THE EFFICACY OF FILM AS A TOOL FOR SOCIAL-EMOTIONAL LEARNING

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ABSTRACT

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The purpose of this study is to test the efficacy of using film and television clips as a tool for teaching emotion in conjunction with standard written materials. Developing and assessing the effectiveness of an educational tool for social-emotional learning is critical to address the gap in the literature regarding ways to improve emotional recognition, understanding, and labeling skills in adults. The specific goals of this study are threefold:

1. Develop an enhanced tool for social-emotional learning (as outlined in the ability model of emotional intelligence) that utilizes film and television clips to enhance learning.
2. Assess the efficacy of the enhanced learning approach by comparing measures on emotional granularity and recognition to the standard group.
3. Assess the retention of the acquired skills over time by additional comparisons between the enhanced learning and standard groups.

For the purpose of testing the efficacy of this tool, four emotions have been selected to be tested: shame, guilt, humiliation, and embarrassment. These emotions were selected because existing research demonstrates a positive relationship between emotional recognition of these affects and adaptive mental health outcomes. Additionally, the literature shows increased emotional regulation benefits for distinguishing negative emotions compared to positive emotions. Last, these emotions are commonly used, conflated, and confused words.

The study, which includes a pretest, standard and enhanced learning, posttest, and two-week follow-up posttest, will collect quantitative data from a sample of 118 participants.

This thesis will first examine the relevant literature regarding emotional intelligence, storytelling and emotion, and teaching tools. Second, it will describe the creation of the current tool, including the selection of emotions and film clips. Next, it will describe how emotional granularity, understanding, and recognition will be tested. Finally, it will examine the results of the study and the larger implications for the findings.

This study attempts to explore address the gap in the literature regarding strategies for teaching emotion recognition, labeling, and understanding.

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LITERATURE REVIEW

Theories of emotional intelligence (EI) and social and emotional learning (SEL) propose that an increased ability to recognize, understand, and label emotions is positively correlated with an increased ability to regulating emotions (Feldman Barrett et al. 2001). For students, being able to recognize and regulate emotions is correlated with increased academic achievement, student behavior, and both student and teacher well-being (Hoffmann et al. 2020). For medical professionals, recognizing and regulating emotions has benefits such as better relationship quality, communication, health outcomes, and diagnoses (Blanch-Hartigan 2011). In organizations, EI is linked to better job performance (Joseph and Newman 2010), lower burnout (Shin et al. 2014), job satisfaction, and organizational commitment (Thoresen et al. 2003). Other benefits of EI include increased subjective well-being (Sánchez-Álvarez, Extremera, and Fernández-Berrocal 2016), coping strategies such as the positive reinterpretation of events and problem solving (Peña-Sarrionandia, Mikolajczak, and Gross 2015), and healthy interpersonal relationships (Mayer, Caruso, and Salovey 2016).

Emotion and Culture

In an increasingly diverse and multicultural society, cross-cultural communication is exceedingly important. However, cross-cultural bias in communication and differing cultural scripts can limit or inhibit an individual's ability to recognize and express emotion with those from a different culture or race (Tsikandilakis et al. 2019).

The dialects theory of emotion suggests that while the expression of basic emotions is a "universal language," there are multiple dialects that influence both how people express and recognize emotions (Elfenbein et al. 2007). For example, people in the Western hemisphere are more likely to show high-intensity emotions and are not as effective at recognizing low-intensity

emotions, perhaps because they are more subtle. By contrast, people in the Eastern hemisphere are more likely to express and acknowledge positive valence emotions than negative valence emotions, possibly because positive emotions are regarded as pro-social and more socially acceptable (Tsikandilakis et al. 2019). Because of the different dialects of basic emotion, there is an "in-group emotional recognition advantage" (Tsikandilakis et al. 2019:920).

When shown own-culture fearful faces both Japanese and Caucasian participants had higher activation in the amygdala than when shown similar faces from other cultures (Chiao et al. 2008). Higher activation in the amygdala, which processes fear and emotion, for own-group individuals suggests that individuals can recognize emotion in, and therefore empathize better with, people from their own culture. Other studies confirm this, and though the data are mixed about whether the bias happens consciously or unconsciously, the data repeatedly show that participants are worse at recognizing other-culture and other-race emotions than they are at recognizing that same emotion within their own culture and race (Tsikandilakis et al. 2019). Because nonverbal communication such as facial expressions performs 93% of communication, this poses a significant problem (Noroozi et al. 2019).

In addition to a decreased ability to read and analyze non-verbal cues, differing cultural scripts, and lexical semantics can interfere with cross-cultural emotional communication as well. The way members of different cultures internalize socialization creates different cultural scripts for how people talk in general, and what emotions are acceptable to express. Not all individuals of a certain culture follow their cultural script, but most are aware of the social expectations of their society (Goddard 2002).

For example, Polish and Americans have different cultural scripts for expressing emotions. The American script follows the "smile code" and emphasizes expressing positive

emotions and suppressing negative emotions. This is not surprising, as Americans tend to value enthusiasm much more than other cultures (Sommers 1984). By contrast, Polish people tend to value authentic expression of emotion and express how they truly feel, whether positive or negative (Goddard 2002). One Pole described their adjustment to the smile code in Americans as learning that "When Americans say it was great, I know it was good. When they say it was good, I know it was okay. When they say it was okay, I know it was bad" (Sokol 2005:176). Contrasting both American and Polish cultural scripts, in Malay culture there is an emphasis on good-nature calm which discourages the display of emotion (Goddard 2002).

Because of the complex role culture plays in the recognition and display of emotion, being born in the United States was part of the inclusion criteria for the current study.

Emotion and Language

Language plays an important role in how people experience and understand emotion. Each language has its own vocabulary for emotion words that correspond to unique affective states. Though many of the affects represented by emotion words correspond to similar affects in other languages, they usually have small but significant differences. For example, the Polish word for happy, szczęśliwy, is limited to "rare states of profound bliss, or total satisfaction with serious things such as love, family, the meaning of life" (Besemeres 2004:142). Other languages have multiple words for an affect or emotion, such as the Greek words for different kinds of love: storge, philia, eros, and agape (Wuest 1959). Some languages even have words for emotions or affects that have no direct translations, such as the German word schadenfreude which captures the feeling of "deriving joy in the misfortune of others" (Kalra and Narang 2019:3885). The semantic differences across languages make translating emotion words an insufficient solution to the cross-cultural study of emotions. Even back translating, the practice

of translating a word and translating it back, only ensures the best translation, not equivalence of meaning (Goddard 2002).

Not only does language communicate emotion, it also shapes it. The constructionist theory of emotion dictates that the vocabulary and concept knowledge one has for emotions influences not only how emotion is regulated, but also how stimuli are perceived and experienced in the first place (Lindquist, Satpute, and Gendron 2015). This theory is supported by a multitude of studies that compare those who have access to certain relevant emotion words to those who lack those words or have them suppressed (Lindquist et al. 2015). In one study, semantic satiation, the act of repeating a word until it loses its meaning, was used to suppress access to the relevant emotion words, the participants were slower and less accurate at matching similar emotional facial expressions than the control group that still had access to the word (Lindquist et al. 2015). In a similar study, individuals with semantic dementia, a disorder that damages an individual's ability to recall meanings of words, and control participants were given 36 photos to sort into categories based on emotion. The subjects without semantic dementia sorted the faces into six categories based on specific emotions (fear, anger, etc.), while the subjects with semantic dementia only sorted them based on valence (positive, negative, or neutral) (Lindquist et al. 2015)**.**

It makes sense, then, that people who speak different languages perceive and experience emotions differently based on the emotion words they have to anchor their perception of stimuli. The same set up used in the semantic dementia study was used with American English speakers and individuals that speak Herero, a dialect used by a remote African Himba tribe. The American English speakers and Herero speakers each sorted the expressions similarly to others who spoke the same language, but differently from those who spoke the other language (Lindquist et al.

2015). Because of the large role language plays in both communicating and perceiving emotion, participation in this study was restricted to participants with both English as their first language and fluency in English.

Emotion and Gender

Gender plays an important role, whether consciously or subconsciously, in the socialization process, and therefore influences the way people perceive, regulate, and express emotions (Brody, Hall, and Stokes 2018). Though oftentimes thought of as a binary category of men and women, gender is much more complex and includes many other identities. Gender identities, defined as people's concept of themselves as male, female, a mix of both, or neither, have prescribed and socially constructed gender norms concerning how individuals "should" behave (West and Zimmerman 1987). These prescriptive gender norms, along with the differing experiences of genders in socialization experiences, social motives, trauma experiences, and power status imbalances, influence the way people who identify with different genders experience and express emotion (Brody et al. 2018). Additionally, gender cannot be studied as an isolated variable as the intersectionality of other identities shapes gender norms (West and Zimmerman 1987).

Across many cultures, women are believed to be more skilled at recognizing emotion and more emotionally expressive than men (Brody et al. 2018). Additionally, there are stereotypes for the type of emotion women and men experience and express. Women are perceived as more likely to experience shame, guilt, and embarrassment (among other emotions), whereas men are perceived as more likely to experience anger, pride, and contempt (Brody et al. 2018). European-Americans are the most likely to hold these stereotypes compared to Asian-American, Hispanic-American, or African-American individuals (Durik et al. 2006). These stereotypes tend to

correlate with data on observed and self-reported emotional expression (Brody et al. 2018). This has an impact on emotional recognition, as shown in a study that examined the impact of gender on emotional recognition that showed that both genders could better identify emotion expressed on women's faces than men's (Dimitrovsky, Spector, and Levy-Shiff 2000). However, emotional experience differs from emotional expression, and men and women are much less likely to differ significantly in self-reported experience than expression (Brody et al. 2018).

Though many of the stereotypes society has about gender and emotion have some correlational basis in data, stereotypes can become self-fulfilling prophecies because of the gender roles created from them (Hall and Carter 1999). Societies stereotypes about gendered emotional expression also produce bias. For example, when the same face was altered to appear female or male, the female faces were perceived to be sadder than the male faces (Hall and Carter 1999). This bias does not just apply to the extent of expression, but even to what emotion is being expressed. When there was an angry face near a man with a happy face, he was more like to be identified as expressing anger and when there was a happy face near a woman with an angry face, she was more likely to be identified as expressing happiness (Neel et al. 2012). Additionally, when women are identified as expressing anger, they are perceived to be angrier than a man with the same expression because of the stereotype that women do not usually express anger, so if they do they must be extremely angry (Hess et al. 2000).

Stereotypes shape display norms, the norms that expression of emotion by males and females in a culture. Display norms prescribe which emotions are desirable or acceptable to express, how they should be expressed, and when and where it is okay to express them (Brody et al. 2018). Each culture has its own set of display norms, though many cross-cultural themes are shared by many cultures. For example, in many cultures, it is seen as more desirable for women

to express happiness, sadness, and fear than men, and more desirable for men to express fearlessness, anger, contempt, and disgust than women. However, just because the expression of certain emotions is less favorable for one gender does not mean that gender experiences them less. Still, violating these display norms can have consequences (Brody et al. 2018).

In comparison to women, men suffering from depression were evaluated more negatively and seen as "unmanly" (Brody 1999). This adds to a pre-existing stigma in seeking help and support when dealing with mental illness (Kim, Thibodeau, and Jorgensen 2011). Women who express anger are perceived as having a lower competence (Brescoll 2016). Women, who already frequently have their competency in the workplace challenged due to gender bias, face even more bias if they deviate from this display norm (Hess et al. 2000). Other consequences of violating display norms include social rejection and discrimination (Brody et al. 2018).

