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THE IMPACT OF TEAM SUCCESS AND TEAM DYNAMICS ON EMPLOYEE EFFORT

A Dissertation
presented in partial fulfillment of requirements
for the degree of Doctor of Philosophy
in the Patterson School of Accountancy
The University of Mississippi

by

TINA S. OWENS

May 2024

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ABSTRACT

I experimentally examine how team success affects individual employees' attribution of their own poor performance and whether inter-team dynamics impact their subsequent efforts. I argue, using attribution theory, that more successful, relative to less successful, team performance will lead employees to take more responsibility for their own poor performance and, thus, make more positive effort adjustments. This is because employees are more likely to accept responsibility for their poor performance when they learn that their team as a whole performed well. Additionally, using social identity theory, I argue that employees on teams with stronger team dynamics will make more positive effort adjustments than employees on teams with weaker team dynamics. Importantly, I argue this effect will be particularly strong for poor-performing employees on less successful teams. I find that team success impacts internal attributions indirectly through accountability, such that employees on more successful teams more internally attribute their poor performance, relative to employees on less successful teams. However, I find no support for the prediction that employees on more successful teams will have more effort adjustment than those on less successful teams. I also find that team dynamics impact the level of internal attributions, such that when a team is more successful, employees with stronger team dynamics increase their internal attribution, while employees with weaker team dynamics decrease their internal attribution. However, again, there is no evidence that team dynamics interact with team success to impact effort adjustment. My study highlights factors that mitigate employees' documented adverse reactions to negative performance feedback, as well as the importance of strong team dynamics on an individual level. These outcomes can help

managers form more precise feedback systems and can shed light on the importance of allocating resources to improve team dynamics.

Keywords: employee performance; negative feedback; performance attribution; social identity; team dynamics; team performance.

DEDICATION

I dedicate this dissertation to my husband, Neal Owens. I cannot thank you enough for everything that you have done to support me as I strived to reach this goal. You have been there for me every step of the way, always willing to listen and encourage, and you have made this process infinitely easier by taking on most of the house responsibilities to help free up my time. We can reorganize chores, but you are now and forever the cook. I love you and cannot wait to start the next chapter of life with you.

I also dedicate this to my daughter, Marissa Owens, and my son, Cayden Owens. You two are such bright lights in my life and it has been a joy watching you both grow into the amazing, caring adults you are today. I hope that this endeavor has shown you that it is never too late to conquer goals and follow dreams. I love you to the moon and back.

Lastly, I dedicate this to the best sister anyone could ever wish for, Holly Padigos. You have selflessly listened to my raves and rants and accomplishments and disappointments. You always cheered me on, even when you had no idea what I was talking about. You encouraged me, supported me, and believed in me every step of the way. There are not enough words in the world to convey how grateful I am to have you in my life.

LIST OF ABBREVIATIONS

ANOVA	Analysis of Variance
CI	Confidence Interval
DF	Degrees of Freedom
LLCI	Lower-Level Confidence Interval
LS MEANS	Least Squares Means
MS	Mean Square
SE	Standard Error
ULCI	Upper-Level Confidence Interval

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Lastly, to my professors at Valdosta State University who told me I could be a professor one day, I thank you for pushing me in this direction. I don't know what my future would look like if I had followed the path I was on, but I am convinced it would not be as fulfilling as what I am embarking on now.

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I. INTRODUCTION

Human capital is a valuable organizational resource that is strongly correlated with firm performance (Crook, Todd, Combs, Woehr, and Ketchen 2011). Organizations invest substantial resources attracting, investing, and developing their employees (Crook et al. 2011), as it is in the organizations' interest to better develop their poor-performing employees than hire new ones, especially when they face labor shortages. This employee development usually begins with confronting employees regarding their performance, commonly through performance feedback. However, employees do not always respond well when told their performance needs improvement. Some research indicates that employees dismiss this type of negative feedback as inaccurate and that negative feedback can lead to lower job satisfaction and organizational commitment (Hecht, Newman, and Tafkov 2019; Kim, Lee, and Jun 2019; Andiola and Bedard 2018; Loftus and Tanlu 2017; Belschak and Hartog 2009).

These findings highlight that employees do not receive negative feedback in a vacuum but, critically, in the context of an organization. Importantly, in organizational contexts, employees function in teams. Not only can team performance impact employees' own performance, but the popular press suggests that even otherwise successful teams struggle when they wrestle with difficult team dynamics, such as miscommunication and weak social bonds (Entrepreneur 2022; Forbes 2021). Team performance and dynamics could shift not only how employees attribute blame for their negative performance, but also adjustments in effort and, thus, be an important consideration in whether negative feedback leads to performance improvement.

