students also performed better on a retention test of extraneous information, suggesting that instructor narratives serve a double-edged function by facilitating student recall about course content, but at the expense of students remembering more extraneous information and adding to their overall cognitive load.

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“Let me tell you a story that will help today’s content make more sense.” Most instructors have recited a similar statement while teaching and then have shared a story with their class because they believe it relates to the course content and will help students learn the material. Stories can serve as memorable learning experiences for students; in fact, we can both (Kromka & Goodboy) readily recall detailed stories told to us when we were undergraduate students. For example, I (Goodboy) recall one story from my junior year in college told by my research methods instructor. My instructor told a story about buying a car when he moved to a new university. He recounted the details of his purchases and the persuasive techniques used by him as the buyer and those used by the car salesman as the seller (i.e., the low-ball technique in compliance-gaining). The story unfolded as a back and forth dance in compliance-gaining and negotiation tactics, ending in him buying two new vehicles in cash (a Mercury Cougar for him and a Ford Escape for his wife). This car-buying narrative was memorable and helped me learn about some basic concepts in persuasion. I (Kromka) share the same sentiment

CONTACT Stephen M. Kromka  smk0023@mix.wvu.edu  Department of Communication Studies, West Virginia University, Morgantown, U.S.A.

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about past instructors' stories. Our experiences are likely not idiosyncratic; there are presumably many stories being told in classrooms to help students learn. And although our personal experiences evidence the importance of these stories to our learning, they are not generalizable to other students; hence the utility of narratives in the classroom for student learning is an empirical question that we decided to pursue.

Indeed, telling a story in class is ingrained in many instructors' pedagogical repertoires, as stories offer students an alternative way to understand course material beyond a straight lecture, with the added benefit that students might find them interesting or entertaining (Norton & Nussbaum, 1980). Ochs (1997) defined a "story" as an individually created discourse element that describes an important event. In the communication literature a story can also be referred to as a "narrative" defined as a discourse unit comprising "symbolic actions—words and/or deeds—that have sequence and meaning for those who live, create, or interpret them" (Fisher, 1984, p. 2). Narratives used in the classroom often include an instructor's personal anecdotes and story-like accounts of others' experiences (Downs, Javidi, & Nussbaum, 1988); usually having a plotline that is structured with a beginning, middle, and end (Koenig Kellas, 2015). Downs et al. (1988) found that on average, instructors offered nine narratives in a 50-minute lecture. This frequent use of instructor narratives suggests that instructors believe narratives are meaningful to students and important for their learning.

In terms of the frequency of instructional narratives, surprisingly, there is a dearth of contemporary research focusing specifically on how narratives are used as effective teaching behaviors. In a study examining a variety of disciplines in higher education, Downs et al. (1988) suggested that narratives benefit students' learning by clarifying complex lesson material and highlighting the most relevant content from the lecture. Research also suggests that narratives are used by instructors who employ a dramatic communicator style when they teach (Norton, 1983); instructors who have the ability to "tell a good story" and to "catch people up in his or her stories" (Norton & Nussbaum, 1980, p. 572). Finally, there is some evidence to suggest students perceived instructors who used narratives as more effective instructors (Holladay, 1984).

While not specifically focused on narratives, recent research on effective teaching behaviors (e.g., self-disclosure, content relevance, humor) implies the potential benefits of using narratives as an effective teaching behavior. Most, but not all, narratives may include self-disclosure (when an instructor shares personal information that is not readily available with their students) (Cayanus & Martin, 2016). We know from self-disclosure research that instructors who disclose relevant and appropriate personal information increase perceptions of caring, instructor credibility, and affinity with students' experiences (Myers, Brann, & Members of Comm 600, 2009). It is possible that instructors who do self-disclose may also be able to reap additional benefits—better relating information to their students by offering narratives. Furthermore, instructors may also use narratives as a pedagogical strategy to demonstrate content relevance; the degree to which instruction satisfies students' personal needs and goals (Frymier & Shulman, 1995). To that end, Muddiman and Frymier (2009) suggested "personal stories" were a relevance strategy serving to connect course material with situations outside of the classroom (p. 135). Research on instructor humor also suggests that instructors could include relevant and appropriate humor into stories for positive student outcomes. For example, instructors who employ humor in their lectures, including the use of funny stories, have students that rate their

classroom experience more positively (Torok, McMorris, & Lin, 2004) and feel as though they learn more from the instructor (Wanzer, Frymier, & Irwin, 2010). In sum, given the research on these related teaching behaviors, it seems as though narratives could play an important role as an effective teaching tool that has potential benefits to both instructors and students.

Disciplines outside of communication also value the power of narrative and employ it as a pedagogical tool with positive outcomes. In nursing education, Davidhizar and Lonser (2003) found that nursing educators who shared stories during instruction received more positive course evaluations from their students who ascribed higher test scores to being able to associate medical facts with the instructor's personal narratives. In an organizational context, practitioners (e.g., technicians, engineers, therapists) preferred to use narrative explanations to provide task context and promote problem solving with their new members (Jonassen & Hernandez-Serrano, 2002). In higher education, researchers have trained preservice teachers with particular narrative teaching skills that allowed them to teach students to connect theoretical ideas to practical knowledge bases rooted in everyday life (Strangeways & Papatraianou, 2016). In respect to families, Koenig Kellas and Kranshuber Horstman's (2014) research on communicated narrative sense-making (CNSM) reveals that when family members told stories by assigning a narrative structure (i.e., setting, scene, agency, and plot), family members were better able to make sense of their shared lives. Narratives, then, appear to be an innovative approach to supplement conventional teaching practices and have the potential to promote learning both inside and outside of the classroom.

Given that correlational research indicates that narratives are important for student learning and perceptions of effective teaching (Downs et al., 1988; Holladay, 1984), it is important to revisit narratives and determine if they help students learn. Therefore, we conducted a quasi-experiment to determine if instructor narratives caused an increase in (a) students' recall in the form of a test of retention, (b) student affect toward the course and instructor, and (c) sustained attention toward the lecture.

Literature review

If "storytelling is an art developed during the beginning of human history, probably to teach the wisdom of generations past" (Hirst & Raffin, 2001, p. 27), then storytelling is, by definition, a pedagogical tool; helping people to process their daily experiences (Bruner, 1990). According to Koenig Kellas (2015), narratives help organize complicated and confusing ideas into "manageable packages" to better allow individuals to make sense of these ideas (p. 254). Instructors may be able to provide more of these manageable packages of information to their students by incorporating narratives into their teaching. Using this definition, when an instructor offers a narrative in the classroom, he or she may be repackaging potentially confusing lesson material so it is easier for students to understand and remember. When this happens, students may undergo interpersonal modifications (i.e., alterations in one's own meaning-making due to others' perspectives; Duck, 1994) from the influence of their instructor's storytelling. In other words, we know that listeners seek to "match" what they are being told to ideas already stored in their memory to confirm previous held beliefs (Schank & Berman, 2002, p. 292). If a student hearing a narrative in class cannot make this match, he or she may revise his

or her own beliefs and learn something new from the instructor's narrative. It makes sense, then, that narratives could lead to acquisition and retention of information by encouraging students to revise their ideas and understanding of the lesson material.