In order to minimize the consequences of norm violations, while at work many men and women engage in surface acting, the practice of trying to appear professional by repressing the expression of one's true feelings (Brody et al. 2018). As a result of surface acting, women report more emotional-distress, burnout, and feelings of inauthenticity than men as a result of the gendered expectation that women should be cheerful and suppress the expression of negative emotions (Scott and Barnes 2011). Surface acting may also be used in the presence of a stereotype threat, such as a woman being evaluated on leadership skills after self-identifying gender and associating a related stereotype that emotional women are bad leaders (Brody et al. 2018).

Display norms also affect behavior in interpersonal relationships outside of work. In heterosexual relationships, women are more likely to talk about their emotions with men, whereas men are more likely to withdraw from conflict and stonewall than women (Smith et al.

2009). These gender differences increase the more stressful a situation is (Vogel et al. 2003). In a study with lesbian, gay, and heterosexual couples, women experienced more sadness when they received a message conveying conflict than men, and lesbian women used more humor and showed more excitement and joy than gay men (Gottman et al. 2003). In a study across same and cross-sex couples, women were more emotionally demanding (i.e. nagging, accusing, blaming), while men were emotionally avoidant (i.e. withdrawing, disengaging, diverting attention) (Baucom, McFarland, and Christensen 2010).

In terms of the skills involved with emotional intelligence, including recognizing, understanding, and regulating emotions, women tend to score higher than men in all areas on emotional intelligence tests (Day and Carroll 2004; Mayer et al. 2016; Tsikandilakis et al. 2019). This result is reinforced by real-world studies that show that women showed higher emotional intelligence in relationships when significant problems arise than men, and female medical students and doctors exceed male colleagues in emotionally intelligent interpersonal communication (Brody et al. 2018).

Emotional Intelligence

The term emotional intelligence (EI) was first brought into academic literature in 1990 and defined as "the ability to monitor one's own and others' feelings and emotions, to discriminate among them and to use this information to guide one's thinking and actions" (Mayer, DiPaolo, and Salovey 1990:189). EI faced criticism from scholars in different academic fields, many of whom thought of emotions as destructive forces that worked counter to logic and reasoning, rather than alongside them (Brackett et al. 2018). With the growing popularity of the idea of the cognitive loop between mood and judgment and more scholars questioning the idea that IQ was the main correlating factor to success, the affective revolution began. As more

evidence linked IQ tests to race and class, it made way for the idea that there are ways to be smart other than high standardized test scores (Brackett et al. 2018). Though there has been research on the importance of emotions in cognition and decision making processes since Darwin, emotional intelligence theory asserts that people vary in the ability to make useful information out of emotions (Brackett et al. 2018).

Mayer and Salovey's concept of emotional intelligence, now referred to as the ability model of EI, focuses on a person's ability to recognize, understand, use, and regulate emotions (Lopes 2016; Mayer et al. 2016). Each of these abilities is distinct and increases with age and experience (Mayer, Caruso, and Salovey 1999). There are other models of EI, notably the Bar-On model, Boyatzis-Goleman model, and trait emotional intelligence model, which are all mixed models with elements of EI, personality traits, and behavioral preferences. The mixed model approach is often criticized for including preferences and personality traits that should not be conflated with intelligence. Additionally, because the ability model focuses on abilities, it conforms to the idea of intelligence and makes understanding the impact of EI on outcomes more clear (Brackett et al. 2018). For this reason, the ability model was chosen as the main framework for EI in this study.

According to an updated framework of the ability model, there are four branches of EI: perceiving emotion, facilitating thought using emotion, understanding emotions, and managing emotions (Mayer et al. 2016). The first branch, perceiving emotion, focuses on a person's ability to perceive emotion in self, in others (including others verbal and nonverbal communication), and in content such as art and media (Brackett et al. 2018; Mayer et al. 2016). More advanced skills include understanding the expression of emotion in different cultures and contexts and identifying inauthentic or inaccurate emotional expression (Mayer et al. 2016). This branch is the

foundation on which the other branches build, as an ability to perceive emotion is needed before one can use, understand, or regulate emotions (Mayer et al. 1999). The abilities of the second branch of emotion, facilitating thought using emotion, include those which fall under "generating emotions to facilitate thought" and "tailoring thinking to emotion" (Mayer et al. 2016:294).

The third branch of EI is understanding emotions. This branch includes the ability to label emotions (emotional granularity), understand the contexts in which certain emotions are elicited and the consequences, affective forecasting, understanding complex or mixed emotions, and understanding emotions in different cultures (Feldman Barrett et al. 2001; Mayer et al. 2016). Increased emotional granularity is correlated to lower levels of depression, higher self-esteem, and lower levels of neuroticism (Brackett et al. 2018). Finally, the fourth branch is managing emotions, which involves the ability to be open to positive and negative valence emotions, engage or disengage with emotions depending on if they are helpful, and manage one's own and others' emotions to achieve a desired outcome (Mayer et al. 2016). The goal of the present study is primarily focused on building EI in the first and third branches, perceiving and understanding emotion.

Increased EI is strongly correlated with a number of personal, professional, academic, and health benefits (Brackett et al. 2018). In interpersonal relationships, those with higher EI are seen as more interpersonally sensitive, report better relationships with friends and romantic partners, have more secure attachment styles, and are better able to use emotions in a productive way (Brackett, Warner, and Bosco 2005; Fernández-Berrocal et al. 2014; Kafetsios 2004; Lopes et al. 2004, 2005). In academics, emotion regulation is the best predictor of academic success and higher EI is correlated to increased SAT scores (Brackett et al. 2018; Di Fabio and Palazzeschi 2009). In the workplace, EI is linked to performance, leadership ability, stress levels,

burnout, and workplace interpersonal relationship satisfaction (Brackett et al. 2018; Joseph and Newman 2010).

Despite the overwhelming evidence that the abilities associated with EI are important for all aspects of life, the recent development of this model has resulted in a lack of literature on the impact of EI ability training (Brackett et al. 2018). So far, only a few studies have examined how EI can be increased through certain means, such as classes, and the results have only been tracked short-term (Brackett et al. 2018).

Social and Emotional Learning

One way that EI abilities are built in is Social and Emotional Learning (SEL). Introduced in 1994, SEL strives to promote skill building among youth to foster personal relationship skills (Brackett et al. 2018). Over 200 studies of SEL programs in schools have shown an increase in social-emotional skills, behavior, and academic success through these programs (Durlak et al. 2011). There are two SEL programs that meet the requirements of the Collaborative for Academic, Social, and Emotional Learning (CASEL) standards of being sequenced, active, focused, and explicit: the RULER and PATHS curriculums (Anon 2015; Brackett et al. 2018).

The five step RULER approach to SEL includes "*recognizing* emotions, *understanding* the causes and consequences of emotions, *labeling* emotions with a nuanced vocabulary, *expressing* emotions adaptively, and *regulating* emotions effectively" (Hoffmann et al. 2020:106). This prekindergarten to high school approach equips teachers with the skills they need to teach SEL in the classroom and emphasizes the role of emotion regulation in the healthy development of children. It focuses on the benefits of building an emotional vocabulary, proposing that the more accurately someone can identify the emotion they are experiencing, the more likely they are to be able to regulate that emotion. By using tools like the Mood Meter,

teachers and students check in and practice labeling emotions, work to understand antecedents and consequences of emotions, and talk about how to regulate emotions (Brackett et al. 2018; Rivers et al. 2013). This approach has been largely successful, and classrooms that use the RULER intervention report higher grades, student autonomy, warmth, leadership, and less bullying than those that do not (Rivers et al. 2013).

The promoting alternative thinking strategies (PATHS) curriculum is a prekindergarten through sixth grade program started to promote social emotional development for hearing impaired and deaf children, but it has been expanded to include students in general education (Greenberg 1993). PATHS "promotes emotional awareness, understanding, and recognition to help children choose adaptive approaches to interpersonal challenges" (Brackett et al. 2018:525). As a result of the program, children are less likely to externalize or internalize emotion, have lower depression rates, an increased ability to recognize, label, and understand emotions, and increase self and teach reports of social skills (Brackett et al. 2018; Greenberg 1993; Kam, Greenberg, and Kusché 2004).

Increasing Emotional Intelligence and Storytelling

While SEL and EI strive to teach similar sets of skills and abilities, SEL is mainly limited to prekindergarten to high school. Despite the positive outcomes of EI for adults as well as children and adolescents, evidence-based guidance for assessing and training EI skills in adults remains scarce (Lopes 2016). There is a gap between the theories and research and practical application of EI abilities, specifically emotional granularity and recognition as many EI programs focus on the regulation step (Lopes 2016). While film clips have successfully been used as an assessment tool for emotional recognition (Blanch-Hartigan 2011), as well as a way to elicit emotions in others (Gross and Levenson 1995; Schaefer et al. 2010), there is no research

showing the efficacy of using clips to teach emotional granularity and recognition, which is what this study is attempting to study.

Because emotions are shown through both verbal and non-verbal cues such as body language, intonation, facial expressions, behavior, and spoken language, and because a person's identity and past experiences can largely determine how one antecedent may result in different emotions for different people, the visual storytelling power of film clips may prove to be an effective teaching strategy (Ekman 1992; Miskam et al. 2014). An example of the importance of context in identifying emotion can be seen in how we may confuse fear and anger. Fear comes from a lack of power but can turn into anger if an individual attributes it to external factors (Haviland-Jones, Barrett, and Lewis 2008). Film clips give viewers the context of a character's history and current situation, allowing the audience to understand why a certain emotion is elicited from an antecedent and offering viewers insight into how the character processes and manages that emotion.

Additionally, storytelling has been used successfully as a tool for teaching emotion. A study across three schools had students participate in feeling words lessons where they learned twelve new emotion labels a year. One of the main ways these feeling words were integrated was through storytelling. Students were asked to identify how characters in books may feel in situations and share stories of when they experienced the feeling. The students who participated in these lessons had higher grades and teaching ratings of social emotional competence compared to the control classes. (Hoffmann et al. 2020). Storytelling is even used in textbooks and academic articles to help explain an emotion, such as in the Humiliation chapter of *The Self-Conscious Emotions: Theory and Research* (Tracy et al. 2007:310):

> Picture Jason, a seventh-grade boy. Jason is small for his age, not at all athletic, and dreads gym class. Unfortunately, gym class is where we find him, waiting with the rest of

> the students for the teacher to walk in and start class. As they wait the biggest boy in the class sneaks up behind Jason and yanks his gym shorts all the way down to his ankles. Everyone laughs at him. Imagine how Jason might feel and how he might react.

It is unlikely that the reader has experienced this exact situation. In fact, it may better serve as a teaching tool if they have not because instead of eliciting an emotion in the reader, which could cause withdrawal for strong negative emotions, or having the reader remember a situation, stories set the scene and showing the antecedent allowing the reader to use empathy and past experiences to infer the emotional reaction.

Though there is a gap in the literature regarding the use of visual storytelling (i.e., film or television) as a tool for teaching emotional granularity, there is a multitude of studies that have examined the emotional aspects of film. The Patient Emotion Cue Test (PECT) was created to test the ability of medical professionals to recognize emotion through verbal and non-verbal responses in patients. It consists of 47 clips of varied emotional strength of responses for anger, sadness, happiness, anxiety, or confusion, as well as emotionally neutral clips (Blanch-Hartigan 2011). The procedure for this study was helpful for the creation of the present study and led to the use of film clips not only as a tool for teaching emotion, but also for assessing emotional recognition in the posttest. This study also identified the benefits of emotion recognition in others for medical professionals, such as social and emotional competence, relationship quality, better communication, better health outcomes, and better diagnoses.