I examine how teams' successes and dynamics impact both individual employees' attributions for their own poor performance and their adjustments in effort. More specifically, I examine whether teams' prior success impacts individual employees' poor performance attributions and whether team dynamics affects the relationship between employees' attributions and their subsequent effort on new tasks. I examine my research question in a critical setting, in which employees have performed poorly. Individuals often take credit for their successes, but blame external factors for unfavorable outcomes, which prevents learning and performance improvement (Silver, Mitchell, and Gist 1995; Zuckerman 1979). It is important to understand the factors that mitigate this blame-shifting and impact the individuals' subsequent effort to help companies better develop their employees and improve overall company productivity.

I rely on attribution and social identity theories to develop my predictions. Attribution theory examines the process through which individuals attribute their own successes and failures, and how these attributions impact future behaviors, such as effort and performance (Weiner 1985, Weiner, Frieze, Kukla, Reed, Rest, and Rosenbaum 1971, Weiner and Kukla 1970). After receiving performance feedback, individuals evaluate who is responsible for the performance outcome, how likely it is to continue, and whether it can be controlled (Weiner 1979; Weiner et al. 1971), but importantly, individuals commonly exhibit self-serving bias when doing so. That is, they attribute successes to themselves and attribute failures to external factors, in an effort to protect their egos and reputation (Alicke and Sedikides 2009; Martinko, Douglas, and Harvey 2006; Mezulis, Abramson, Hyde, and Hankin 2004; Campbell and Sedikides 1999; Zuckerman 1979). Individuals who externally attribute their poor performance are unlikely to subsequently improve their performance. This is concerning to organizations because it leads employees to dismiss feedback and reduces employee learning (Harvey and Martinko 2009; Leung, Su, and

Morris 2001). However, Martinko et al. (2006) conjecture that when individuals know they have performed differently than others doing the same task, they will attribute the cause to themselves. Extending theory from Martinko et al. (2006), I posit that employees consider not only their own performance, but also their team's *prior* performance, when making causal attributions about their individual performance on a subsequent task. That is, I expect employees on more successful teams will be more likely to internally attribute (i.e., attribute to themselves) their poor performance on other tasks and, thus, make more positive effort adjustments than employees on less successful teams.

Self-concept is an individual's perception of themselves that influences their behavior and is shaped by both experiences and the people with whom one identifies (Shavelson, Hubner, and Stanton 1976). Social identity theory posits that being a member of a team can shape team members' self-concept by including the attitudes, beliefs, and behaviors of the group in their individual identity (Tajfel and Turner 1979; Tajfel 1974). Employees who more strongly identify with their team behave in ways that align with team norms, are motivated to improve team status to improve their own self-concept, and feel more accountable to their teammates (Brown, Sprinkle, and Way 2022; Murray, Coffee, Arthur, and Eklund 2020; Barreto and Ellemers 2000). This indicates, in part, that teams with stronger social identity have stronger team dynamics. Additionally, this suggests that these stronger team dynamics will cause poor-performing employees, particularly on less successful teams, to improve their self-concept and contribute more to their teammates by increasing their subsequent effort, relative to employees on teams with weaker dynamics. Thus, I expect that stronger team dynamics will prompt employees on less successful teams, who externally attribute their poor performance, to adjust effort more positively despite their attribution, than employees on less successful teams with weaker team

dynamics. I do not expect this same positive effect of stronger team dynamics for poor performing employees on more successful teams.

I experimentally examine how team success affects team members' attributions of their own negative performance, as well as how team success interacts with team dynamics to impact team members' individual effort following negative feedback. I manipulate, between-participants, team performance as more or less successful and team dynamics as stronger or weaker. I use a trivia task to manipulate both team success and team dynamics. Team members in the more successful condition receive easier trivia questions and are likely more successful by construction, and team members in the less successful condition receive harder trivia questions and are likely less successful by construction. Team members in the stronger team dynamics condition work on the trivia questions together, with an opportunity to chat with one another, and team members in the weaker team dynamics condition work on the trivia questions individually, without an opportunity to chat.

After the trivia task, team members complete two rounds of the difficult main experimental task, find-the-differences puzzles[1]. Between the two rounds, all team members receive negative, individual performance feedback. Specifically, I negatively frame this feedback by telling team members that they could have been more helpful to their team if they had obtained a higher score. All team members are also reminded of their team's earlier more or less successful performance on the trivia task. Next, I measure my first dependent variable of interest, team members' attributions for their individual performance, using Russell's (1982) Causal Dimension Scale. Then, team members complete round two of the find-the-difference puzzles. I

[1] The objective of find-the-differences puzzles is to find all the differences between two images that appear very similar but differ in subtle ways.

measure the percentage change in time spent between rounds one and two to capture my second dependent variable of interest, effort adjustment.