Narratives could also lead to other affective outcomes in the classroom. Interpersonal research suggests that people who listen to narratives could put themselves in the shoes of the narrator and respond with affective behaviors such as agreement and positive tone (Koenig Kellas & Kranstuber Horstman, 2014); illustrating the potential of narratives as a tool to appeal to the emotions of the listeners (Martin, 2000) and to connect and emotionally engage with others (Chafe, 1990). Kreuter et al. (2007) support this by suggesting that narratives may influence affect by tapping into emotional matters and providing surrogate social connections. The affective tone typically employed in narratives signifies emotional meaning in order to engage listeners and emphasize an important idea (Baerger & McAdams, 1999).

Narratives may also play a role in sustaining student attention (focusing attention on one activity for an extended time period; Schmeichel & Baumeister, 2010). To explain: an important element that makes narratives worth telling or hearing is the goal of the narrative (Schank & Abelson, 1977) and listeners tend to pay more attention to narratives that relate to their own personal goals (Schank & Berman, 2002). If an instructor's goal (i.e., the desired result) of sharing a narrative is to aid student learning, and this goal matches up with the students' desire to learn the lesson material, this should help to sustain students' attention. Narratives may also be able to sustain attention through intrapersonal means. Alterio and McDrury (2003) argued that the use of narratives helps students undergo a reflective process on their own lives in an effort to relate to the instructor's story, which ultimately raises student awareness to the content of the lesson.

Empirical rationale for narratives in instruction

In the classroom, students sometimes struggle with remembering abstract lesson concepts and instructor narratives may help them organize information through the process of indexing. Indexes, which are groups of similar features and ideas, are located in students' memories (Schank & Berman, 2002). As students receive new information, their minds seek indexes already stored in our memories to trigger "reminders," which allow them to remember past ideas and events (Schank & Berman, 2002, p. 292). Instructor narratives may help students index important lecture material so that the information is more readily retrievable at a later date. The process of indexing is similar to Koenig Kellas's (2015) idea of "manageable packages" (p. 254), in which instructors may be able to use narratives to repackage abstract lesson material to make it more understandable and memorable for students. Prior research suggests that learning through storytelling is more retrievable and memorable compared with learning through lecture (Bruner, 1990; Schank & Berman, 2002) because students "remembered the facts from the stories" (Davidhizar & Lonser, 2003, p. 218).

Narratives may also increase recall by helping students focus on the most important concepts of the course material. Hokanson and Fraher (2008) asserted that students have an inherent understanding of narrative structure and implicitly understand their role in the instructor's story. Narrative structure might allow students to contextualize the key ideas and apply them to events in the students' own lives (Andrews, Hull, &

Donahue, 2009). Put simply, narratives may be functioning as a strategy to help sort the less important information from the more important course content (Downs et al., 1988), and may allow students to spend less time struggling to comprehend the real-world application of the material and spend more time focusing on the key points of the lesson (Hokanson & Fraher, 2008). Students may then be more successful in recalling important course material taught in a lecture. Short-term recall is the capacity to hold a minor amount information in one's mind at a readied state for a small amount of time (Atkinson & Shiffrin, 1968). When students are able to recognize and recall relevant information, they are taking the critical first step toward higher levels of cognitive processes and meaningful learning (Anderson & Krathwohl, 2001). If narratives make it easier for students to remember lecture material, students should perform better on recalling information on a test of retention. Therefore, we offer the following hypothesis concerning short-term recall:

H1: Compared with a lecture where the instructor summarizes the key points of a lesson with examples, students will score higher on a test of retention when the same key points are offered by the instructor in a narrative format.

Moreover, it is important to note that narratives inherently offer their own extraneous details (e.g., character names, setting, plot, etc.) within their structure, which is information that would not benefit students' learning of important lesson information (i.e., extraneous material). This material is extra information that is not tied to the lesson and would not benefit the student learner to recall (e.g., names of characters in the story, details of in the description of the setting, imagery, etc.). It is unclear if students are necessarily sorting important lesson information from extraneous details provided in a narrative. Therefore, we asked the following research question about learning superfluous information:

RQ: Compared with a lecture where the instructor summarizes the key points of a lesson with examples, will students remember more extraneous information when the same key points are offered by the instructor in a narrative format?

A distinctive feature of narratives is their ability to emotionally engage the listener. Narratives typically involve some emotional component that creates an affective tone (e.g., tension, drama, humor) in which the listener can empathize (Baerger & McAdams, 1999). As a result, it is possible that students may report increased affect, which is "a feeling tone, an emotion, or a degree of acceptance or rejection" (Krathwohl, Bloom, & Masia, 1964, p. 7). Moreover, students have reported that instructors who routinely shared narratives were "among the best teachers I have known" and that their courses were "among the best I have taken" on a scale of teacher effectiveness (Norton & Nussbaum, 1980). The use of instructor narratives may generate positive student feelings, thus leading to increased affect for the instructor and the course content. We hypothesize that instructors who use narratives will be more liked by students than instructors who do not use narratives in regard to course content, recommended behaviors in the course, and the instructor themselves. Thus, the following hypothesis is posited:

H2: Compared with a lecture where the instructor summarizes the key points of a lesson with examples, students will report more affect towards the (a) instructor, (b) content, (c) behaviors recommended, (d) intent in taking another class with instructor, (e) intent in enrolling

in related content course, and (f) engagement in recommended course behaviors, when the same key points are offered by the instructor in a narrative format.

As previously mentioned, narratives may be employed as a means to sustain students' attention. Listeners tend to pay more attention to narratives that are related to their personal goals (Schank & Berman, 2002), which should match up with the instructor's ultimate goal of clearly conveying the lesson material. Furthermore, Gerrig (1993) asserted that the semantic structure and temporal ordering of information in a narrative functions as an attention-focusing mechanism. Since a narrative is typically structured with a beginning, a middle, and an end, students may sustain their attention to an instructor's narrative because they are anticipating the narrative's conclusion (Gerrig, 1993; Koenig Kellas, 2015), which may increase students' reports of sustained attention. Therefore, we posit the following hypothesis:

H3: Compared with a lecture where the instructor summarizes the key points of a lesson with examples, students will sustain their attention more when the same key points are offered by the instructor in a narrative format.

Method

Instructor narrative pilot study

To test our hypotheses and research question, we required a narrative to integrate into a lecture to compare its teaching effectiveness relative to the same lecture without a narrative. While narratives are similar in their structure (i.e., setting, scene, agency, plot), they may differ in their quality as some stories are better than others. The quality of a narrative may diminish or augment potential effects on student recall, affect, and attention. Because a good story is difficult to define and may be interpreted subjectively by students, a pilot study was conducted to test the quality of the instructor's narrative in the main quasi-experiment. This IRB-approved pilot study consisted of 46 undergraduate students enrolled in upper-level communication studies courses at a large Mid-Atlantic university. The pilot study was voluntary and the students did not receive any type of compensation for their participation. After reading the cover letter, students who agreed to participate were asked to read a modified version of a story from Baerger and McAdams's (1999) life coherence study. The story was about a poor man who explains to his wealthy brother that his family and friends are more important than being rich. We chose this narrative because among other stories, it scored relatively high on a 7-point Likert-type scale within the researchers' coding system for each of the four dimensions of narrative coherence: orientation (i.e., the extent to which the narrative is located in a personal, social, and temporal context, $M = 6$), structure (i.e., the extent to which the narrative has a clear beginning, middle, and end, $M = 5$), affect (i.e., the extent to which the narrative uses emotion to establish an affective tone, $M = 6$), and integration (i.e., the extent to which the elements of the narrative are reconciled at the conclusion, $M = 7$). Because these high ratings suggested a good, coherent story; we decided to slightly adapt this narrative for the pilot test. We modified the details, the location, and the language of the story so that it would be relevant and clear to today's college student population, but we kept the plotline of the story the same. The story is offered in Appendix A. After reading the narrative, the students responded to a questionnaire about the quality of the story.