Film clips have also been used as a tool for eliciting emotion. Though emotional arousal is not the goal of the current study, some of the findings from these studies are important variables to consider. For example, participants who had seen the film from which the clip was selected reported greater levels of target emotion arousal (Gross and Levenson 1995). Although this could not be controlled for in the present study, it is an area for further research. Ideally, a

similar procedure used in both Schaefer, Nils, Sanchez, and Philippot's (2010) study and Gross and Levenson's (1995) study would be used in the current study. Both of these previous studies utilized an in-person lab for the survey and film clips which ensures all participants have a consistent experience and watch the clips in full (Gross and Levenson 1995; Schaefer et al. 2010).

Selecting Emotions

Previous studies examining the link between film and emotion mainly focused on and tested the basic emotions identified by Ekman: happy, sad, anger, fear, and disgust (Blanch-Hartigan 2011; Gross and Levenson 1995; Schaefer et al. 2010). These emotions are regarded as basic because they are considered biologically given and physiologically distinct (Ekman 1992; Kim et al. 2011). Though these emotions are important and widely tested in this area, they would not work for a study focused on emotional granularity or regulation for that very reason: they are clearly distinct and do not require high levels of emotional granularity to differentiate. Therefore, emotions that are used interchangeably or are often confused are more ideal. Additionally, the ability to distinguish and label negative emotions is linked with higher emotional regulation than being able to do so with positive emotions (Feldman Barrett et al. 2001). Therefore, granularity between negative valence emotions would have an increased potential for benefits than for positive emotions.

Many of the negative valence self-conscious emotions, those which are the result of "self-evaluative processes in relation to important standards for behavior," met these criteria (Kim et al. 2011:69). Shame, guilt, humiliation, and embarrassment are commonly confused, used interchangeably, or conflated despite describing different emotional experiences (Burgo 2013; Kim et al. 2011). Even dictionaries have these emotions confused, defining embarrassment as "a

feeling of self-consciousness, shame, or awkwardness" (Anon 2019), humiliate as "to make (someone) ashamed or embarrassed" (Anon 2021a), and shame as a "painful emotion caused by consciousness of guilt, shortcoming, or impropriety; a condition of humiliating disgrace or disrepute" (Anon 2021c). Though their dictionary definitions may make them seem synonymous, these four emotions have different antecedents, are regulated in distinct ways, and have very different impacts on social and emotional well-being (Kim et al. 2011; Tracy et al. 2007a). For example, there is evidence for the benefits of distinguishing these specific emotions. For example, there is an increased correlation between depression and shame than guilt (Kim et al. 2011). Pride, another self-conscious emotion, was excluded as it is neither a negative valence emotion nor likely to be confused with the other four emotions.

Defining Shame, Guilt, Embarrassment, and Humiliation

In order to teach and test emotional granularity for these emotions, correctly defining what they are and how they differ is paramount. According to Social Evaluation Theory, there is one thing that causes embarrassment: loss of esteem in the eyes of others (Modigliani 1971). Dramaturgic Theory takes a different approach and proposes that embarrassment is elicited when there is a disruption, or anticipation of disruption, of social performance rather than esteem (Silver et al. 1987). More recent studies, however, suggest that there are three types of events that can trigger embarrassment: committing a faux pas, being the center of attention, and being in a sticky social situation (Sabini et al. 2000). Following the more recent theory, embarrassment is defined as "self-conscious feelings of exposure and ungainly awkwardness; embarrassed people typically feel painfully conspicuous and clumsy" (Tracy et al. 2007:246). Embarrassment is an inherently social emotion; it happens when one violates a norm in front of others. By contrast, shame is "a darker, angrier, and more intense emotion" that happens alone (Tracy et al.

2007a:246).

The physical signs of embarrassment include but are not limited to: heart rate and blood pressure increases, the signature blush, looking away specifically down and left, awkward smiles, shifting body language, and covering of the mouth (Tracy et al. 2007a). People who feel embarrassed are likely to apologize, use humor, totally ignore what happened, or leave the scene. Rarely, in circumstances where another person is the cause of the embarrassment, people may react with anger. With shame, the aftermath is usually self-criticism and avoidance rather than acknowledging and attempting to repair as seen with guilt. Shame is focused on self-worth, and the self-view of someone in shame is that they are "fundamentally flawed or defective" and they attribute the failure to uncontrollable self-characteristics (Tracy et al. 2007:332). By contrast, guilt focuses on the shortcoming or failure with a view that the mistake was controllable. Shame usually results in avoidance and withdrawal, whereas guilt tends to result in approaching, repairing, or apologizing (Frijda 1989; Tangney and Dearing 2002).

Humiliation has not received as much attention in the literature as other negative valence self-conscious emotions. Loosely, humiliation is the feeling of being lowered in the eyes of others through loss of esteem or dignity in front of others (Tracy et al. 2007a). The person being humiliated feels as though it is an undeserved or unfair attack by someone who is trying to psychologically lower them. Not only is humiliation correlated with depression, but it can also quickly turn into anger which can motivate retaliation or violence. In a study examining 12 school shooters, all shooters described constant humiliation (Harter, Low, and Whitesell 2003).

The Current Study

The current study is an exploratory examination aiming to examine a new way to teach SEL skills and answer the following questions:

1. Does the use of film clips as an SEL tool increase the recognition, understanding, and labeling of shame, guilt, embarrassment, and humiliation as measured by the immediate posttest?
2. Does the use of film clips as an SEL tool result in better retention of the knowledge and abilities built on the initial study as measured by the two-week follow-up posttest?
3. Do men and women have statistically significant differences in the abilities assessed in the posttest, and do these abilities differ for specific emotions?

Question 1 addresses whether the new method of teaching SEL skills increases performance on the posttest evaluation. Though there are limited data available on the efficacy of film specifically as a tool to teach SEL skills, the results of related studies show promising results. Storytelling has been used as a successful SEL tool in schools where teachers ask students to identify emotions in book characters or tell stories about when they felt that emotion (Hoffmann et al. 2020). Additionally, film clips have been used as a tool to elicit emotions and as an evaluative tool to assess emotion recognition skills (Blanch-Hartigan 2011; Gross and Levenson 1995; Schaefer et al. 2010). Working from the available previous literature, this study proposes that using film clips to supplement a standard learning approach will be more effective for teaching SEL skills than using the standard approach alone.

Question 2 addresses whether the new method of teaching will allow for better retention of the knowledge and skills built on the initial survey after two weeks. Current SEL programs have seen relatively high levels of retention throughout their program which suggests that the enhanced group will not score significantly lower on the follow-up posttest than the immediate posttest, and that the enhanced learning group will not have a lower retention rate than the standard learning group (Rivers et al. 2013).

Finally, question 3 addresses gender differences in SEL skills. In general, women tend to score better on all aspects of emotional intelligence tests, including recognition and understanding, than men (Day and Carroll 2004; Mayer et al. 2016; Tsikandilakis et al. 2019). This previous research suggests that the women identifying participants of the current study may outperform the men identifying participants in their overall scores on the pretest and immediate posttest.

Because of cultural display norms, correct response rates for specific emotions may differ by gender, with women scoring higher on some emotions and men scoring higher on others. Women are perceived as more likely to experience shame, guilt, and embarrassment (among other emotions), whereas men are perceived as more likely to experience anger, pride, and contempt (Brody et al. 2018). Additionally, it is seen as more desirable for women to express happiness, sadness, and fear than men, and more desirable for men to express fearlessness, anger, contempt, and disgust than women (Brody et al. 2018). However, just because there are cultural norms for what society deems as acceptable expression for a certain gender does not mean one gender experiences that emotion less than another (Hess et al. 2000). In fact, a gender that would violate a display norm for expressing an emotion may be better at recognizing that emotion because of the social consequences they may face, causing them to be extra aware of it.

In previous studies on emotional recognition, women were better at recognizing fear, sadness, and happiness than men (Wang 2013; Zupan, Babbage, and Willer 2015). Based on this information, the current study predicts than women will have higher recognition rates for fear, sadness, and happiness than men. Though there is less empirical evidence for this, based on display norms it is also likely that men will have better recognition abilities for anger, contempt, and disgust than women.

METHOD

In order to assess whether film and storytelling is an effective tool to teach emotional intelligence abilities, standard learning, enhanced learning, and assessment questions were created and integrated into an online survey along with a pretest to assess baseline emotional understanding. Two weeks following the initial survey, a two-week follow up was administered to assess the retention of learning from the first study. The initial survey had 115 participants who were recruited using Prolific, a survey participant pool service (Anon 2021b). The IRB determined that this protocol meets the criteria for exemption from IRB review under 45 CFR 46.104 (3)(i)(A) Benign behavioral interventions (non-identifiable). All participants gave their informed consent and were informed that they may withdraw at any time by exiting the study.

Sampling

Population and sampling strategy.

The target population for this study is American adults who wish to build EI skills. The accessible population, however, was the American adults that were part of the Prolific participant pool. The entire Prolific population consists of over 153,000 people, and about 7,000 of those were eligible for the current study after filtering out those who did not met the inclusion criteria for the study (Anon 2021b). Participants were invited to participate in this study through convenience sampling via Prolific, a survey participant pool service. All participants are fluent in English with English as their first language and were born in the United States. Those with a background in social work and psychology were excluded from participation due to their increased knowledge of emotions. Additionally, participants had at least a 90% approval rating on at least five previous studies to ensure the quality of their responses.

Recruitment strategy.

Participants for this study were recruited using Prolific, an online survey participant pool service that connects interested participants with researchers (Anon 2021b). In order to encourage participation for the initial survey and retention for the two-week follow-up survey, participants were compensated for their time with $5 for each survey successfully completed. The payments were sent through Prolific.

Sample characteristics.

There were 115 participants enrolled in the initial study. All of the participants were born in the United States and English was their first language. There was a total of 66 women (57.4%) and 49 men (42.6%). The mean age of the participants was 23.4 years. The participants were randomly assigned to one of two groups: the standard learning group and the enhanced learning group. This sample size was selected as the estimated attrition rate for the two-week follow-up survey was 15% which would result in approximately 50 usable responses from each group. This is a similar size to other studies done testing emotion and film (Schaefer et al. 2010). The standard group and enhanced learning group had similar gender and mean age demographics for both the initial and follow-up studies (see Table 1). Race and ethnicity were not reported by Prolific.

Table 1. Demographic Characteristics of Participants

Survey 1				
	Standard Learning		Enhanced Learning	
	N	%	N	%
Women	33	58%	33	57%
Men	24	42%	25	43%
Total	57	100%	58	100%
Survey 2 (Two-week follow-up)				
	Standard Learning		Enhanced Learning	
	N	%	N	%
Women	27	55%	26	54%
Men	22	45%	22	46%
Total	49	100%	48	100%

Generalizability.

This study is meant to be an exploratory examination of a new method for SEL. It is not intended to be generalized to the general population, rather it is building the groundwork to address a gap in the literature. Because this study has a relatively small number of participants recruited through convenience sampling causing interaction effects of selection biases and the experiment variable as well as the creation of a new instrument that is not proven to be reliable, the results are not clearly generalizable to the general adult population.

Study Design and Procedures

Choosing a method.

Although an in-person study has many advantages and is the method many researchers such as Gross (1995) and Schaefer (2010) used in similar studies, an online survey was chosen because of the sampling and safety benefits it provided. During the COVID-19 pandemic, in-person studies posed a substantial risk to the health of both participants and researchers. Additionally, an online survey allowed for easier and less costly administration of the survey and

allowed for the recruitment of a larger range of participants. Online surveys are also easier for participants as they can complete it at a time and place that is convenient for them. This is particularly helpful for the two-week follow-up survey as it makes participant retention levels higher (Smith, McNamara, and King 2017). Additionally, an online survey allows for a standardized administration of the learning.