I find partial support for my prediction that more team success impacts internal attributions. Specifically, I find that team success does not lead directly to internal attributions, but rather, indirectly, through accountability. Team members on more successful teams feel more accountable to their teammates and, in turn, internally attribute their poor performance more than team members on less successful teams. However, contrary to my prediction, neither increased internal attributions nor team success lead to effort adjustments.

I do not find support for my prediction that team dynamics interacts with team success to impact team members' effort adjustment in response to negative feedback. Further analysis of my team dynamics manipulation reveals that less successful teams unexpectedly have stronger team dynamics than more successful teams. Less successful teams engage in more chatting than more successful teams, likely because less successful teams encounter more difficult trivia questions and, therefore, benefit from chatting to a greater extent than more successful teams who encounter easier trivia questions. This greater degree of chatting causes improved team dynamics within less successful teams. With this in mind, I run a PROCESS (Hayes 2022) path model to examine my data using measured, rather than manipulated, team dynamics. I find that team success and team dynamics impact internal attributions, such that when a team is more (but not less) successful, as team dynamics become stronger team members more internally attribute their own poor performance. However, there is still no significant impact on effort adjustment.

This study contributes to both the academy and practice. First, I add to the attribution literature. To date, the attribution literature suggests that poor performers generally attribute their performance to some external factor. However, my study provides nuance to this general finding.

I find that when employees' teams perform more successfully *on prior tasks*, poor-performing employees feel more accountable to their teammates and are less likely to externally attribute their individual performance than when employees' teams perform less successfully on prior tasks. That is, I find a carryover effect of team success on future *team member* performance attribution, which has been unaddressed in prior literature. I also find, consistent with prior attribution literature, no difference in subsequent effort adjustment for members of *less*, relative to more, successful teams. Though inconsistent with my expectations, this does not change when less successful teams' members have stronger team dynamics. Consistent with my expectations, I find no evidence that the strength of team dynamics affects effort adjustments for members of *more* successful teams. Thus, my study answers the call for further exploration of the integration of social identity, which underlies team dynamics, with attribution theory (McDonald 2018).

Second, my study adds to the performance feedback literature, specifically regarding negative performance feedback. One of the goals of management accounting is to provide information that can steer employee performance and decision-making in ways that are advantageous to the organization (Sprinkle 2003). In working towards this goal, companies use performance feedback to prompt changes in employees' poor performance so that their subsequent work outputs are improved. While most studies examine the effects of combined positive and negative feedback, negative feedback is of particular importance because some employees do not react well to this type of feedback. Thus, understanding the factors that impact employees' reactions to negative feedback is vital, yet not well-understood. My study fills this void in the literature by examining two such factors, team success and team dynamics, in a negative feedback setting, allowing me to shed light on how these factors affect employees' attributions and adjustments in effort.

Third, I contribute to the social bond literature. Prior research shows that chatting increases social bonds, which is an important factor in many subsequent behaviors, such as peer-to-peer knowledge sharing (Bowlin, Christ, Deng, and Nielson 2024), auditor-client honesty (Deng 2024), and auditor-imposed adjustments (Kachelmeier and VanLanduyt 2017). My research adds another layer of information by suggesting that social bonds are not driven by simply the *ability* to chat, but rather, the *action* of chatting. Employees may discern that there is no benefit to themselves to engage in conversation with team members, and, thus, decide not to engage in chatting, even though the ability is there. Deciding not to chat impacts researchers' ability to test theory about how social bonds affect subsequent behavior.

Finally, I contribute to practice. Despite research showing that hiring new employees is costlier, in terms of both financial and performance costs, employers are increasingly replacing their employees from the external labor market or outsourcing the work rather than focusing on improving their poor performers (Kalleberg and Mouw 2018; Weil 2014). While providing feedback is one way to promote learning and ensure goal alignment, thus improving both employee and organizational performance, managers struggle to effectively provide negative feedback to their employees (Hecht et al. 2019; Belschak and Den Hartog 2009; Ilgen, Fisher, and Taylor 1979). Understanding the factors that impact individuals' reactions to negative feedback is vital in optimizing feedback systems. My study suggests that management control systems that highlight overall team performance, as well as employees' individual performance, discourage poor performers within largely successful teams from blame-shifting and, instead, encourage them to take more responsibility for their performance.