The pilot study questionnaire included Baerger and McAdams's (1999) narrative coherence rating scheme. This measure included one item for each of the four dimensions of narrative coherence: orientation ($M = 4.76$, $SD = 1.39$), structure ($M = 4.54$, $SD = 1.64$), affect ($M = 5.63$, $SD = 1.34$), and integration ($M = 5.07$, $SD = 1.02$). Each of these four measures assessed the overall coherence of the narrative using a 7-point Likert-type scale ranging from (1) very low to (7) very high. A one-item scale assessed the narrative's emotional tone ranging from (1) very negative to (7) very positive ($M = 5.48$, $SD = 1.29$; McAdams, Diamond, de St. Aubin, & Mansfield, 1997). To estimate the ecological validity of the story, another one-item scale measured the degree to which the narrative was perceived to be realistic. This item asked students about "the extent to which the ideas in the story are very similar to ideas that one would encounter in real life." The perceived realism scale ($M = 5.09$, $SD = 1.74$) used a 7-point Likert-type scale ranging from (1) very unrealistic to (7) very realistic. The means for the six narrative qualities ranged from above "neutral" to "high" in all respects. We decided that these were acceptable scores for checking the quality of story, consistent with Baerger and McAdams's (1999) scores in their study using the narrative. Consequently, the pilot-tested story was incorporated in the following procedures of the main quasi-experiment.

Procedures

After obtaining Institutional Review Board approval, undergraduate students were recruited from large lecture communication studies courses via email announcements, bulletin board flyers, and preclass announcements. The advertisements for this study provided an online link to a Sona Systems website where students signed up for one of two research study sessions in the same classroom. Upon arrival at the scheduled university large-lecture classroom, I (Kromka) obtained signed informed consent from participants and introduced the study by informing participants I would provide a recorded teaching lesson on the projector in the large lecture classroom. The participants were instructed to "please listen carefully to the instructor in the same manner that you would for one of your own college instructors." The high definition video lecture was overlaid in a PowerPoint format that simultaneously displayed a slideshow of lecture information and a video of the instructor teaching. The instructor's face was formatted in a small box at the corner of the slide. Participants were able to see the instructor teaching throughout the entire lesson. The instructor was a mid-thirties man dressed in business-casual attire. A male instructor was chosen for this study because Baerger and McAdams's story involved a man talking about his relationship with his brother.¹

The lesson was entitled "How to Be Happy" and the lecture material was based on positive psychology research surrounding specific topics such as beauty, money, and dispositional gratitude that may or may not lead to personal happiness (lecture content from Watkins, 2016). The topic of positive psychology was chosen as the stimulus material for this study because this is not a topic taught in the classes we recruited from. The teaching script that accompanied the lecture slides is provided in Appendix B.

The quasi-experiment had two conditions. In both conditions, the instructor, PowerPoint slides, and the stimulus material were identical. The only difference between the two conditions was the lesson's conclusion. In condition one (control; 10:17 in length), the instructor concluded by summarizing the lesson's three key points with examples

for each key point (e.g., “It doesn’t matter if you have 20 Armani suits and live in sunny San Diego, it doesn’t make you any happier than someone who doesn’t have those things.”). The instructor then told the participants “thank you for listening and have a great day,” at which point the video ended. In condition two (treatment; 13:15 in length), the instructor stated “I would like to conclude our lecture today with a little story, which I feel summarizes the three key points in our lesson. So, I would like to share with all of you my own personal take on happiness.” The instructor told a narrative that included the same example topics and details as in the first condition (e.g., “20 Armani suits,” “sunny San Diego”) so that participants were receiving similar information (both material to be tested on and accompanying extraneous details) at the end of both lectures (see Appendix B for the narrative manipulation).

After attending the video lecture in class, participants in both conditions were given a post-test questionnaire that contained measures of sustained attention and affect for both the course and the instructor. The questionnaire also included a quiz to measure student recall on a test of retention, another quiz to measure the retention of extraneous information, and several demographic questions. After completing the anonymous post-test, students were then asked to place the anonymous survey in a sealed envelope and place it in a closed box.

Participants

Participants were 194 undergraduate students enrolled in communication studies courses at a large Mid-Atlantic university. The participants consisted of 63 men, 126 women, and 1 participant who preferred not to answer (four participants did not complete the demographic portion of the survey). The age of the participants ranged from 18 to 32 years ($M = 19.94$, $SD = 2.00$). There were 142 participants who identified as Caucasian, 6 participants who identified as Asian/Asian American, 10 participants who identified as black/African American, 7 participants who identified as Hispanic, 1 participant who identified as Native American, 17 participants who identified as Middle Eastern, 5 participants who identified as mixed race, and 2 participants who chose not to report their ethnicity. Fifty-five participants were first-year students, 58 participants were sophomores, 39 participants were juniors, and 38 participants were seniors.

Instrumentation

Quiz on material

To measure student recall of lecture concepts, a 5-item multiple choice quiz (five answer options: a through e) was administered. Quiz questions were coded as (1) for correct answers and (0) for incorrect answers. The 5-item quiz was scored to reflect a percentage of correct answers ($KR-20 = .63$; $M = 71.55\%$, $SD = 26.44\%$, Range = 0% – 100%).

Quiz on extraneous information

Another 5-item quiz was given to determine if students retained unimportant extraneous information from the lecture (i.e., details unrelated to important lecture concepts). The questions were multiple choice (five response options) and were coded in the same manner as quiz on the material. The questions asked about the same personal details

that were present in both the control and treatment conditions. One example question was “In the lesson, the instructor mentioned the name of a city in California. What was the name of the city?” The 5-item extraneous quiz was also scored to reflect a percentage of correct answers ($KR-20 = .48$; $M = 62.27\%$, $SD = 26.53\%$, $Range = 0\%–100\%$).