However, online surveys do have drawbacks. Because online surveys cannot be monitored the way that in person studies can be, there is the potential for participants to skip through learning pages or film clips without taking the proper time to view them. Additionally, the participants had the ability to go back to previous pages of the survey which could allow them to reference the learning as they complete the posttest. Despite these drawbacks, the safety, retention, ease of use, and standardization of administration made an online survey the best method available for this study. Formsite, an online survey platform, was chosen because of its customizability, security, and the ability to integrate videos into the survey.

Selecting film clips.

After selecting the emotions to be used in this study, movie and television clips to be used for the enhanced learning group and posttest assessment for both groups were selected. An initial set of more than 300 film excerpts from previous research were narrowed down to two clips for each emotion, for a total of eight clips. Each clip chosen had to meet the following criteria: the clip clearly exhibits self-talk or dialogue from one emotion more than the others; the clip is self-contained and required little context for the participant to understand the emotion; the clip is a reasonable length; and the clip is not likely to cause the participants distress. The excerpts were all cut so that there was a coherent segment highlighting the primary emotion being portrayed. The clips used were between 33 seconds and two minutes long. Dr. Ronda

Dearing, an expert in shame and guilt, was consulted throughout this process and aided in the selection of clips. Additionally, because of the effect the gender of the person expressing emotion has on recognition abilities, an equal number of clips with each gender expressing emotion were chosen (Dimitrovsky et al. 2000).

Measures.

Two different instruments were used throughout this study. The first was the STEU-B which was used as a pretest to ensure the randomized groups had similar emotional knowledge entering the study. This is a close-ended/ fixed choice test. Correct answers were coded "1" and incorrect answers were coded "0." The second instrument was the posttest assessment and consisted of only closed-ended/ fixed-choice questions. Again, correct answers were scored "1" and incorrect answers were scored "0."

Validity and reliability.

The STEU-B has face validity as it poses a situation and asks the participant to identify the emotion being described. This seems to be a good way to assess emotional understanding. The STEU-B also has criterion validity as assessed in previous research (Yan et al. 2019). Additionally, it has construct validity as it assesses baseline understanding of a wide range of emotions, a skill that is being taught and tested through the study. The STEU-B has test-retest reliability as found in previous studies (Allen et al. 2014).

The posttest, which was created as a part of the current study, is new and not previously tested or proven to be reliable. For the experimental design, as many steps were taken as possible given the limitations to address the threats to internal and external validity. Because the survey was given online, social interaction was not a threat to validity in this study. The participant selection threat was addressed through the randomization of the groups and the use of a pretest to

assess the baseline understanding of the groups. Maturation was controlled for as it is equally likely to manifest in the standard and enhanced learning groups. History was controlled for through the pretest assessment of the baseline of participants. Though there is a possibility that those who are not highly skilled in emotional understanding and recognition drop out of the study, attrition from the study is likely to be coincidental and there is a similar likelihood for participants in both groups to drop out. Instrumentation is controlled for as both groups have the same instrument and measures.

Testing, however, is a threat to validity for which it is hard to control. There is a possibility that participants would remember their answers from the immediate posttest and choose the same ones on the follow-up posttest. However, both groups would be equally vulnerable to this threat to validity, so only the learning retention rate would be affected, not the comparison between groups.

Several threats to external validity were addressed in the design as well. Though the pretest could potentially create an interaction effect of testing and the experimentation variable, participants were aware that they would be quizzed on the learning so it is unlikely that answering questions assessing emotional understanding would make them more prone to sensitivity or suggest they need to pay more attention. However, the reactive effects of experimental arrangements are a threat to the validity of this study, as it is with most EI assessments. Because emotion is being taught and assessed in an experimental setting rather than a real life setting which could have stress, time pressure, and social pressure, participants may demonstrate emotional recognition skills that are different than their real-world skills. However, improvement in emotional labeling and understanding is less affected by experimental

arrangements as it is not extrapolating the skill of calm emotional recognition in film clips to real-life emotional recognition, it is just assessing knowledge.

The interaction effects of selection bias are another threat to the external validity of the current study. The participants of this study were recruited from a participant pool, and those who sign up for this service may not represent the average person. Therefore, the generalizability of this study may be limited. Finally, multiple treatment interference is mitigated through the use of standard and enhanced learning groups, so the treatment of the enhanced learning was the only independent variable.

Dissemination.

The online survey was disseminated via the Prolific website. Prolific screened potential participants to ensure they met the inclusion and exclusion criteria and directed interested and pre-screened participants to a link to the survey. Participants then completed the survey, entering their Prolific ID into the designated field in the survey so that their response could be matched to their response on the two-week follow-up survey. After completing the survey, they were directed back to Prolific via a link on the final page of the survey. Those participants who finished the initial survey were invited by Prolific ID to participate in the follow-up survey two weeks later.

Procedure.

Participants were shown a cover letter with information about the potential risks, benefits, and their rights as a participant prior to starting the survey. Participants gave their informed consent via clicking an “I agree to participate” button. If they agreed to participate, they were directed to the first page of the survey.

To ensure that the randomized groups had comparable preliminary EI, a pretest was

administered. The Situational Test of Emotional Understanding- Brief (STEU-B) was chosen because it is a standardized, valid, and reliable instrument to assess this (Allen et al. 2014). Both groups received a standardized definition of the emotions that they read before continuing. One randomized group, the standard, continued to the posttest. The enhanced learning group received additional learning materials in the form of four film clips and a written explanation as to why each of those clips represents one of the four emotions.

Since this study is evaluative and looks to determine the efficacy of this teaching tool both in immediate understanding and delayed retention, it consists of an immediate posttest, and that same posttest administered as a two-week follow up (Chambliss and Schutt 2019). To test emotional granularity, both groups answered basic multiple-choice questions about the emotions. Then, both groups were shown clips and asked to identify the emotions being displayed to determine their emotion recognition skills. The average time spent on the learning and posttest was 14 minutes for the standard group and 21 minutes for the enhanced learning group. The average time spent on the two-week follow up posttest was 6.6 minutes for the standard group and 6.8 minutes for the enhanced learning group.

Confidentiality.

Prolific provided ID numbers and demographic information but did not release any identifiable information about the participants. This kept the study confidential, and none of the data could be traced back to a participant.

Data cleaning.

Because the survey was administered online, participants were not monitored, and it was impossible to ensure that each participant spent adequate time looking over the learning section. Some participants completed the survey with a faster time than it would have taken solely to

watch the film clips, let alone watch them and spend adequate time answering the questions and reading the learning. The data from those participants with a faster time than the sum of the length of the film clips were removed, and those participants were not invited to participate in the follow-up study if this happened during the initial survey. No other data were modified.

RESULTS

Analysis

The results from the study are structured around five questions:

1. Did the two randomized groups have statistically similar understanding of emotions prior to the study as assessed by the STEU-B pretest?
2. Did the enhanced learning group have an increased ability to recognize, understand, and label the four emotions compared to the standard learning group as assessed by the immediate posttest?
3. After two weeks, did the enhanced learning group have an increased ability to recognize, understand, and label the four emotions compared to the standard learning group as assessed by the two-week follow-up posttest?
4. Did the enhanced learning group have a higher retention of the abilities than the standard group after two weeks, as assessed by comparing the immediate posttest and two-week follow-up post results of both groups?
5. Did men and women differ in their ability to recognize, understand, and label different emotions?

The data used to explore all five of these questions were analyzed using an independent-means T-test using SPSS (IBM Corp 2020). A p-value of $<.05$ was taken as statistically significant due to the relatively small sample size. Additionally, only the data from participants who completed both the immediate and two-week follow-up studies (n=97) were included due to the small number of participants who did not complete both (n=118).

Question 1: Did the two randomized groups have statistically similar understanding of emotions prior to the study as assessed by the STEU-B pretest?

Overall, the standard and enhanced learning groups did not have a statistically different means for the pretest (p=0.359), meaning they had similar levels of emotional understanding coming into the study and the randomization of groups based on this variable was valid. Their averages were extremely similar, with the standard group scoring a 62.73% and the enhanced learning group scoring a 64.25% overall (see Table 1).

Table 1. Standard vs. Enhanced Scores – STEU-B Pretest

Question	Standard	Enhanced	Difference	P
A	40.82%	41.67%	0.85%	0.867
B	77.55%	62.50%	-15.05%**	0.002
C	81.63%	72.92%	-8.71%**	0.043
D	89.80%	83.33%	-6.47%	0.063
E	75.51%	75.00%	-0.51%	0.909
F	63.27%	68.75%	5.48%	0.262
G	79.59%	83.33%	3.74%	0.348
H	75.51%	77.08%	1.57%	0.719
I	26.53%	41.67%	15.14%**	0.004
J	93.88%	95.83%	1.95%	0.388
K	63.27%	77.08%	13.81%**	0.004
L	30.61%	39.58%	8.97%	0.077
M	16.33%	22.92%	6.59%	0.105
N	28.57%	18.75%	-9.82%**	0.024
O	44.90%	47.92%	3.02%	0.588
P	91.84%	97.92%	6.08%**	0.006
Q	63.27%	68.75%	5.48%	0.264
R	61.22%	64.58%	3.36%	0.501
S	87.76%	81.25%	-6.51%**	0.078
Total	62.73%	64.25%	1.52%	0.359

** Differences that are statistically significant

Question 2: Did the enhanced learning group have an increased ability to recognize, understand, and label the four emotions compared to the standard learning group as assessed by the immediate posttest?

Across all of the questions on the immediate posttest, the standard group scored 2.61% better than the enhanced learning group (p=.014). Only three of the thirteen questions on the posttest had statistically significant correct response rates: questions 2, 5, and 12 (see Table 2). The standard group scored better on questions testing the ability to identify emotion self-talk and differentiate the definitions of emotions, while the enhanced group did better on a question testing the ability to recognize emotion in a film clip. These results suggest that the enhanced learning group did not have an overall increased ability to recognize, label, or understand emotions directly following the learning.

Table 2. Standard vs. Enhanced Scores – Immediate Posttest

Question	Standard	Enhanced	Difference	P
1	87.76%	87.50%	-0.26%	0.94
2	97.96%	85.42%	-12.54%**	0.000
3	87.76%	91.67%	3.91%	0.209
4	89.80%	89.58%	-0.21%	0.946
5	91.84%	85.42%	-6.42%**	0.047
6	81.63%	77.08%	-4.55%	0.274
7	89.80%	87.50%	-2.30%	0.481
8	91.84%	87.50%	-4.34%	0.163
9	95.92%	91.67%	-4.25%	0.083
10	81.63%	75.00%	-6.63%	0.117
11	81.63%	81.25%	-0.38%	0.924
12	95.92%	100.00%	4.08%**	0.004
13	95.92%	95.83%	-0.09%	0.967
Total	89.95%	87.34%	-2.61%**	0.014

** Differences that are statistically significant

Question 3: After two weeks, did the enhanced learning group have an increased ability to recognize, understand, and label the four emotions compared to the standard learning group as assessed by the two-week follow-up posttest?

Overall, the standard group outperformed the enhanced group in the two-week follow up test by 4.04%, but this difference was not statistically significant (p=.363). Additionally, the standard group accounted for five of the six questions with statistically different correct response rates (see Table 3). These questions tested the ability to distinguish emotions and identify emotion specific self-talk. The enhanced group again scored better on question 12 which tests the ability to identify emotion in film. These results suggest that the enhanced learning group did not have an increased ability to recognize, understand, and label the emotions two-weeks following the learning.