II. BACKGROUND AND HYPOTHESIS DEVELOPMENT

Performance and Feedback

Human capital is a valuable organizational resource that is strongly correlated with firm performance (Crook et al. 2011). Organizations invest a substantial amount of money attracting, investing, and developing their employees, and it is in an organization's interest to better develop their poor performing employees, especially in a job market that has an abundance of jobs but fewer available workers (van Dijk and de Waal 2020; Crook et al. 2011). Nonetheless, the annual number of employees who voluntarily leave their job is on the rise. While there are many reasons employees choose to quit, one of them is poor performance.

The number of employees who leave their jobs voluntarily (not including retirements and transfers) rose 13%, from 42.1 million in 2019 to 47.8 million in 2021 (Bureau of Labor Statistics 2022). In fact, the annual quit level has increased in 11 of the past 12 years, with 2020 being the only exception. Importantly, the professional services industry, including accounting, and the retail trades industry were two of nine industries that reached an all-time high for annual number of employees who quit. This is concerning for organizations with poor performing employees. Unlike high performing employees, poor performing employees have less job satisfaction and no fear of losing professional recognition or rewards if they quit (Dalton, Krackhardt and Porter 1981; Hollenbeck and Williams 1986). These employee turnovers are not only monetarily costly to the organization, but they also negatively impact organizational performance through customer satisfaction, workplace productivity, and financial performance

(Park and Shaw 2013). One way to help employees improve their performance is to provide them with feedback (Ilgen et al. 1979).

Performance feedback, information that is provided to employees about their performance on a specific task, is a critical element of an organization's management control system. Organizations rely on outcome-based performance feedback to maintain quality control, sustain a successful organization, and ensure that employee goals are aligned with organizational goals (Hunt 1995; Ashford and Cummings 1983). Performance feedback also benefits the employee by encouraging learning, increasing job satisfaction and motivation, and guiding and correcting employee behavior (Andiola 2014; Hunt 1995; Ashford and Cummings 1983; Ilgen et al. 1979).

Some researchers find that negative feedback promotes learning and motivates individuals to perform better (Hecht et al. 2019; Kim et al. 2019), while others find that negative feedback is likely to be dismissed as inaccurate and, therefore, does not lead to performance improvement (Andiola and Bedard 2018; Belschak and Hartog 2009). Additionally, negative feedback can lead to lower self-efficacy, job satisfaction, and organizational commitment (Andiola and Bedard 2018; Loftus and Tanlu 2017; Belschak and Hartog 2009). Understanding the conditions that cause this variation in the impact of negative feedback is important to organizations, so that they can best utilize negative feedback as an effective resource.

Attribution Theory

Individuals have an innate need to make sense of the world around them, and attribution theory examines the process through which individuals make sense of the world by assigning causes to events that occur (Kelley 1973; Weiner et al. 1971; Heider 1958). Attribution research can be categorized into either self-attribution studies or other-attribution studies. Examples of

self-attribution theory research include examining individuals' causal explanations, or attributions, for their own successes and failures and how these attributions impact future expectancies, emotions, and behaviors (Weiner 1985, Weiner et al. 1971, Weiner and Kukla 1970). Other-attribution theory research examine how individuals use consensus, consistency, and distinctiveness information to make attributions for the performance and behavior of others (Kelley and Michela 1980; Kelley 1973). In this study, I focus on employees' self-attributions in the workplace.

Individuals explain their success or failure after an achievement task with one of four types of causal attributions (Weiner et al. 1971). The first causal attribution is one's own ability, which is usually perceived as the cause of performance when past performance is consistent with current performance. The second causal attribution is effort, which is more likely to be ascribed when the outcome is success, rather than failure, or when performance has either increased or decreased over time. The third causal attribution is task difficulty, which individuals have no control over and is likely to be ascribed when individuals' performance on a task is similar to others' performance on the same task. The last causal attribution is luck, which individuals also have no control over and is likely to be ascribed when performance outcomes vary widely and are not long-lasting. The type of causal attribution that individuals use leads to variance in their subsequent effort.

Weiner et al. (1971) posits that there are three attributional dimensions that underly individuals' causal attributions. The first dimension is locus of causality, or the perception that the cause of one's performance is something internal or external to themselves. Internal attributions are related to circumstances that individuals are responsible for, while external attributions are related to circumstances that individuals perceive as being the responsibility of

someone or something else (Weiner et al. 1971). Internal attributions can result in stronger reactions to both positive and negative performance feedback than external attributions and can lead to changes in self-efficacy and goal revisions (Tolli and Schmidt 2008).