Affect

Affect was measured using Richmond’s (1990) modified version of Andersen’s (1979) Affective Learning scale. The scale comprises a total of six subscales. Three subscales measured students’ attitudes toward the instructor of the course ($M = 5.55$, $SD = 1.29$, $\alpha = .77$), the content of the course ($M = 5.70$, $SD = 1.24$, $\alpha = .81$), and the behaviors recommended in the course ($M = 5.87$, $SD = 1.08$, $\alpha = .78$). Each of the three subscales was assessed by using four 7-point semantic differential scales (i.e., good–bad, valuable–worthless, fair–unfair, positive–negative). The other three subscales measured students’ behavioral intent towards taking another class with the same instructor ($M = 4.77$, $SD = 1.60$, $\alpha = .94$), enrolling in another course of related content ($M = 4.52$, $SD = 1.58$, $\alpha = .90$), and engaging in behaviors recommended in the course ($M = 5.52$, $SD = 1.28$, $\alpha = .86$). Each of these three subscales was assessed by using another set of four 7-point semantic differential scales (i.e., likely–unlikely, possible–impossible, probable–improbable, would–would not). It is important to note that while our study employs the modified affective learning scale (Andersen, 1979; Richmond, 1990), we do not claim to be measuring affective learning, as this measure has been argued to capture general student affect, but not any changes in learning (Myers & Goodboy, 2015).

Student sustained attention

The sustained attention to classroom learning scale (Wei, Wang, & Klausner, 2012) was used to measure students’ attention. It is a 6-item instrument that asks participants to respond to statements such as “I paid full attention to the lecture” and “I did not shift my attention to other, nontask-oriented activities during this lecture” using a 7-point Likert type scale ranging from (1) very untrue of me to (7) very true of me. Two of the six items were excluded for similar reasons as prior researchers (Bolkan, Goodboy, & Myers, 2017). The first item was excluded due to vague wording and deemed an ambiguous assessment of student attention for the current study. The second item was excluded because it did not pertain to the experimental conditions (i.e., “I pay full attention to classroom discussions in that class”). The Cronbach’s alpha for the 4-item scale was .80 ($M = 4.99$, $SD = 1.25$).

Results

Hypothesis one predicted that a lecture concluding with an instructor narrative summarizing the key points of a lesson would lead to increased student scores on a quiz compared with a lecture concluding with examples summarizing the key points. Results of a Welch t -test confirmed this hypothesis, $t(186) = -2.49$, $p = .01$, $d = .36$, $U_3 = 64.06\%$, as students in the narrative lecture performed significantly better on a quiz of retention than students in the short example lecture (see Table 1). Table 2 includes the retention quiz questions along with the frequencies of how often each question was answered correctly.

Table 1. Quiz on material.

	<i>M</i>	<i>SD</i>	KR-20	Range	0/5	1/5	2/5	3/5	4/5	5/5
Narrative condition	76.04	24.82	.63	0–100	3	4	6	17	38	33
Short examples condition	66.67	27.40	.61	0–100	6	5	8	24	33	17

Note. The last six columns provide the number of participants who received each quiz score.

The research question asked if students would remember more extraneous information from a lecture concluding with an instructor narrative summarizing the key points compared with a lecture concluding with short examples. A Welch *t*-test was used to examine the differences between the example lecture and the narrative lecture for the extraneous quiz scores. Results revealed that there were significant differences between the two conditions, $t(182) = -5.36$, $p < .001$, $d = .77$, $U_3 = 77.94\%$. Students in the narrative lecture performed significantly better on the extraneous quiz than students in the short example lecture (see Table 3). Table 4 includes the extraneous quiz questions and how frequently each question was answered correctly.

Hypothesis two predicted that a lecture concluding with an instructor narrative summarizing the key points of a lesson would increase students' affect towards (a) the course

Table 2. Quiz on material.

	Question description	Frequencies (correct/total)
Q1	"What is the relationship between cognitive intelligence and happiness?" A: The more intelligent you are, the happier you are. B: The happier you are, the more intelligent you are. C: There is no relationship between cognitive intelligence and happiness. D: The more intelligent you are, the less happy you are. E: The happier you are, the less intelligent you are.	144/194
Q2	"In reference to the lottery winner study: compared with nonwinners and victims of accidents, researchers found that lottery winners _____." A: were equal. B: were significantly happier and enjoyed simple pleasures much more. C: were significantly happier and enjoyed simple pleasures much less. D: were not significantly happier and enjoyed simple pleasures much more. E: were not significantly happier and enjoyed simple pleasures much less.	100/194
Q3	"Ben has \$1000 and wants to use his money in a way that will allow him to be the happiest with his purchase over a long period of time. What is the best way for Ben to spend his money?" A: Brand new rims on his truck. B: A trip to Chicago to visit his sister. C: A new smartphone. D: Investment in the stock market. E: A new Rolex watch.	169/194
Q4	"Jeremy has a great job that pays him a large salary. However, he does not feel happy because he wants to make more money. According to research, what could Jeremy do to feel happier overall in his life?" A: Be grateful for his current salary. B: Get a new job that pays the same salary. C: Buy a brand new car. D: Purchase a house by the beach. E: Get plastic surgery to become more handsome.	167/194
Q5	"Research has found that materialism is likely to _____ your happiness." A: support B: increase C: inhibit D: not change E: double	104/194

Table 3. Quiz on extraneous information.

	<i>M</i>	<i>SD</i>	KR-20	Range	0/5	1/5	2/5	3/5	4/5	5/5
Narrative condition	71.49	22.86	.42	0–100	2	3	9	31	33	23
Short examples condition	52.26	26.71	.40	0–100	6	14	23	23	21	6

Note. The last six columns provide the number of participants who received each quiz score.

instructor, (b) the course content, (c) the course behaviors recommended, (d) intent in taking another class with the same instructor, (e) intent in enrolling in another course of related content, and (f) engaging in behaviors recommended in the course compared with a lecture concluding with short examples summarizing the key points. This hypothesis was partially supported. There were no significant differences between lecture conditions for (b) affect towards the course content, $t(184) = -1.28$, $p = .20$, (c) affect towards course behaviors recommended, $t(186) = -.19$, $p = .85$, (e) intent in enrolling in another course of related content, $t(181) = -.71$, $p = .48$, or (f) engaging in behaviors recommended in the course, $t(181) = -1.08$, $p = .28$.

However, there were differences in affect towards (a) the course instructor, $t(183) = -1.99$, $p = .04$, $d = .35$, $U_3 = 63.68\%$, indicating that students in the narrative lecture ($M = 5.73$, $SD = 1.27$) reported greater levels of affect towards the instructor than students in the

Table 4 Quiz on Extraneous Information.

	Question description	Frequencies (correct/total)
Q1	"In the lesson, the instructor mentioned Armani suits. What was the number of suits he mentioned?" A: 2 B: 15 C: 20 D: 22 E: 30	76/194
Q2	"In the lesson, the instructor talked about shoes. What was the price of the shoes?" A: \$100 B: \$300 C: \$900 D: \$2,000 E: \$1,000,000	154/194
Q3	"In the lesson, what were some "simple pleasures" that the instructor mentioned?" A: Vacations to Hawaii and the Midwest B: Sharing stories and taking walks C: Concerts and fancy dinners D: Picking flowers and laughing at jokes E: Big screen TVs and brand new computers	120/194
Q4	"In the lesson, the instructor mentioned the name of a city in California. What was the name of the city?" A: San Diego B: San Pedro C: Los Angeles D: Fresno E: San Francisco	142/194
Q5	"In the lesson, the instructor mentions an example of coping. What was the specific example?" A: Thinking that your glass is half full. B: Thinking that you glass is half empty. C: It is what it is. D: Always looking on the bright side. E: Love is all you need.	112/194

example lecture ($M = 5.36$, $SD = 1.28$). There was also a significant difference in affect with the (d) intent in taking another class with the same instructor, $t(177) = -2.40$, $p = .02$, $d = .35$, $U_3 = 63.68\%$, indicating that students in the narrative lecture ($M = 5.04$, $SD = 1.46$) reported greater intent in taking another class with the same instructor than students in the short example lecture ($M = 4.48$, $SD = 1.69$).