Table 3. Standard vs. Enhanced Scores – Two-Week Follow Up Posttest

Question	Standard	Enhanced	Difference	P
1	83.67%	85.42%	1.74%	0.639
2	93.88%	85.42%	-8.46%**	0.006
3	95.92%	91.67%	-4.25%	0.083
4	89.80%	85.42%	-4.38%	0.194
5	93.88%	85.42%	-8.46%**	0.006
6	81.63%	85.42%	3.78%	0.320
7	91.84%	85.42%	-6.42%**	0.047
8	85.71%	85.42%	-0.30%	0.934
9	97.96%	91.67%	-6.29%**	0.004
10	83.67%	70.83%	-12.84%**	0.003
11	85.71%	79.17%	-6.55%	0.092
12	93.88%	100.00%	6.12%**	0.000
13	100.00%	93.75%	-6.25%**	0.000
Total	90.58%	86.54%	-4.04%	0.363

** Differences that are statistically significant

Question 4: Did the enhanced learning group have a higher retention of the abilities than the standard group after two weeks, as assessed by comparing the immediate posttest and two-week follow-up post results of both groups?

Standard group.

The standard group performed about the same (0.63% better) for the immediate and two-week follow up posttest, with the total averages for both being statistically similar (p=.432). Four individual questions had statistically different means from the pretest to the posttest (see Table 4), two of which were increases (questions 3 and 13), and two of which were decreases (questions 2 and 8). The two questions that increased in correct response rate tested the ability to associate self-talk with an emotion. One of the questions where the correct response rate decreased significantly tested the ability to identify emotion in others, while the other tested the ability to associate self-talk with an emotion.

Table 4. Standard Group Retention

Question	Immediate	Follow Up	Difference	P
1	87.76%	83.67%	-4.08%	0.253
2	97.96%	93.88%	-4.08%**	0.041
3	87.76%	95.92%	8.16%**	0.003
4	89.80%	89.80%	0.00%	1.000
5	91.84%	93.88%	2.04%	0.438
6	81.63%	81.63%	0.00%	1.000
7	89.80%	91.84%	2.04%	0.489
8	91.84%	85.71%	-6.12%**	0.050
9	95.92%	97.96%	2.04%	0.245
10	81.63%	83.67%	2.04%	0.598
11	81.63%	85.71%	4.08%	0.279
12	95.92%	93.88%	-2.04%	0.363
13	95.92%	100.00%	4.08%**	0.004
Total	89.95%	90.58%	0.63%	0.432

** Differences that are statistically significant

Enhanced group.

Similar to the standard group, the enhanced learning group did about the same (0.80% worse) overall for the immediate and two-week follow up posttest, with the total averages for both being statistically similar (p=.482). Only one question had a statistically significant increase (8.33%) in correct response rate from the immediate to follow up posttest, question 6 (see Table 5). This question tested the ability to recognize emotion in film. There were no statistically significant decreases in correct response rate for the enhanced learning group.

Table 5. Enhanced Learning Group Retention

Question	Immediate	Follow Up	Difference	P
1	87.50%	85.42%	-2.08%	0.556
2	85.42%	85.42%	0.00%	1.000
3	91.67%	91.67%	0.00%	1.000
4	89.58%	85.42%	-4.17%	0.221
5	85.42%	85.42%	0.00%	1.000
6	77.08%	85.42%	8.33%**	0.037
7	87.50%	85.42%	-2.08%	0.556
8	87.50%	85.42%	-2.08%	0.556
9	91.67%	91.67%	0.00%	1.000
10	75.00%	70.83%	-4.17%	0.365
11	81.25%	79.17%	-2.08%	0.613
12	100.00%	100.00%	0.00%	1.000
13	95.83%	93.75%	-2.08%	0.363
Total	87.34%	86.54%	-0.80%	0.492

** Differences that are statistically significant

Comparison.

When comparing the retention rates between the standard and enhanced group, the enhanced group outperformed the standard group in two out of the three statistically different retention rates (see Table 6). All three of the questions that had statistically significant retention rates had to do with identifying emotion in film clips. Overall, both groups had statistically similar retention rates (p=.770), however the standard group average retention rate is slightly

higher (1.43%). These results suggest that the enhanced group was less likely than the standard group to decrease in ability over time, but the groups did not differ in their overall retention rates.

Table 6. Standard vs. Enhanced Retention

Question	Enhanced vs. Standard	P
1	2.00%	0.922
2	4.08%	0.901
3	-8.16%	0.141
4	-4.17%	0.960
5	-2.04%	0.938
6	8.33%	0.360
7	-4.12%	0.963
8	4.04%**	0.019
9	-2.04%	0.333
10	-6.21%**	0.032
11	-6.17%	0.533
12	2.04%**	0.021
13	-6.17%	0.939
Total	-1.43%	0.770

** Differences that are statistically significant

Question 5: Did men and women differ in their ability to recognize, understand, and label different emotions?

On the STEU-B pretest, immediate posttest, and follow-up posttest, men and women had almost identical correct answer response rates, always scoring within one percentage point of each other. The correct response rate for the pretest was 63.46% for women and 63.52% for men. For the immediate posttest, women averaged 88.39% while men averaged 88.99%. For the two-week follow-up posttest, women averaged 88.53% while men averaged 88.64%. While the overall scores for men and women were very similar, there were certain questions for which men or women did better in a statistically significant way.

Women had higher correct response rates for questions that tested the ability to identify

emotion words such as humiliation, pride, and joy, whereas men had higher correct response rates for contempt, anger, and guilt among others (see Table 7). These results suggest that while men and women do not differ in their overall abilities to recognize, understand, and label emotion, there are certain emotions for which men and women have statistically significant abilities.

Table 7. Correctly Identified Emotions by Gender

	Emotion	Difference	P
Women	Scared	15.05%	0
	Pride	11.84%	0.017
	Sad	11.36%	0
	Dislike	10.12%	0.019
	Humiliation	9.48%	0
	Joy	8.75%	0.012
	Surprised	7.20%	0.001
	Humiliation	7.20%	0.001
Men	Gratitude	33.15%	0
	Contempt	16.77%	0.003
	Anger	9.69%	0.05
	Guilt	8.28%	0.009
	Embarrassment	3.77%	0.008

DISCUSSION

While school based SEL programs have been successful in increasing children's abilities to regulate, understand, and label emotions, few such programs exist on the organizational level or for adults (Lopes 2016; Rivers et al. 2013). SEL is proven to have positive effects for children in schools, such as higher grades, student autonomy, warmth, leadership, and less bullying (Rivers et al. 2013). The skills that SEL emphasizes largely overlap with the abilities that EI assesses. Despite the success of SEL programs and well-researched benefits of EI, such as less burnout, greater job satisfaction, and better leadership skills, there are not many comparable comprehensive SEL programs that build EI abilities for adults (Lopes 2016; Mayer et al. 2016).

The current programs. such as stress management training, anger management, and counseling, are effective solutions to problems and show that emotional regulation skills can be trained (Lopes 2016). However, there is a gap in the literature regarding training EI skills through SEL in adults (Lopes 2016). This exploratory study attempted to help lay the groundwork for addressing this gap and assess the efficacy of a new SEL method for teaching EI abilities in adults. Specifically, it aimed to assess recognition, understanding, and labeling of emotions due to the overlap of these skills between SEL and EI and proven benefits of emotional granularity on emotional regulation (Mayer et al. 2016; Rivers et al. 2013).

Because of the success SEL programs had with storytelling as a tool and the efficacy of film clips in eliciting emotion, film clips were chosen as the method for SEL in the present study (Gross and Levenson 1995; Hoffmann et al. 2020; Schaefer et al. 2010). Additionally, previous studies have used film clips as a tool to assess emotional recognition, so film clips were also used in the posttest as an assessment tool (Blanch-Hartigan 2011; Miskam et al. 2014). The negative valence self-conscious emotions, shame, guilt, embarrassment, and humiliation, were chosen to

be taught and assessed because of their common confusion and the positive benefits that are derived from the ability to distinguish them (Kim et al. 2011; Tracy et al. 2007a).

Interpreting the Results

Immediate posttest.

On the immediate posttest, the standardized learning group exceeded the enhanced learning group and had a higher overall correct response rate that was statistically significant. The standard group far exceeded (12.54%, p=.000) the enhanced learning group on a question that tested participants' ability to identify an example of shame talk. The standard group also scored higher on question 5 (6.42%, P=.047) which tested participants on their ability to distinguish shame and embarrassment. This suggests that the standard group likely had a better understanding of shame than the enhanced group.

Despite the standard group's higher correct response rate on questions testing understanding of embarrassment, the enhanced learning group outperformed the standard group (4.08%, P=.004) and had a 100% correct response rate on a question testing the participants' ability to recognize embarrassment in a film clip. This suggests that the enhanced learning group had excellent recognition skills for this emotion and may point to the embarrassment learning film clip being an effective tool for teaching recognition of this emotion.

Follow-up posttest.

On the two-week follow-up posttest, the standard and enhanced learning group did not have statistically significant overall correct response rates (p=.363). However, the standard group did have significantly higher correct response rates for five of the questions, including the two questions on which they outperformed the enhanced group on the immediate posttest. The other three questions tested participants' abilities to recognize an emotion portrayed in a film clip and

identify the self-talk of that emotion. This shows the standard group's increased ability to recognize shame and understand humiliation and guilt in addition to their increased ability to understand embarrassment.

The enhanced learning group again outperformed the standard group on the embarrassment recognition question retaining their 100% correct response rate. This reinforces that the enhanced learning for this emotion may be effective at increasing recognition rates.

Retention.

Overall, both groups had comparable learning retention rates (p=.770), meaning that the enhanced learning was neither effective nor a hindrance to retaining knowledge over the two-week period. The standard group had a higher retention rate that was statistically different from the scores for question 10 (6.21%, p= .032). This question assessed participants' ability to recognize shame from a film clip. A 6% increase in recognition abilities suggests that these participants continue to build the skill they learned on the initial survey.

The enhanced group had a higher retention rate that was statistically different for questions 8 (4.04%, p=.019) and 12 (2.04% p=.021). Question 6 was also higher by 8.33% but not statistically significant (p=.360). These three questions all tested the participants' ability to recognize emotions, testing humiliation, embarrassment, and guilt, respectively. This suggests that while the enhanced learning group had a lower overall score on the initial and follow-up posttests, the enhanced learning tool may be effective for increasing retention of emotion recognition abilities, at least for humiliation and embarrassment.

Understanding the results.

There are many possibilities as to why the enhanced learning group did not perform as well as the standard learning group on the posttests. Though there is no way to know the

definitive reason they did not score as highly, examining the possible methodological and conceptual reasons for their lower scores can help bring new insight into the results and point to areas for future research.

The first possibility is a methodological flaw of the survey in which participants had the option of going back to previous pages. The standard group's survey went straight from the page with the emotion definitions and examples to the posttest, meaning it was possible for them to easily reference the learning during the posttest. The enhanced group, however, had four pages of film clips and descriptions between the standard learning and posttest. It would have been much more difficult for them to reference the learning during the posttest. There was not a learning section on the two-week follow-up posttest, so the standard group's higher performance on the follow-up posttest would have to be due to retention of the information.