The second dimension, stability, is the perception that the cause of one's performance is something that is either more or less permanent (Weiner et al. 1971). If the cause of one's performance is expected to remain relatively constant over time, it is considered a stable, factor. However, if the cause of one's performance is something that can fluctuate, it is considered an unstable, factor. The third dimension, controllability, is the perception that the cause of an individual's performance is something that they did or did not have the authority to change (Weiner 1979). Individuals who attribute their failure to a combination of unstable and controllable causes persistently try harder than those who attribute their failure to a combination of stable and uncontrollable causes (Rascle, Foll, Charrier, Higgins, Rees, and Coffee 2015).

In summary, individuals think about outcomes' causes in terms of their ability, the effort they put forth, the difficulty of the task, and the level of luck they experienced, as well as in terms of locus of causality, stability, and controllability. These attributions and attributional dimensions are key to subsequent emotions and future expectancies, which then impact the behaviors that individuals engage in after receiving performance feedback, such as effort extension and performance improvement (Weiner et al. 1971).

The primary attributional dimension individuals use to determine how they expect to perform in the future is stability (Weiner 1979; Weiner et al. 1971). Individuals will expect greater shifts in subsequent performance after attributing prior performance to an unstable cause than to a stable cause (Weiner 1979; Weiner et al. 1971). Individuals who attribute their poor performance to either low ability level or task difficulty expect their poor performance to

continue because these attributions are stable and not likely to change (Weiner et al. 1971). However, individuals who attribute their poor performance to a lack of effort or bad luck may expect their future performance to increase because these attributions are unstable (Weiner et al. 1971). Once individuals make these expectations, they behave differently. Poor performing individuals who attribute their performance to a lack of effort or bad luck, rather than lack of ability or task difficulty, more persistently put forth effort going forward (Weiner et al. 1971). However, some poor performers protect their egos by engaging in self-serving biases.

Self-serving bias is a phenomenon in which individuals attribute positive outcomes internally to themselves and negative outcomes externally to something or someone else, and these biased attributions impact individuals' ensuing behaviors. (Campbell and Sedikides 1999). Individuals use self-serving biases in order to protect their egos, make themselves look better, minimize punishments, and maximize rewards (Alicke and Sedikides 2009; Martinko et al. 2006; Mezulis et al. 2004; Zuckerman 1979). As an example of self-serving bias in an earnings forecast setting, managers take credit for positive performance and then have a sense of overconfidence in subsequent forecasting (Libby and Rennekamp 2012). Also, auditors take credit for positive reviews, attributing their performance to themselves or their relationship with their peers or supervisor, but they blame their supervisor, the audit review process, or the working environment for their negative reviews (Andiola, Bedard, and Westermann 2019). Self-serving bias is concerning to organizations because it leads to dismissal of feedback, reduces learning and future improvements, and prompts a downward revision of goals (Harvey and Martinko 2009; Tolli and Schmidt 2008; Leung et al. 2001). Taylor and Doria (1981) find that after personal failure, group members indulge in self-serving attributions that go against the group more than after personal success. For example, they blame other group members to avoid taking responsibility for the

failure themselves. This blame-shifting causes social relationships to deteriorate, group stress to increase, and motivation to decrease (Keyton 2000; Weiner 1995; Meyers and Brashers 1994).

Poor performing employees become aware of their poor performance through the feedback component of management control systems (Ilgen et al. 1979). Poor performing employees sometimes dismiss negative feedback and use self-serving bias to blame-shift and argue that the cause of their poor performance was something external to them (Harvey and Martinko 2009; Tolli and Schmidt 2008; Leung et al. 2001). I posit that the attributions employees make about their own poor performance depend on their team's performance, because team performance influences employees' locus of causality. That is, similar to prior theoretical research (Martinko et al. 2006), I argue that it becomes increasingly difficult to attribute poor performance externally when others are performing well. When employees who are part of more successful teams perform poorly, they have fewer external causes to which they can reasonably shift blame and, thus, are more likely to attribute their poor performance internally. That is, I expect information about well-performing teams reduces employees' likelihood of attributing their poor performance to task difficulty or luck, relative to employees who are part of less successful teams. Rather, poor-performing members of more successful teams are more likely to attribute their poor performance to their ability or, more likely, their effort. Attributing poor performance on controllable tasks to effort rather than ability allows employees to continue to protect their egos while internally attributing their poor performance. This will lead poor performing employees on more successful teams to make positive effort adjustments going forward.