Hypothesis three posited that a lecture concluding with an instructor narrative summarizing the key points of a lesson would increase students' sustained attention compared with a lecture concluding with short examples summarizing the key points. Results of a Welch t -test revealed significant mean differences between the two conditions, $t(181) = -3.55$, $p < .001$, $d = .51$, $U_3 = 69.50\%$, indicating that students who listened to the narrative lecture ($M = 5.29$, $SD = 1.16$) reported greater levels of sustained attention than students who listened to the short example lecture ($M = 4.66$, $SD = 1.27$).

Discussion

This quasi-experiment manipulated a teaching narrative into a lesson to examine effects on students' learning, affect, and attention. Overall, the results obtained in this study suggest that narratives (a) slightly increased students' recall of information on a quiz, but also (b) fostered more learning of extraneous details from the narrative; (c) created small gains in positive affect toward the instructor, but not toward the course or content; and (d) helped sustain students' attention during the lecture. These findings are discussed with implications for teaching.

Learning and retention

Offering students a narrative to supplement a lecture yielded a small gain in student recall. Averaging the scores for each condition, students who received a narrative ($M = 76.04\%$, $SD = 24.82\%$) performed better on a quiz of retention than students who did not receive a narrative ($M = 66.67\%$, $SD = 27.40\%$), which is a small difference on a 5-item quiz, but it did amount to the difference between an average grade (C letter grade) and a below-average grade (D letter grade). The instructor's narrative may have reinforced the important content and aided in indexing the lesson material into "manageable packages" within the students' long-term memory (Koenig Kellas, 2015; Schank & Berman, 2002). Students may have been better able to acquire and recall the important information because the narrative provided a meaningful reference point in which the students could easily access (Tulving, 1985), thus leading to a slightly higher quiz score. However, this claim must be tempered for two reasons. First, although there was significant difference in learning between the two conditions, we found a relatively small effect size ($d = .36$) for the test of retention. If an instructor chooses to use a narrative similar to ours for teaching purposes, student learning may benefit only by a slight margin. Second, students in the narrative condition may also be retaining too much unnecessary information. Students who received a narrative also performed significantly better on the extraneous test ($M = 71.49\%$, $SD = 22.86\%$) than students who did not receive a narrative ($M = 52.26\%$, $SD = 26.71\%$), which is the difference between an average grade (C letter grade) and a failing grade (F letter grade). On one hand, the narrative may repackage and clarify course material (Downs et al., 1988; Koenig Kellas, 2015), but on the other hand, the narrative

appears to emphasize and add trivial information and details about the story that students do not need to remember to perform well in a course—those same details were provided in the control condition with examples but were not retained as much given the low extraneous test scores. In the narrative condition, students remembered more details about the name of a city (San Diego), the price of a pair of shoes (\$300), and the number of Armani suits (20) a character owned, which may not have been competing for their cognitive resources on a short 5-item quiz, but could be problematic on larger tests throughout a semester.

These findings on retention of the material and extraneous information could be interpreted through the lens of cognitive load theory. Cognitive load theory states that students have limited memory workloads during instruction and that these cognitive loads are categorized into three forms: germane, intrinsic, and extraneous (Sweller, Ayres, & Kalyuga, 2011). Germane cognitive load is students' effort to process and comprehend course material. Intrinsic cognitive load describes the structure and complexity of classroom concepts that are inherently difficult by nature and may not be altered by the educator's instructional design. Extraneous cognitive load is attributed to the instructional design and is created by the manner in which the course material is presented to the students. Researchers suggest that educators should aim to emphasize germane and intrinsic loads because these cognitive loads lead to learning (Sweller et al., 2011). Because students have a limited amount of cognitive resources, using resources for extraneous load reduces the amount available for germane and intrinsic loads. A narrative is an instructional design strategy that the instructor uses to present and clarify information by relating the lesson material to students' own meaningful experiences (aiding germane load). Yet, by instructional design, presenting the lesson material as a narrative may also provide a great deal of superfluous material from the details of the story (increasing extraneous load). Therefore, cognitive load theory helps explain how the inherent structure of narratives (i.e., setting, scene, agency, plot) may impact the total amount of mental effort that students must utilize from their working memory to thoroughly comprehend important lesson material within the context of the narrative. Ultimately, it seems as though instructor narratives may be a double-edged sword, in which there are simultaneous positive learning effects (i.e., increased retention of important material) and unwanted effects (i.e., increased retention of extraneous material) on students' recall. These wanted and unwanted learning effects might exist because of competing cognitive loads offered by the instructor narrative (more of a germane load which is ideal for learning, but also more of an extraneous load which is not; Bolkan, 2017).

From a cognitive load perspective, extraneous information presented in stories could compete for students' cognitive resources and detract from learning, as students can only handle a limited amount of extraneous or essential course information at any given time. On the other hand, extraneous information might be beneficial from a relational teaching perspective. That is, the details of the story might offer an instructor opportunities to create personal connections with the students, especially if the stories are taken from the instructor's personal life. Moreover, the effectiveness of the narrative might be depleted if these superfluous details were omitted from the story. Although remembering the story details is peripheral to the desired learning objective, without them, there may be no story left to tell.

Student affect

While it did not increase student affect towards lecture content or course, incorporating a narrative played a small role in how much students liked the instructor and their likelihood to take another class with the same instructor. The affect generated for the instructor, but not the course or content, may be explained by the fact that our narrative included instructor self-disclosures. As mentioned, instructor self-disclosure is the process by which instructors voluntarily share information (that would otherwise not be readily available) about themselves with their students (Cayanus & Martin, 2016). In our study, the instructor recounted a personal narrative that included multiple self-disclosures about himself and his life (but not all narratives necessarily do this). According to the disclosure-liking hypothesis, people who engage in more self-disclosure tend to be liked more than those who self-disclose to lower degree (Collins & Miller, 1994). Likewise, students may have enjoyed the lecture because instructor self-disclosure increases feelings of affect toward the instructor (Cayanus & Martin, 2008). Alternatively, in the example condition, there were no instructor self-disclosures provided in the examples (identical in content). In the narrative condition, the frequent amount of personal self-disclosures from the instructor's life (10 occurrences; see Appendix A) likely created more positive student feelings of acceptance towards the instructor. However, it must be noted that students may not always appreciate self-disclosures and feel less engaged in class if the instructor is perceived to be misbehaving by sharing self-disclosures with a monotone voice or presenting a boring lecture (Borzea & Goodboy, 2016). Furthermore, negative self-disclosure topics (e.g., risky behaviors and religion) have been found to be an instructor misbehavior, whereas self-disclosures about an instructor's family and educational background have been shown to be inversely related to instructor misbehaviors (Borzea & Goodboy, 2016). In the current study, the instructor's narrative included small disclosure references to risky behaviors (i.e., drug dealing and organized crime), but the overall story topic of being close to one's family and friends may have negated students' perceptions of instructor misbehavior in self-disclosure.