There are also conceptual reasons that are a possibility for the standard learning group's success. One possibility is that the standard learning was sufficient for teaching the SEL skills being assessed in the posttest. The additional information as well as the time taken to complete the enhanced learning may have distracted from the initial learning instead of supplementing it (Zerr et al. 2018). In terms of retention, studies suggest that quicker learners retain their knowledge better when they do not study the material for longer than needed (Zerr et al. 2018). If the standard learning was enough information to develop the SEL skills, it is possible that spending additional time studying the information could have negatively affected the retention of the knowledge due to additional and unnecessary resources.

Another conceptual explanation for the results is the effect of emotion on learning and memory. Experiencing emotion can have either a positive or negative effect on learning and retention of information depending on the situation and emotion (Tyng et al. 2017). Because

"emotional stimuli appear to consume more attentional resources than non-emotional stimuli," it is possible that the film clips used in the enhanced learning elicited emotion that diverted attention away from the learning and to the regulation of the emotion (Tyng et al. 2017:2). Because of the positive correlation between how negative an emotion is with the frequency and salience of the elicited emotion, the more negative emotions shown in the clips, such as humiliation and shame, may have triggered a more salient and therefore more distracting response than the less severe emotions of guilt and embarrassment (Gross and Levenson 1995; Schaefer et al. 2010; Tracy et al. 2007b; Tyng et al. 2017). This is consistent with the results of the current study wherein the enhanced group had an increased ability and retention of the ability to recognize embarrassment, the most lighthearted of the four emotions, whereas the standard learning group scored better on the more negative emotions such as humiliation.

Gender and emotion.

Previous research has shown that women tend to do better on all aspects of emotional intelligence tests, including recognizing and understanding emotions, than men (Day and Carroll 2004; Mayer et al. 1999; Tsikandilakis et al. 2019). However, the men and women in this study had statistically similar correct response rates on the pretest, immediate posttest, and follow-up posttest, always scoring within 1% of each other. Because of the small sample size of this study, this evidence is not enough to generalize, however.

There were some questions where men and women had statistically significant differences in correct response rate. Women scored higher on questions testing understanding of fear, pride, sadness, dislike, joy, surprise, and humiliation, whereas men scored higher on questions testing understanding of contempt, anger, guilt, and embarrassment. Some of the emotions that had statistically significant correct response rates by gender followed expected

trends from previous research. For example, men are perceived as more likely to experience anger and contempt than women and scored higher on these emotions than women (Brody et al. 2018). Previous research has shown women outperform men in the recognition of sadness, joy, and fear, and that is consistent with the findings of the current study (Wang 2013; Zupan et al. 2015). Additionally, in American culture it is seen as more desirable for women to express sadness and fear than men, and women scored higher on these emotions (Brody et al. 2018).

However, some of the results did not follow typical gender expectations. For example, women are perceived as more likely to experience guilt and embarrassment than men, and men scored higher on these emotions whereas women scored higher on pride than men who are perceived as more likely to experience it (Brody et al. 2018). This may be because violating display norms can come with consequences, so one gender may be extra cognizant of emotions that they perceive as unfavorable to show. Additionally, despite display norms, just because the expression of certain emotions is less favorable for one gender does not mean that gender experiences them less (Brody et al. 2018).

Limitations

The assessment of EI abilities is difficult because assessed abilities on a written test are not directly generalizable to real life abilities, particularly for emotion (Lopes et al. 2005). Recognizing emotion from a film clip selected for its display of emotion, for example, may prove easier than recognizing emotion while in a stressful situation or in a person trying to mask their feelings. This is a limitation all EI written assessments face, and while none of them are perfect, they are still helpful in assessing areas for improvement or progress after training and are still predictive of professional and social success (Brackett et al. 2018).

Additionally, because of the lack of previous research in this area, the creation of the

learning and assessment tools was largely based on inferences as an exploratory approach to increase SEL skills and EI abilities (Lopes 2016). As a result, the generalizability is negatively impacted. However, the results of this study are still helpful to lay the groundwork for future research in this area.

Finally, the small sample size and convenience sampling method were also a limitation of this study. This created limitations in the generalizability of the study because those who sign up to be a participant on Prolific may not be representative of the average person. Additionally, race and ethnicity data were not released by Prolific which makes determining the validity of the sample even more difficult.

Areas for Future Research

This study served as an exploratory look into SEL methods to increase EI abilities with the intention of laying the groundwork for a more comprehensive study. Further research is required to explore the efficacy of different methods for increasing EI abilities. Although the results of this study did not prove film clips to be an effective method for increasing emotional understanding, recognition, and granularity, more research should be done to investigate the potential benefits of film and storytelling as tools to supplement current SEL practices due to the previously mentioned limitations.

In future studies in this area, a sampling method that collects race and ethnicity information should be used, as it is important to have a representative sample because of the impact culture and background have on emotion recognition. Because the standard learning group performed so well on the posttests, if this study is replicated it would benefit the research to have a control group that does not receive either the standard or enhanced learning in order to understand the efficacy of the standard learning. Additionally, a larger sample size could provide

more valid, reliable results. The current study could also be modified to incorporate a phased learning approach similar to the RULER program where participants are given information in chunks rather than all at once during the initial study (Hoffmann et al. 2020). This research would help identify the most effective way to teach EI abilities and could be applied in schools, organizations, and for personal development.

Another area for future research is to examine the efficacy of different kinds of storytelling, such as vignettes and spoken stories, in conjunction with film clips. It is possible that one form of storytelling or a mix of different forms would be the most effective for increasing individuals' ability to recognize, understand, and label emotions. This research would be beneficial to existing SEL programs as well as building information in the under-researched area of building EI abilities.

Another gap in the literature that requires future research is the role of emotion elicitation in social-emotional learning. By using the film clips previously tested in Schaefer, Nils, Sanchez, and Philippot's (2010) study and Gross and Levenson's (1995) study to elicit emotion in conjunction with standardized learning, it would be possible to explore whether eliciting negative valence emotions enhances or inhibits learning. Because there is little data exploring this approach to SEL, it would prove beneficial to future efforts to build on existing SEL programs (Lopes 2016).

Future research examining gender differences in recognizing, understanding, and labeling specific emotions could provide further explanations for the results of the present study. For example, studying if those who identify as a certain gender are better at recognizing an emotion that has larger consequences for display norm violation could shed light on why men were better at identifying guilt and shame and women were better at identifying pride when previous

literature suggests those emotions are more favorable when expressed by another gender (Brody et al. 2018).

Conclusion

EI abilities and SEL skills are important for academic, professional, and personal success. Although this study did not demonstrate this particular method of building emotional recognition, understanding, and labeling skills to be effective, there is potential for great benefits as future research continues to explore and eventually implement new methods for teaching SEL skills in adults. As this gap in the literature continues to be explored, it is important to keep cultural, linguistic, and gender differences and biases in mind in as all three effect the way people express and recognize emotion.

REFERENCES

Allen, Veleka D., Alexander Weissman, Susan Hellwig, Carolyn MacCann, and Richard D. Roberts. 2014. "Development of the Situational Test of Emotional Understanding – Brief (STEU-B) Using Item Response Theory." *Personality and Individual Differences* 65:3–7. doi: 10.1016/j.paid.2014.01.051.

Anon. 2015. "CASEL."

Anon. 2019. "Embarrassment." *Oxford English Dictionary*.

Anon. 2021a. "Humiliation." *Merriam Webster*.

Anon. 2021b. *Prolific*. Oxford, UK: Prolific.

Anon. 2021c. "Shame." *Merriam Webster*.

Baucom, Brian R., Pamela T. McFarland, and Andrew Christensen. 2010. "Gender, Topic, and Time in Observed Demand-Withdraw Interaction in Cross- and Same-Sex Couples." *Journal of Family Psychology* 24(3):233–42. doi: 10.1037/a0019717.

Besemeres, Mary. 2004. "Different Languages, Different Emotions? Perspectives from Autobiographical Literature." *Journal of Multilingual and Multicultural Development* 25(2–3):140–58. doi: 10.1080/01434630408666526.

Blanch-Hartigan, Danielle. 2011. "Measuring Providers' Verbal and Nonverbal Emotion Recognition Ability: Reliability and Validity of the Patient Emotion Cue Test (PECT)." *Patient Education and Counseling* 82(3):370–76. doi: 10.1016/j.pec.2010.11.017.

Brackett, Marc A., Susan Rivers, Michelle Bertoli, and Peter Salovey. 2018. "Emotional Intelligence." Pp. 513–26 in *Handbook of Emotions*. New York, NY: The Guilford Press.

Brackett, Marc A., Rebecca M. Warner, and Jennifer S. Bosco. 2005. "Emotional Intelligence and Relationship Quality among Couples." *Personal Relationships* 12(2):197–212. doi: 10.1111/j.1350-4126.2005.00111.x.

Brescoll, Victoria L. 2016. "Leading with Their Hearts? How Gender Stereotypes of Emotion Lead to Biased Evaluations of Female Leaders." *The Leadership Quarterly* 27(3):415–28. doi: 10.1016/j.leaqua.2016.02.005.

Brody, Leslie. 1999. *Gender, Emotion, and the Family*. Cambridge, Mass: Harvard University Press.

Brody, Leslie, Judith Hall, and Lynissa Stokes. 2018. "Gender and Emotion." Pp. 369–93 in *Handbook of Emotions*. New York, NY: The Guilford Press.

Brown, Brené. 2012. *Daring Greatly: How the Courage to Be Vulnerable Transforms the Way We Live, Love, Parent, and Lead*. 1st ed. New York, NY: Gotham Books.

Burgo, Joseph. 2013. “The Difference Between Guilt and Shame | Psychology Today.” *Pyschology Today*. Retrieved October 12, 2020 (https://www.psychologytoday.com/us/blog/shame/201305/the-difference-between-guilt-and-shame).

Chambliss, Daniel F., and Russell K. Schutt, eds. 2019. *Making Sense of the Social World: Methods of Investigation*. Sixth edition. Los Angeles: SAGE.

Chiao, Joan Y., Tetsuya Iidaka, Heather L. Gordon, Junpei Nogawa, Moshe Bar, Elissa Aminoff, Norihiro Sadato, and Nalini Ambady. 2008. “Cultural Specificity in Amygdala Response to Fear Faces.” *Journal of Cognitive Neuroscience* 20(12):2167–74. doi: 10.1162/jocn.2008.20151.

Day, Arla L., and Sarah A. Carroll. 2004. “Using an Ability-Based Measure of Emotional Intelligence to Predict Individual Performance, Group Performance, and Group Citizenship Behaviours.” *Personality and Individual Differences* 36(6):1443–58. doi: 10.1016/S0191-8869(03)00240-X.

Di Fabio, Annamaria, and Letizia Palazzeschi. 2009. “An In-Depth Look at Scholastic Success: Fluid Intelligence, Personality Traits or Emotional Intelligence?” *Personality and Individual Differences* 46(5):581–85. doi: 10.1016/j.paid.2008.12.012.

Dimitrovsky, Lilly, Hedva Spector, and Rachel Levy-Shiff. 2000. “Stimulus Gender and Emotional Difficulty Level: Their Effect on Recognition of Facial Expressions of Affect in Children With and Without LD.” *Journal of Learning Disabilities* 33(5):410–16. doi: 10.1177/002221940003300501.

Durik, Amanda M., Janet Shibley Hyde, Amanda C. Marks, Amanda L. Roy, Debra Anaya, and Gretchen Schultz. 2006. “Ethnicity and Gender Stereotypes of Emotion.” *Sex Roles* 54(7):429–45. doi: 10.1007/s11199-006-9020-4.