Further, while prior theoretical research conjectures that individuals will more internally attribute poor performance when they perform differently than others on the same task (Martinko

et al. 2006), I extend theory by positing that even others' prior performance informs individuals' current attributions. That is, I posit that information about teams' strong historical performance is a relevant input to employees' current attributions, limiting employees' external attributions of their poor performance. For instance, when an employee who works on a team that has a history of performing well receives feedback that they have performed poorly, they will reasonably expect that their team members have continued to perform well, inconsistent with their own performance. Thus, the poor performing employee will resolve this inconsistency by attributing their poor performance internally, to their own effort exertion. Therefore, I expect employees who are part of more successful teams will exhibit less self-serving bias, such that they attribute their poor performance more internally than employees who are part of less successful teams. Formally:

> **Hypothesis 1a:** Poor performing employees will attribute the cause of their poor performance more internally when they are part of a more successful team than when they are part of a less successful team.

When employees internally attribute their performance, they ascribe the reason as either ability or effort. Poor performing employees can better protect their egos by attributing their performance to their effort exertion rather than their ability. Since effort is an unstable dimension that can be changed on controllable tasks, like most tasks in the workplace, I expect that employees who attribute their performance more internally will adjust their effort more positively than those who attribute their performance less internally. Thus, I expect that poor performing employees who are part of more successful teams will adjust their effort more positively than employees who are part of less successful teams. Formally:

> **Hypothesis 1b:** Poor performing employees will adjust their effort more positively when they are part of a more successful team than when they are part of a less successful team.

Team Dynamics and Social Identity

Team dynamics, or team members' relational behaviors, are majorly impacted by team members' social identity. Social identity is described as the way in which individuals define themselves in terms of the characteristics of the social groups they belong to (Tajfel 1978). That is, individuals socially identify with groups they are a part of, and whose characteristics have personal value to them. Individuals who more strongly identify with their team behave in ways that align with group norms and feel more accountable to their team (Brown et al. 2022; Murray, et al. 2020; Barreto and Ellemers 2000). In other words, teams with stronger social identity have better team dynamics than teams with weaker social identity.

I posit that stronger team dynamics among employees can lead to more positive effort adjustments for at least two reasons. First, team members who more strongly identify with their teammates work harder to protect their own self-concept, which is more tied to the team. Second, team members who more strongly identify with their teammates feel more accountable to those teammates and, thus, work harder on their behalf. I discuss both reasons, in turn, next.

First, team members tie their own self-concept to their team more or less strongly, depending on the strength of their social identity with the team. Self-concept is individuals' perceptions of themselves, and it is a continually shifting part of individuals' identity (Sim, Goyle, McKedy, Eidelman, and Correll 2014). As individuals more strongly identify with a social group, their self-concept starts to shift from their unique characteristics to include characteristics of their group (Hornsey 2008). Individuals aim to have a positive self-concept, and being associated with a more successful or higher prestige team can maintain or increase individuals' self-concept (Ashforth et al. 2008; Tajfel and Turner 1979; Tajfel 1974). But, being associated with a less successful or lower prestige team can threaten individuals' self-concept.

When team members' self-concepts are threatened, team members can cope with the threat by either leaving the team for a more prestigious team or by implementing strategies to improve the team's prestige (Hogg and Abrams 1990; Tajfel and Turner 1979; Tajfel 1978, 1974). Individuals who highly identify with teams that present a threat to self-concept react more strongly to the threat than individuals who weakly identify with their teams, since these former team members' self-concept is more strongly interconnected with their team (Dietz-Uhler and Murrell 1998). These individuals will often engage in positive affirmations to maintain a positive identity with the team and to protect their own self-concept. Additionally, individuals who more strongly, but not less strongly, identify with their team put forth additional effort after a threat to their self-concept, but they do not change their effort when there is no threat (Ouwerkerk, de Gilder, and de Vries 2000). I posit that less successful team performance is one threat to self-concept that will lead to more positive effort adjustments for those with stronger team dynamics than for those with weaker team dynamics. Since I do not expect more successful team performance to threaten self-concept, I do not expect this same positive effect of stronger team dynamics among employees on more successful teams.

Second, team members who more strongly identify with their team feel more accountable to their teammates than team members who less strongly identify with their team. Individuals who strongly identify with a specific team, such that the team is part of their identity, consider the team their "in-group" and other teams as "out-groups" (Tajfel 1974). In these cases, team members define themselves in terms of the in-group's beliefs, attitudes, and behaviors, and the team's goals and outcomes become more salient and important. (Brown et al. 2022; Terry, Hogg, and White 1999). For example, when employees view a work team as part of their identity, they are more likely to agree with the beliefs, goals, and norms of the team and behave in ways that

are in alignment with those elements. When employees more strongly identify with their team, they are more likely to consider how their performance impacts the team because they feel more accountable to their team and care more about their team's performance than their own (Barreto and Ellemers 2000). I posit that this increased accountability will lead employees to make more positive effort adjustments in order to improve their team contribution. Indeed, individuals who view their team as part of their identity increase their effort on team tasks more than individual tasks and this willingness to increase effort then increases motivation to perform well (van Knippenberg 2000; Worchel, Rothgerber, Day, Hart, and Butemeyer 1998).[2] While I expect this effect to hold for employees on less successful teams, I do not expect this effect to hold for employees on more successful teams since this later type of team does not need a boost in contribution from the employee in order to attain success.