Attention

We found that a lecture concluding with an instructor narrative summarizing the key points of the lesson increased student sustained attention. This finding is in accordance with prior research that suggests that narratives increase listeners' attentiveness (Koenig Kellas & Kranstuber Horstman, 2014) and may be explained by how the structure of a narrative adds variety to an instructor's lecture. During a standard lecture, students' attention begins to wane at approximately 10 minutes (McKeachie & Svinicki, 2014). Given this information, instructors should limit standard lecture formats and insert different types of engaging activities throughout a lesson to break up the lecture (Walls & Cather, 1987). In the current study, the narrative condition (13:17 in length) was slightly longer than the example condition (10:17 in length). However, students in the narrative condition reported higher ratings for sustained attention. It may be that the instructor's narrative functioned as an engaging activity because it prompted students to intuitively process and self-reflect on personal information within the narrative, thereby actively connecting it to the lesson content (Alterio & McDrury, 2003). Utilizing the narrative format to

summarize the key points of the lecture may have given students a break from the standard lecture format and allowed students a chance to self-reflect on the material.

Furthermore, increased sustained attention could have been due to the fact that narratives are inherently structured with important causal events (Holladay, 1984; Ochs, 1997). Bower and Morrow (1990) found that participants were likely to focus their attention on significant events in a story (e.g., a happening that helped or hindered the goal of the main character). The causal connections between the significant events allow people to sustain their attention to follow the plot of a narrative (Schank & Berman, 2002). In the current study, the instructor's story was rated as relatively high in orientation and structure, which suggests that the story allowed listeners to easily identify the significant events as the narrative unfolded. The students may have sustained their attention to a higher degree because of their desire to know what happens next in the narrative compared with fleeting short examples.

Overall, the results of the current study provide preliminary evidence for the power of narratives in the classroom. While there have been past studies that suggest narratives help students learn (Davidhizar & Lonser, 2003; Downs et al., 1988), this experimental study provides causal evidence of these learning benefits by asking students to recall information on a test of retention. Although the effect size for student recall was relatively small, our findings suggest that there may be more to narratives than simply a good story. Furthermore, based on this study, a good narrative may be an effective way to increase student affect towards the instructor. Our study also sheds light on how a good narrative could have the ability to sustain attention so that students are receptive to lesson material in order for learning to occur in the first place. Ultimately, our findings suggest that instructor narratives have potential student benefits that warrant further research.

Implications for teaching and learning

From our results, instructors should know that using narratives to summarize important lesson content has the potential to help students recognize and recall relevant information, which is the vital first step on the road to meaningful learning (Anderson & Krathwohl, 2001). To capitalize on these short-term recall benefits, we suggest that instructors share good narratives that employ all of the measured narrative features that students appreciated in our pilot test (i.e., orientation, structure, affect, integration, emotional tone, and perceived realism; Baerger & McAdams, 1999; McAdams et al., 1997). To explain: based on the success of our narrative and its features, first, instructors should orient their students to the relevance of the narrative by clearly locating it in a personal context. *Orientation* involves setting the scene of the story with a clearly designated main character and location. Strong orientation allows students to understand the parameters of the narrative, so they will be able to relate it to their own personal experiences. In our story, the instructor set the scene by describing himself and his brother, where he was living at the time, and his personal situation.

Second, the narrative should have a well-defined episodic *structure* (i.e., beginning, middle, ending). The narrative should be structured in a clear causal manner so that students can easily follow the significant events in that order. In our narrative, the instructor begins by discussing his values (beginning), then describes a visit by his brother, and

consequently, an ensuing conversation about life (middle), followed by a conclusion about how they had different perspectives on what it means to be happy (ending).

Third, the instructor should incorporate *affect* whereby the narrative employs “explicit statements of feeling” to make an overall evaluative point (Baerger & McAdams, 1999, p. 81). In our narrative, the instructor emphasized his feelings about the importance of relationships and happiness. We suggest that a narrative include drama, tension, and/or pathos to communicate the importance of the events to the instructor and, by doing so, emphasize the story’s evaluative point to the students. In our narrative, the instructor talked passionately about how much relationships meant to him and conveyed the story with a fervent tone (e.g., when the instructor described his brother speaking emotionally to challenge him on how happy his life could be in that moment: “You got nothin’. What do you got?!”).

Fourth, a narrative should feature *integration* to express the sentiments in the context of larger life (i.e., a life lesson or unified life story). The story should tie up loose ends with details, uncertainties, and inconsistencies to resolve these parts of the story into a completed ending. From our narrative, the details do not necessarily add up until the instructor connects his ideas about money, relationships, and what it means to be rich (e.g., “And I consider myself a very rich man because I have friends. I am happy”).

Fifth, a narrative should have an overarching positive *emotional tone*. While an instructor may disclose negative subject matter (e.g., drug dealers, poverty, narcissism) during the narrative, the overall essence of the narrative should be positive and hopeful, as it was rated in our pilot study. The overall message and takeaway should communicate a positive message to be perceived as more effective (Koenig Kellas, 2018). In our narrative, the story ended with the premise that money and possessions are not required to be happy and that students should derive happiness from the relationships they forge with others.

Sixth, the narrative should be perceived as realistic and honest. Perceived realism allows students to easily accept the narrative’s event as something they could encounter in real life. Furthermore, the details of the narrative should be perceived as genuine, as students do not appreciate personal information that seems contrived or exaggerated (Lannutti & Strauman, 2006). Our narrative was made up and adapted from an existing story (Baerger & McAdams, 1999), so it was untrue for our instructor who delivered it. However, we piloted tested it and students perceived that the events could have happened to him. It is possible that a more embellished or incredible story might have been rejected by students as unrealistic.

Finally, in terms of frequency and timing, instructors that feel comfortable sharing stories with their students should consider sharing good narratives approximately once every 10 minutes to break up the monotony of the standard lecture, add variety to the lesson format, and sustain students’ attention for the duration of the class (McKeachie & Svinicki, 2014; Walls & Cather, 1987).

Limitations and future directions

This study has several limitations. The first limitation is that this is only a single study with a quasi-experimental design, yielding relatively small effect sizes for student short-term recall and affect. Kline (2013) asserted that the behavioral science community must perform replication studies to be able to generalize findings beyond a one-shot study.

Without replication, most of the claims from one-shot studies have “the staying power of castles in the sand” (Kline, 2013, p. 270). A replication of our study using a different lesson topic, student sample, and test of retention is warranted to make stronger claims about narratives and student short-term recall.

Another limitation includes the effect of short-term recall. The participants were given the quiz immediately after the instructor completed the lecture. This may have allowed students to easily recall the answers for the test of retention without truly retaining the important lesson material in the long term. And in terms of cognitive load theory, over the course of an entire 50-minute lecture where instructors typically tell multiple stories per class session (Downs et al., 1988), the germane and extraneous loads tied to students’ working memory limits should be affected more by narratives.

A third limitation is that students were not required to take notes during the lecture conditions. Students were merely asked to “please listen carefully to the instructor in the same manner that you would for your own college instructor.” In a typical college classroom, most students would take notes to help remember important lecture material for a future examination and previous research suggests that notetaking helps students learn (Titsworth, 2001), but they might not take notes on the narrative itself.