Durlak, Joseph, Allison Dymnicki, Rebecca Taylor, Roger Weissberg, and Kriston Schellinger. 2011. “The Impact of Enhancing Students’ Social and Emotional Learning: A Meta-Analysis of School-Based Universal Interventions.” *Child Development* 82(1):405–32. doi: 10.1111/j.1467-8624.2010.01564.x.

Ekman, Paul. 1992. “An Argument for Basic Emotions.” *Cognition and Emotion* 6(3–4):169–200. doi: 10.1080/02699939208411068.

Elfenbein, Hillary Anger, Martin Beaupré, Manon Lévesque, and Ursula Hess. 2007. “Toward a Dialect Theory: Cultural Differences in the Expression and Recognition of Posed Facial Expressions.” *Emotion* 7(1):131–46. doi: 10.1037/1528-3542.7.1.131.

Feldman Barrett, Lisa, James Gross, Tamlin Conner Christensen, and Michael Benvenuto. 2001. “Knowing What You’re Feeling and Knowing What to Do about It: Mapping the Relation between Emotion Differentiation and Emotion Regulation.” *Cognition & Emotion* 15(6):713–24. doi: 10.1080/02699930143000239.

Fernández-Berrocal, Pablo, Natalio Extremera, Paulo N. Lopes, and Desireé Ruiz-Aranda. 2014. "When to Cooperate and When to Compete: Emotional Intelligence in Interpersonal Decision-Making." *Journal of Research in Personality* 49:21–24. doi: 10.1016/j.jrp.2013.12.005.

Frijda, Nico H. 1989. "Aesthetic Emotions and Reality." *American Psychologist* 44(12):1546–47. doi: 10.1037/0003-066X.44.12.1546.

Goddard, Cliff. 2002. "Explicating Emotions Across Languages and Cultures: A Semantic Approach." in *The Verbal Communication of Emotions | Taylor & Francis Group*.

Gottman, John Mordechai, Robert Wayne Levenson, Catherine Swanson, Kristin Swanson, Rebecca Tyson, and Dan Yoshimoto. 2003. "Observing Gay, Lesbian and Heterosexual Couples' Relationships: Mathematical Modeling of Conflict Interaction." *Journal of Homosexuality* 45(1):65–91. doi: 10.1300/J082v45n01_04.

Greenberg, Mark T. 1993. *Promoting Social and Emotional Development in Deaf Children: The PATHS Project*. Seattle: University of Washington Press.

Gross, James J., and Robert W. Levenson. 1995. "Emotion Elicitation Using Films." *Cognition & Emotion* 9(1):87–108. doi: 10.1080/02699939508408966.

Hall, Judith A., and Jason D. Carter. 1999. "Gender-Stereotype Accuracy as an Individual Difference." *Journal of Personality and Social Psychology* 77(2):350–59. doi: 10.1037/0022-3514.77.2.350.

Harter, Susan, Sabina M. Low, and Nancy R. Whitesell. 2003. "What Have We Learned from Columbine: The Impact of the Self-System on Suicidal and Violent Ideation Among Adolescents." *Journal of School Violence* 2(3):3–26. doi: 10.1300/J202v02n03_02.

Haviland-Jones, Jeannette M., Lisa Feldman Barrett, and Michael Lewis. 2008. *Handbook of Emotions*. The Guilford Press.

Hess, Ursula, Sacha Senécal, Gilles Kirouac, Pedro Herrera, Pierre Philippot, and Robert E. Kleck. 2000. "Emotional Expressivity in Men and Women: Stereotypes and Self-Perceptions." *Cognition and Emotion* 14(5):609–42. doi: 10.1080/026999300501176 48.

Hoffmann, Jessica D., Marc A. Brackett, Craig S. Bailey, and Cynthia J. Willner. 2020. "Teaching Emotion Regulation in Schools: Translating Research into Practice with the RULER Approach to Social and Emotional Learning." *Emotion* 20(1):105–9. doi: 10.1037/emo0000649.

IBM Corp. 2020. *IBM SPSS Statistics for Macintosh*. Armonk, NY: IBM Corp.

Joseph, Dana L., and Daniel A. Newman. 2010. "Emotional Intelligence: An Integrative Meta-Analysis and Cascading Model." *Journal of Applied Psychology* 95(1):54–78. doi: 10.1037/a0017286.

Kafetsios, Konstantinos. 2004. “Attachment and Emotional Intelligence Abilities across the Life Course.” *Personality and Individual Differences* 37(1):129–45. doi: 10.1016/j.paid.2003.08.006.

Kalra, Ankur, and Akhil Narang. 2019. “Schadenfreude: Does the Desire to Succeed at All Cost Result in a Detriment to the Individual’s Soul?” *European Heart Journal* 40(48):3885–86. doi: 10.1093/eurheartj/ehz846.

Kam, Chi-Ming, Mark T. Greenberg, and Carol A. Kusché. 2004. “Sustained Effects of the PATHS Curriculum on the Social and Psychological Adjustment of Children in Special Education.” *Journal of Emotional and Behavioral Disorders* 12(2):66–78. doi: 10.1177/10634266040120020101.

Kim, Sangmoon, Ryan Thibodeau, and Randall S. Jorgensen. 2011. “Shame, Guilt, and Depressive Symptoms: A Meta-Analytic Review.” *Psychological Bulletin* 137(1):68–96. doi: 10.1037/a0021466.

Lindquist, Kristen A., Ajay B. Satpute, and Maria Gendron. 2015. “Does Language Do More Than Communicate Emotion?” *Current Directions in Psychological Science* 24(2):99–108. doi: 10.1177/0963721414553440.

Lopes, Paulo N. 2016. “Emotional Intelligence in Organizations: Bridging Research and Practice.” *Emotion Review* 8(4):316–21. doi: 10.1177/1754073916650496.

Lopes, Paulo N., Marc A. Brackett, John B. Nezlek, Astrid Schütz, Ina Sellin, and Peter Salovey. 2004. “Emotional Intelligence and Social Interaction.” *Personality & Social Psychology Bulletin* 30(8):1018–34. doi: 10.1177/0146167204264762.

Lopes, Paulo N., Peter Salovey, Stéphane Côté, and Michael Beers. 2005. “Emotion Regulation Abilities and the Quality of Social Interaction.” *Emotion (Washington, D.C.)* 5(1):113–18. doi: 10.1037/1528-3542.5.1.113.

Mayer, John D., David R. Caruso, and Peter Salovey. 1999. “Emotional Intelligence Meets Traditional Standards for an Intelligence.” *Intelligence (Norwood)* 27(4):267–98. doi: 10.1016/S0160-2896(99)00016-1.

Mayer, John D., David R. Caruso, and Peter Salovey. 2016. “The Ability Model of Emotional Intelligence: Principles and Updates.” *Emotion Review* 8(4):290–300. doi: 10.1177/1754073916639667.

Mayer, John D., Maria DiPaolo, and Peter Salovey. 1990. “Perceiving Affective Content in Ambiguous Visual Stimuli: A Component of Emotional Intelligence.” *Journal of Personality Assessment* 54(3–4):772–81. doi: 10.1080/00223891.1990.9674037.

Miskam, Mohd Azfar, Syamimi Shamsuddin, Mohd Ridzuan Abdul Samat, Hanafiah Yussof, Husna Ahmad Ainudin, and Abdul Rahman Omar. 2014. “Humanoid Robot NAO as a Teaching Tool of Emotion Recognition for Children with Autism Using the Android

App." Pp. 1–5 in *2014 International Symposium on Micro-NanoMechatronics and Human Science (MHS)*.

Modigliani, Andre. 1971. "Embarrassment, Facework, and Eye Contact: Testing a Theory of Embarrassment." *Journal of Personality and Social Psychology* 17(1):15–24. doi: 10.1037/h0030460.

Neel, Rebecca, D. Vaughn Becker, Steven L. Neuberg, and Douglas T. Kenrick. 2012. "Who Expressed What Emotion? Men Grab Anger, Women Grab Happiness." *Journal of Experimental Social Psychology* 48(2):583–86. doi: 10.1016/j.jesp.2011.11.009.

Noroozi, F., M. Marjanovic, A. Njegus, S. Escalera, and G. Anbarjafari. 2019. "Audio-Visual Emotion Recognition in Video Clips." *IEEE Transactions on Affective Computing* 10(1):60–75. doi: 10.1109/TAFFC.2017.2713783.

Peña-Sarrionandia, Ainize, Moïra Mikolajczak, and James J. Gross. 2015. "Integrating Emotion Regulation and Emotional Intelligence Traditions: A Meta-Analysis." *Frontiers in Psychology* 6:160. doi: 10.3389/fpsyg.2015.00160.

Rivers, Susan E., Susan E. Rivers, Marc A. Brackett, Marc A. Brackett, Maria R. Reyes, Maria R. Reyes, Nicole A. Elbertson, Nicole A. Elbertson, Peter Salovey, and Peter Salovey. 2013. "Improving the Social and Emotional Climate of Classrooms: A Clustered Randomized Controlled Trial Testing the RULER Approach." *Prevention Science* 14(1):77–87. doi: 10.1007/s11121-012-0305-2.

Sabini, John, Michael Siepmann, Julia Stein, and Marcia Meyerowitz. 2000. "Who Is Embarrassed by What?" *Cognition & Emotion* 14(2):213–40. doi: 10.1080/026999300378941.

Sánchez-Álvarez, Nicolás, Natalio Extremera, and Pablo Fernández-Berrocal. 2016. "The Relation between Emotional Intelligence and Subjective Well-Being: A Meta-Analytic Investigation." *The Journal of Positive Psychology* 11(3):276–85. doi: 10.1080/17439760.2015.1058968.

Schaefer, Alexandre, Frédéric Nils, Xavier Sanchez, and Pierre Philippot. 2010. "Assessing the Effectiveness of a Large Database of Emotion-Eliciting Films: A New Tool for Emotion Researchers." *Cognition & Emotion* 24(7):1153–72. doi: 10.1080/02699930903274322.

Scott, Brent, and Christopher Barnes. 2011. "A Multilevel Field Investigation of Emotional Labor, Affect, Work Withdrawal, and Gender." *Academy of Management Journal* 54(1):116–36. doi: 10.5465/AMJ.2011.59215086.

Shin, Hyojung, Yang Min Park, Jin Yuan Ying, Boyoung Kim, Hyunkyung Noh, and Sang Min Lee. 2014. "Relationships between Coping Strategies and Burnout Symptoms: A Meta-Analytic Approach." *Professional Psychology: Research and Practice* 45(1):44–56. doi: 10.1037/a0035220.

Silver, Maury, John Sabini, W. Gerrod Parrott, and Maury Silver. 1987. “Embarrassment: A Dramaturgic Account.” *Journal for the Theory of Social Behaviour* 17(1):47–61. doi: https://doi.org/10.1111/j.1468-5914.1987.tb00087.x.

Smith, Lia J., Patrick J. McNamara, and Andrea C. King. 2017. “Optimizing Follow-up and Study Retention in the 21st Century: Advances from the Front Line in Alcohol and Tobacco Research.” *Drug and Alcohol Dependence* 175:171–78. doi: 10.1016/j.drugalcdep.2017.01.045.

Smith, Timothy W., Cynthia A. Berg, Paul Florsheim, Bert N. Uchino, Gale Pearce, Melissa Hawkins, Nancy J. M. Henry, Ryan M. Beveridge, Michelle A. Skinner, and Chrisanna Olsen-Cerny. 2009. “Conflict and Collaboration in Middle-Aged and Older Couples: I. Age Differences in Agency and Communion During Marital Interaction.” *Psychology and Aging* 24(2):259–73. doi: 10.1037/a0015609.