In sum, poor performing employees on less successful teams with stronger team dynamics will attempt to make changes that will help their teams either because (1) it improves their own self-concept or (2) their shift from an individual to a team perspective increases their accountability to their teammates. Encouragingly, these reactions are especially helpful for employees on less successful teams. When poor performing employees are part of more successful teams, their greater likelihood of attributing their poor performance internally, relative to those who are part of less successful teams, will induce a more positive adjustment in effort so that they can better contribute to team outcomes, regardless of the strength of team dynamics. However, when employees are part of less successful teams, they are more likely to externally

[2] Stronger team dynamics also impact other behaviors. Identifying with a team reduces earnings management, social loafing, and tardiness, and increases helping behavior, motivation, and commitment to team goals (Brown et al. 2022; Haslamm Powell, and Turner 2000; van Dick 2001; Hogg and Terry 2000; Ashforth et al. 2008; Eleme's, de Gilder, and Haslam 2004). It also increases the desire to fight on behalf of the team when confronted with a threat, such as when the team receives negative performance feedback (Spears, Jetten and Doosje 2001; Branscombe and Ellemers 1998). While team failures lead to lower cooperation among team members, this effect is mitigated when individuals identify strongly with teams because team members have more concern for the team (Jackson 2011).

attribute their own poor performance. Thus, an alternative mechanism is needed to improve these employees' effort adjustments. I posit that stronger team dynamics, driven by employees' stronger social identity with their team, is such a mechanism. Specifically, I predict that stronger, relative to weaker, team dynamics will lead poor performing employees on less, but not more, successful teams to adjust their effort more positively, despite poor performing employees on less successful teams attributing their performance externally. Formally:

> **Hypothesis 2:** Poor performing employees on less, but not more, successful teams will adjust their effort more positively when they are part of teams with stronger team dynamics than when they are part of teams with weaker team dynamics.

This prediction is not without tension. In general, stronger team dynamics are a strength of any team, and thus intuition suggests that they could improve effort adjustments even for employees on more successful teams. For example, poor performing employees on more successful teams likely attribute their performance more internally, and identifying more strongly with their teammates could lead them to more positively adjust their effort in order to better follow team norms, in spite of the team not relying on them for collective success.

III. RESEARCH METHOD

Research Design

I address my research question using a 2 × 2 between-participants experimental design. I manipulate team performance as more or less successful, and I manipulate team dynamics as stronger or weaker. I employ a setting in which all team members receive negatively framed feedback on their individual performance. That is, they are told they *only* received score "X" on a task and that a higher score would be more helpful to their team, where "X" is their actual score.[3] This framing focuses the team members on the implication that their performance was not a sufficient contribution to the team. Prior research shows that team members focus on how their feedback is framed, positively or negatively, rather than on their actual performance (van de Ridder, Peters, Stokking, de Rue, and ten Cate 2014; Murthy and Schafer 2011; McFarland and Miller 1994).

Participants

I recruit team members from upper-level courses at a large, public university. Because my study is abstract and does not require specific skills, students are appropriate participants (Peecher and Solomon 2001; Libby, Bloomfield, and Nelson 2002). Team members complete my study in Smartriqs, an online platform hosted by Qualtrics that allows participants to interact with one another (see Molnar 2019). All team members are offered class extra credit and a

[3] For example, "Unfortunately, you correctly identified all the differences in only six find-the-differences puzzles. A higher score would be more helpful to your team."

chance to win an Amazon gift card for participating. Team members spend approximately 20 minutes on the experiment.

Experimental Task

Team members complete two experimental tasks, an initial trivia task, which I use to manipulate team performance and team dynamics, and the main find-the-differences task, which I use to capture effort adjustment, my primary dependent variable, after team members receive negatively framed performance feedback.