The fourth limitation is that a white cisgender male instructor taught in the lectures. We are two white, heterosexual cisgender male researchers, and we must remind ourselves, as should other researchers, that our research becomes less generalizable when we do not consider women, faculty of color, or queer faculty in designing our teaching. Would our study’s findings be the same if we featured a black instructor, a trans instructor, or an instructor with a disability? Would the instructor self-disclosures offered in this story produce the same results? Simpson (2010) asserts that narratives shared by people of minority populations “significantly shift the content and process of learning in many communication classrooms” (p. 368). Because our study did not utilize instructors from these populations, the generalizability of the findings are limited.

A fifth limitation is that the quasi-experiment did not control for the instructor’s non-verbal communication when providing the lesson and sharing the story. Perceived immediacy behaviors, those communication behaviors that enhance psychological closeness with others, may have positively affected students’ recall and attentional focus (Kelley & Gorham, 1988). Future narrative studies should control for the instructor’s immediacy behaviors (e.g., vocalic variables such as vocal variety or rate of speech) to examine how these behaviors may impact students’ perception of an instructor’s narrative.

Future narrative research in the classroom should also examine the multilayered elements of narratives to help instructors better understand the most effective types of stories. As mentioned above, Muddiman and Frymier’s (2009) research found that instructors use personal stories to make class content more relevant to students. Future studies may wish to identify topics that are perceived to be the most relevant to students because the relevance of the instructor narrative may be what causes attentional focus and learning gains for students. Another unexplored element of narratives may lie in their ability to include humor to spark situational interest; a temporary state of arousal due to specific features of a situation that may lead to focused attention and positive emotional tone (Krapp, Hidi, & Renninger, 1992). More specifically, Bolkan and Griffin (2018) found that the use of instructor humor, including the use of funny stories, catches student interest (Bolkan & Griffin, 2018). Future research may wish to examine how the combination of

humor and narrative functions as an interest-catching mechanism. Future research may also examine narratives in a student-centered approach. Researchers could, for example, ask students to write a story connecting lecture material to a personal past experience. The researchers then could evaluate if students' understanding of the material was accomplished in the same way that family members make sense of events through retrospective storytelling (Koenig Kellas, 2018). Finally, researchers might also experiment with different storytelling formats such as telling one grand narrative over the entire length of a class while incorporating important material throughout the lesson.

Conclusion

Most, if not all, instructors share stories when they teach. Personally speaking, some of these stories have stuck with us throughout the years as informative learning experiences. Empirically speaking, our quasi-experiment examined how instructor narratives impact student recall, affect, and sustained attention. Ultimately, we suggest instructors might be wise to intermittently incorporate good narratives as key point summaries between periods of heavy material to break up the monotony of standard lecture, sustain student attention, and potentially aid student recall. It may be that when an instructor shares a personal narrative in a teaching context, they bridge the gap between cryptic classroom theory and context-dependent practical application; allowing students to more easily recall important classroom material. Instructors may be able to use narratives to help students connect to lesson content on a deeper level and apply it to their personal lives. By doing so, instructors might also help their students like them, too. We have all likely personally experienced the power of a good story in the classroom; we hope that scholars continue to explore this power theoretically and empirically.

Note

1. The lecture videos are available upon request by the first author.

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Notes on contributors

Stephen M. Kromka (M.A., West Virginia University, 2017) is a doctoral student in the Department of Communication Studies at West Virginia University.

Alan K. Goodboy (Ph.D, West Virginia University, 2007) is a professor in the Department of Communication Studies at West Virginia University.

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Appendices

Appendix A—Narrative adapted from Baerger and McAdams (1999)

To understand my life and my view of happiness, you would probably have to know the people who I love. You'd probably have to know my wife, my children, my sister, my best friends, and you would, by knowing them, you would probably know me. That's my cheesy answer, but they're what I live for, they're all that truly matters to me in my life. My brother, who was a dealer, a drug dealer, and did time in New York, he works for people in organized crime. He's a drug dealer. He's a legitimate drug dealer. He was also a narcissist who suffered from depression. But once, I hadn't seen my brother for like 10 years and he came over here to Morgantown. And he saw how I was living at the time, which was, you know, in a \$200-a-month apartment. On an old, ripped-up mattress, you know, but I was just thankful I had somewhere to sleep. I had finished college, still kicking around and coping with things by always looking on the bright side. I was satisfied, but still sorting my life out, and he told me, "I have, you know, I have 20 Armani suits." He said, "I wear \$300 shoes, I've got, you know, I live on the beach in sunny San Diego on a piece of land that's worth, you know, \$1,000,000. I got this, I got that." He was bragging about all of it to me. He says to me, "You can't be happy. What do you got? You know, you've been here in West Virginia all these years. You got nothin'! What do you got?!" And, ah, I pulled out my

beat-up flip phone, opened up my contact list, and handed it to him, and I said, “This is my bank account.” And he said, “This isn’t a bank account, it’s your contact list.” I said, “Yeah.” I said, “This is filled with all of the names of the people who I care about in this world and who care about me.” I said,

They’re all over, you know, they’re all over the world. Some are in West Virginia, some in Texas and Pennsylvania, in Austria, in Italy, and I can go to any of these people, I could buy a plane ticket and go on a trip to see these people, and when I see them, their faces will light up. Rather than \$300 shoes, I could go visit some of my best friends in Texas and we would have the best time just taking walks and sharing stories. They’d be glad to see me. I’d be glad to see them. They would open their homes to me. They would let me sleep on their couch. And I could probably stay with them as long as I want.

I said, “So, this is my bank account. And I consider myself a very rich man because I have friends. I am happy.”

Appendix B—Lecture transcript

-PLAY LECTURE VIDEO-

*[Indicates Title of Slide]

*Indicates words that appeared on each slide

- (1) [**How To Be Happy**] Good afternoon everyone. My name is Ryan Thompson. Today’s lesson is entitled “How to Be Happy.” So we are going to be talking about research and findings that have been found to lead us to that one thing that all of us want in life: happiness.
- (2) [**The Factors We Believe Affect Our Happiness**] We define happiness as our “overall perception and satisfaction with our quality of life.” Many people seem to take the “If only” approach to happiness. “If only I was beautiful.” “If only I was smarter.” “If only I lived on the beach.” “If only I was rich, then I’d be happy.” Many people believe that these factors impact our happiness. So, right now, we are going to talk about the research that may suggest that if this is true or not.
 - (a) First, let’s look at *beauty*. Maybe some time in your life you have felt that “If only I was more beautiful or handsome, then I’d be happy.” Studies on *objective beauty*, beauty judged by independent observers, show us that objective beauty has virtually no relationship with your happiness. Indeed, one study by Diener, Wolsic, and Fujita (1995) found a small correlation between perceived attractiveness and happiness, though they concluded this was because happy people make themselves more beautiful than most. In short, changing your beauty is not going to change your happiness.
 - (b) Next, let’s talk about *intelligence*. Are smarter people happier or is ignorance bliss? Some research has found that happy people believe that they are smarter than others. However, when tested on intelligence, happier people did not score higher than people who reported being less happy. Overall, it appears there is no relationship between your cognitive intelligence and happiness.
 - (c) Then there is *geography* and happiness. The idea that “If I could live in Hawaii, then I’d be happier.” We often fantasize about living somewhere else because we are sure that it would improve our happiness. Research has found that weather does impact our daily moods, but it doesn’t necessarily impact your satisfaction with life. In 1998, researchers polled college students in the Midwest and in Southern California. Both Midwestern and Californian students thought that the Californians would be happier, but, in fact, the students from the two regions were identical in their happiness. Students from both regions thought Californians would be happier for the same reasons: better weathers and all of the recreational opportunities that California has to offer. This is an example of *focusing illusion*. Focusing illusion is the tendency to focus on the good aspects; the fun and sun of California. And forget about the drawbacks; the crowds, traffic, and high price of California living. In conclusion, people seem to be similarly happy no matter where they live.