Sokol, Laura Klos. 2005. *Shortcuts to Poland*. Warszawa: International Publishing Service.

Sommers, S. 1984. “Adults Evaluating Their Emotions: A Cross-Cultural Perspective.” Pp. 319–38 in *Emotions in adult development*. Beverly Hills, CA: Sage.

Tangney, June Price, and Ronda L. Dearing. 2002. *Shame and Guilt*. New York: Guilford Press.

Thoresen, Carl J., Seth A. Kaplan, Adam P. Barsky, Christopher R. Warren, and Kelly de Chermont. 2003. “The Affective Underpinnings of Job Perceptions and Attitudes: A Meta-Analytic Review and Integration.” *Psychological Bulletin* 129(6):914–45. doi: 10.1037/0033-2909.129.6.914.

Tracy, Jessica L., Richard W. Robins, June Price Tangney, and Joseph J. Campos. 2007a. *The Self-Conscious Emotions: Theory and Research*. New York, UNITED STATES: Guilford Publications.

Tracy, Jessica L., Richard W. Robins, June Price Tangney, and Joseph J. Campos. 2007b. *The Self-Conscious Emotions: Theory and Research*. New York, UNITED STATES: Guilford Publications.

Tsikandilakis, Myron, Leonie Kausel, Gonzalo Boncompte, Zhaoliang Yu, Matt Oxner, Renzo Lanfranco, Persefoni Bali, Poutasi Urale, Jonathan Peirce, Vladimir López, Eddie Mun Wai Tong, Hayward William, David Carmel, Jan Derrfuss, and Peter Chapman. 2019. “‘There Is No Face Like Home’: Ratings for Cultural Familiarity to Own and Other Facial Dialects of Emotion With and Without Conscious Awareness in a British Sample.” *Perception* 48(10):918–47. doi: 10.1177/0301006619867865.

Tyng, Chai M., Hafeez U. Amin, Mohamad N. M. Saad, and Aamir S. Malik. 2017. “The Influences of Emotion on Learning and Memory.” *Frontiers in Psychology* 8. doi: 10.3389/fpsyg.2017.01454.

Vogel, David L., Stephen R. Wester, Martin Heesacker, and Stephanie Madon. 2003. "Confirming Gender Stereotypes: A Social Role Perspective." *Sex Roles* 48(11):519–28. doi: 10.1023/A:1023575212526.

Wang, Bo. 2013. "Gender Difference in Recognition Memory for Neutral and Emotional Faces." *Memory* 21(8):991–1003. doi: 10.1080/09658211.2013.771273.

West, Candace, and Don H. Zimmerman. 1987. "Doing Gender." *Gender and Society* 1(2):125–51.

Wuest, Kenneth Samuel. 1959. "Four Greek Words for Love." *Bibliotheca Sacra* 116(463):241–48.

Yan, Shuqun, Yuting Feng, Yaoshan Xu, and Yongjuan Li. 2019. "Psychometric Properties and Criterion Validity of STEU-B and STEM-B in Chinese Context." *Frontiers in Psychology* 10. doi: 10.3389/fpsyg.2019.01156.

Zerr, Christopher L., Jeffrey J. Berg, Steven M. Nelson, Andrew K. Fishell, Neil K. Savalia, and Kathleen B. McDermott. 2018. "Learning Efficiency: Identifying Individual Differences in Learning Rate and Retention in Healthy Adults." *Psychological Science* 29(9):1436–50. doi: 10.1177/0956797618772540.

Zupan, Barbra, Duncan Babbage, and Barry Willer. 2015. "Gender Differences in Affect Recognition and Emotional Inferencing Following Traumatic Brain Injury." *Archives of Physical Medicine and Rehabilitation* 96(10):e3. doi: 10.1016/j.apmr.2015.08.005.

APPENDIX A: STUDY LEARNING

Pretest

The Situational Test of Emotional Understanding- Brief (STEU-B) (Allen et al. 2014).

Learning

Both groups learning (standard and enhanced).

Please carefully read the following information on shame, guilt, embarrassment, and humiliation. Once you are done reading it, proceed to the next section.

Shame: Shame is the intensely painful feeling or experience of believing that we are flawed and therefore unworthy of love and belonging. Something we've experienced, done, or failed to do – or something about who we are – makes us feel unworthy of love, belonging, and connection (Brown 2012). Shame self-talk is "I am bad" or "I am not _____ enough." When feeling shame, a person often wants to hide from the world or lash out. Shame often turns quickly to anger or the desire to hide or secret-keep.

Guilt: We experience guilt when something we've done or failed to do does not match our values or who we want to be. Guilt creates feelings of discomfort because we are out of alignment with our values. While shame self-talk is "I am bad" and a focus on self, guilt self-talk is "I did something bad." Guilt often drives us to apologize, make things right, or do things differently in the future.

Embarrassment: Embarrassment is fleeting and usually mildly funny (especially in retrospect). It often arises as a feeling of awkwardness in response to an uncomfortable situation that is publicly witnessed. When experiencing embarrassment, people tend to feel exposed, flustered, and clumsy. Embarrassment self-talk might include thoughts like "I can't believe that just happened" or "I hope no one noticed!" Unlike shame, when we do something embarrassing, we

know we're not the only ones that experienced that emotion. Shame makes us feel alone.

Humiliation: Humiliation results from being treated in a way that feels unjustified. This type of mistreatment violates one's dignity and diminishes one's sense of worth as a human being. Humiliation can physically feel very much like shame. However, unlike shame where we believe that we deserve to feel bad about ourselves, when we feel humiliated, we don't believe we deserve it. It is a feeling accompanied by a loss of pride, self-respect, or dignity due to being made to feel inferior. Humiliation self-talk is "I don't deserve this!" As a result, feelings of humiliation are often expressed outwardly as anger.

The differences:

Shame vs. Guilt: Shame talk is "I *am* bad." Guilt talk is "I *did* something bad."

Shame vs. Embarrassment: Situations involving shame are more likely to have a moral element (doing something that is considered "wrong," often involving another person). In contrast, embarrassment usually arises in less serious social situations. Shame is more negative than embarrassment, and it is rarely amusing.

Shame vs. Humiliation: Humiliation feels like it was undeserved; shame feels warranted/ deserved. Shame and humiliation are both often expressed as anger. Even though the outward expression looks similar, with shame, the internal thought process is "I'm inadequate," whereas with humiliation, the internal thought process is "I didn't deserve to be treated like that."

Enhanced learning (enhanced group only).

****Prior to viewing the video clips showing the four target emotions, participants will be shown the following brief description of each clip. They will then click on a link to view the clip.*

The following clip will portray a scene in which a character experiences shame. In this scene, Tori and Dean are in couples' therapy after it was revealed that Dean cheated with another woman. Dean shares how he feels about himself with Tori and their therapist. This clip shows

shame as opposed to the other emotions because his self-talk is focused on how he feels like he is fundamentally flawed, not just that he did something bad.

The following clip will portray a scene in which a character experiences guilt. In this scene, Pat's father has an honest dialogue with his son about what he wishes he would have done differently as a parent. This clip shows guilt as opposed to the other emotions because Pat's father feels bad for not spending enough time with him, apologizes, and wants to do things differently moving on. He focuses on the behavior being bad, not on himself as a bad person.

The following clip will portray a scene in which a character experiences embarrassment. In this scene, Elle, a Harvard law student who is being excluded by her colleagues, shows up to what she thinks is a costume party. As it turns out, she is the only one dressed up. This clip shows embarrassment as opposed to the other emotions because though she felt awkward and exposed, it did not diminish her sense of self-worth or dignity and she was able to acknowledge the humor in the situation.

The following clip will portray a scene in which a character experiences humiliation. In this scene, Katherine, one of the only women and only African American mathematicians at NASA in the 60s, is humiliated by her boss in front of her co-workers. Because she can only use the designated "colored bathroom" in a faraway building, she is forced to take long bathroom breaks. What we see in the clip is anger as a result of feeling humiliation. Katherine is feeling humiliation as opposed to the other emotions because her boss is unjustifiably mistreating her and diminishing her dignity and she recognizes that she doesn't deserve to be treated this way.

APPENDIX B: SURVEY POSTTEST QUESTIONS

****Correct responses are indicated in bold text (which will not be seen by research participants).*

1. What is the difference between shame and guilt?
    a. Shame is focused on behavior, guilt is focused on self
    b. Shame is focused on self, guilt is focused on behavior
    c. There is no difference
    d. The differences are too subtle to notice

2. Which of the following statements are representative of shame talk?
    a. I am a failure.
    b. I did something wrong.
    c. I made a mistake.
    d. I said that incorrectly.

3. Which of the following statements are representative of guilt talk?
    a. I am a failure.
    b. I'm such a loser.
    c. I did something wrong.
    d. I'm irresponsible.

4. The thing that distinguishes feelings of shame from feelings of humiliation is that when feeling shame, we believe that we deserve to feel bad.
    a. True
    b. False

5. How is embarrassment different than shame?
    a. We know we are not alone in our experience
    b. We can find humor in the experience
    c. Embarrassment is shame
    d. A & B only

For questions 6-7, please watch this clip and answer the following questions.

Schindler's List **clip:** Oskar has just been presented with a ring in appreciation for the lives he saved. In this clip, we see his reaction.

6. Which emotion best represents what the main character might be feeling in this scene?
    a. Shame **b. Guilt** c. Embarrassment d. Humiliation

7. What the character might be thinking/feeling:

a) "I messed up. I hope people didn't notice." (e)
b) "I wish my actions had been different." (g)
c) "I'm a bad person." (s)
d) "I shouldn't have been treated that way by others." (h)

For questions 8-9, please watch this clip and answer the following questions.

***Chef* clip:** The chef reacts to a bad review from a film critic.

8. Which emotion best represents what the main character might be feeling in this scene?
    a. Shame b. Guilt c. Embarrassment **d. Humiliation**

9. What the character might be thinking/feeling:
a) "**I was treated unfairly." (h)**
b) "I'm a failure as a person." (s)
c) "I messed up, but thinking back it's kind of funny." (e)
d) "I wish I had done things differently." (g)

For questions 10-11, please watch this clip and answer the following questions.

***I am Sam* clip:** Sam tells Rita that people like her don't know what it is like to be imperfect. This is her response.

10. Which emotion best represents what the female character might be feeling in this scene?
a. Shame b. Guilt c. Embarrassment d. Humiliation

11. What the character might be thinking/feeling:
a) "Those were some awkward situations." (e)
b) "I can't get anything right." (s)
c) "I wish I had done things differently." (g)
d) "I can't believe that people treated me the way they did." (h)

For questions 12-13, please watch this clip and answer the following questions.

***Wild* clip:** After being on the trail alone for quite a while, Cheryl has a random interaction with a stranger.

12. Which emotion best represents what the female character might be feeling in this scene?
    a. Shame b. Guilt c. **Embarrassment** d. Humiliation

13. What the character might be thinking/feeling:
a) "I need to apologize and try to make things right." (g)
b) "I didn't deserve that." (h)
c) "That was awkward!" (e)
d) "I'm a total loser." (s)

BIOGRAPHY

Ellen Alley is a B.A. student at the University of Texas at Austin majoring in Plan II Honors and Human Dimensions of Organizations with a minor in sociology. In college, she founded the Texas Field Hockey team and served as president for two years, was active in Student Government, and was a member of Phi Chi Theta business fraternity. She graduates in 2021 and plans to attend The University of Texas for graduate school in Interpersonal Communication in the fall. Ellen has a younger brother, Charlie, who lives in Houston with her two parents, Brené and Steve.