- (d) Lastly, we have *money*. At one point in your lives, I'm sure that all of you have felt that if you had more money that you could improve your happiness. You could buy a bigger house. You could go on longer vacations. You could buy a cooler car. However, after you have the essentials of life such as food, water, shelter, and affiliation with others, there's not much happiness to be bought. So why doesn't more money equal more happiness? The primary reason is the *Law of Habituation*. This law states that when you are constantly exposed to something, good or bad, you tend to get used to it over time. That means that the law of habituation is helpful when it comes to bad things. However, it is not helpful for good things because it puts one on the *hedonic treadmill*. This is the idea that we purchase something because we think it will improve our happiness and maybe it does for a time. But over time, we adapt to the new thing and our happiness returns to where it was before the purchase. So does money buy happiness? Not really.
- (3) **[Predictors of Happiness]** So we just talk about some factors and circumstances that do not affect happiness. But now, what are some things that do affect happiness? We are now going to talk about a few predictors of happiness.
- (a) The first thing that affects your happiness is your *subjective perception*, which is your perspective or outlook on life. Your perception can make all the difference. Researchers find that your perceived attractiveness is much more predictive of your happiness than your objective appearance. Furthermore, people's subjective perceptions of their wealth are much more strongly associated with their happiness than is their objective wealth.
- (b) Getting more specific about one's subjective perception, we must examine the importance of *gratitude*. *Dispositional gratitude* refers to the individual difference that reflects the extent to which people feel thankful for receiving help from others. Dispositional gratitude is the most reliable predictor of happiness. Studies have shown that gratitude for your income is much more predictive of happiness than your actual income. The extent of your possessions is not so important to your happiness. Rather, the critical variable is how thankful you are for your possessions.
- (c) Another variable dependent on one's subjective perception is how one perceives *simple pleasures*. Also known as mundane pleasures, simple pleasures are everyday activities that can be enjoyed relatively frequently. In 1978, researchers compared lottery winners to nonwinners and victims of accidents. They found that lottery winners' happiness was not significantly greater than the happiness of nonwinners and victims of accident. However, lottery winners enjoyed simple pleasures much less, which may explain why they were not any happier compared with the other two groups. Simple pleasures are important to happiness for two reasons. First, they may happen much more frequently than spectacular pleasures. Second, frequency of positive experiences is more important than intensity when it comes to your happiness.
- (d) Lastly, another important predictor of happiness is one's ability to cope. *Coping* is defined as how we "constantly change cognitive and behavioral efforts to manage specific external or internal emotional stressors." There are two strategies that we use to cope. There is the "active-movement-towards" strategy. This involves active acceptance, emotional expression, and positive reappraisal of negative situations. There is also the "active-movement-away" strategy, which includes mental disengagement from a stressor. Individuals who are able to utilize these two strategies report being happier than those who do not use such strategies.
- (4) **[How You Spend Your Happiness Money Matters]** While money may not necessarily buy us happiness, the way that we spend our money for enhancing our happiness does matter.
- (a) We live in a culture that likes things and how things may make us happy. We may think of this as *materialism*; the belief that the primary path to happiness is through material possession. The philosophy that "he who dies with the most toys wins." Paradoxically, research suggests that materialism is likely to inhibit your happiness. College studies found that students who put a greater value on money were more unhappy than those who valued love. In 1993, Kasser and Ryan found that the more financial aspirations a

person had, the less happy they were. Materialists have also be found to be more depressed, narcissistic, and have more financial problems. Materialists have also been found to not only have less gratitude, but that materialism degrades gratitude. If you are always looking at what you don't have and focusing on what you lack, it's difficult to be grateful for what you have.

- (b) So what is the best way to spend on money to make us happy? If you had \$2,000 to spend on improving your happiness, how would you use it? Your money may be better spent on a *material purchase* (such as a television, computer, or stereo) because these items should last longer than an *experiential purchase* (such as a vacation or concert), and thus, you should be able to derive more pleasure from these things over time. That makes sense. However, research has found that we are better off spending our money on experiences rather than things for a number of reasons. First, researchers have found that our memories of positive experiences improve over time. Whereas the joy of purchasing that new television quickly wears off, that wonderful view from the Eiffel Tower on your French excursion only seems to grow in our memories. Second, experiential purchases are more resistant to upward social comparison, in which we compare our things and experiences to those who have more and better possessions and experiences. Third, experiential purchases have more social value. One may feel more happiness talking about their trip to Hawaii than talking about their new Mustang. Finally, experiential purchases are more important to our identity. They can tell both ourselves and others more about who we really are.

(5) **CONDITION 1—EXAMPLES:**

[3 Key Points] Now, to summarize what we have learned today, here are the three key points of the material:

- (a) Factors and circumstances such as *beauty, intelligence, geography, and money don't affect happiness*. It doesn't matter if you have 20 Armani suits and live in sunny San Diego, it doesn't make you any happier than someone who doesn't have those things.
- (b) *Dispositional gratitude, simple pleasures, and coping are predictors of happiness*. You can have an old, ripped-up mattress, but just thankful that you have somewhere to sleep. You can also appreciate little things like taking walks and sharing stories, and cope by always looking on the bright side.
- (c) Lastly, *buying experiences are better for one's happiness than material purchases*. Rather than \$300 shoes, I could go visit my some of my best friends in Texas.

[**How to Be Happy**] In conclusion, the "If only" approach to happiness may not be the best approach. This brings us to the end of the class material. Thank you all very much for your time today. I hope that you all enjoyed this class on "How to Be Happy" and I hope that all of you take a little of this information with you when you leave today.

Thank you for listening and have a great day. -END-

-END LECTURE VIDEO. ADMINISTER POST-TEST QUESTIONNAIRE-

CONDITION 2—NARRATIVE:

I would like to conclude our lecture today with a little story, which I feel summarizes the three key points in our lesson. So, I would like to share with all of you my own personal take on happiness.
NARRATIVE (in Appendix A)

[**How to Be Happy**] In conclusion, the "If only" approach to happiness may not be the best approach. This brings us to the end of the class material. Thank you all very much for your time today. I hope that you all enjoyed this class on "How to Be Happy" and I hope that all of you take a little of this information with you when you leave today. Thank you for listening and have a great day. -END-

-END LECTURE VIDEO. ADMINISTER POST-TEST QUESTIONNAIRE-