The experiment proceeds as follows. I conduct research sessions in a controlled computer lab. Each session lasts approximately 30 minutes, including time dedicated to instructions. As team members enter the computer lab, I randomly assign them to a computer where they complete the entire experiment. I begin each session by reading the instructions aloud while the team members follow along with a written copy. See Appendix A for a copy of the instructions. These instructions describe the experiment and payment. Team members consent to participate and follow a link to my study in Qualtriqs. First, they learn about how they will work in their three-person team, and they read instructions for the trivia task. In the trivia task instructions, I reveal to team members that the difficulty level of trivia questions varies between teams. By doing so, I avoid deceiving team members. Next, team members answer several questions to ensure accurate comprehension of the task. Then, teams consider ten general-knowledge trivia questions, team members submit their answers individually, and team members receive feedback regarding their teams' collective performance. Next, team members use the feedback they received to evaluate their team's performance on the trivia task.[4]

[4] The trivia questions were obtained online from thoughtcatalog.com and welovequizzes.com.

Team members then complete the find-the-differences puzzles, the main experimental task.[5] In these puzzles, team members examine two images that are nearly identical but have a number of minor differences between them. Team members' task is to identify and report the number of differences between each pair of images, which varies among puzzles.[6] I chose this task because the number of differences detected is a function of team members' elected effort level. Also, accurately solving these puzzles is difficult, so team members are unlikely to solve a high number. Thus, I can convincingly frame team members' feedback negatively without deceiving them.

After team members read the find-the-differences puzzles task instructions, they complete a practice round with one find-the-differences puzzle in order to better understand the task. Then, team members move to the first of two rounds of the task. Team members count the differences in each of five puzzles, enter the number of differences they find between the two images into an answer box, and then submit their answer to each puzzle before moving on to the next. Team members have an unlimited amount of time to count the differences in each puzzle. Following round one, team members are reminded of their earlier evaluation of their team's performance.[7] Team members also receive negatively framed feedback about their individual performance on round one of the find-the-differences puzzles. After receiving negative feedback, team members evaluate their own performance on the individual task and complete Russell's (1982) Causal Dimension Scale regarding their attribution of the cause of their poor

[5] The find-the-differences puzzles were obtained online from printitfree.net and kidsfront.com.
[6] I used a pilot study to evaluate the difficulty levels of 30 find-the-differences puzzles, from which I selected ten puzzles, all with similar difficulty.
[7] To remind team members of their evaluation of their team's earlier performance, I tell them, "Recall that earlier you thought your team performed ____ on the trivia task." The comparison of their own performance to their perception of their team's performance is a determinate in how they attribute the cause of their performance.

performance.[8] Team members then complete round two, with five new puzzles. Finally, after round two, team members complete a short post-experimental questionnaire measuring social identity and capturing demographic data.

Independent Variables

Team Performance

I use the trivia task to manipulate team performance at two levels, more successful and less successful. Specifically, I manipulate the difficulty of the trivia questions that teams receive. Team members in the more (less) successful condition receive ten easier (harder) trivia questions.[9] After completing the trivia task, team members receive feedback that reflects their team's collective performance on the trivia questions.[10] All team members receive feedback that states, "Your team scored X on this task, compared to an average score of Y among people who have previously answered a subset of questions from the same pool of trivia questions." Team members then use this information to rate their team's performance with the question "On a scale of 0 to 5, how successful do you think your team is?" with a 6-point Likert scale, anchored at "very unsuccessful" (0) and "very successful" (5).[11] I use this question as a team performance manipulation check and to remind team members of their evaluation after round one of the find-the-differences task.

[8] I measure team members' attribution after round one, rather than in the post-experimental questionnaire, so that team members do not confound their first and second round performance when making their evaluations.
[9] I use a pilot study to confirm the difficulty level of the trivia questions. Participants receive 10 randomly selected trivia questions from a set of 20. Within these 20 questions I included some that I expected to be easier and some that I expected to be harder. I used participants' success on each question to confirm my expectations of questions' difficulty. Each question in the easier group is answered correctly significantly more often than any question in the harder group. Also, there is no significant difference in participants' performance on questions within the easier group, and there is no significant difference in participants' performance on questions within the harder group.
[10] In both conditions, team members individually submit their final answers to the trivia questions. The three team members' scores are summed and divided by three to get a collective team performance score. Team members are given this information in the trivia task instructions so that they are aware that their performance impacts their team.
[11] The 6-point Likert scale points are defined as follows: 5 – Very successful, 4 – moderately successful, 3 – slightly successful, 2 – slight unsuccessful, 1 - moderately unsuccessful, 0 – very unsuccessful.

Team Dynamics

I also use the trivia task to manipulate stronger and weaker team dynamics. Specifically, I follow prior literature by manipulating the social identity aspect of team dynamics (see Bowlin et al. 2024; Kachelmeier and VanLanduyt 2017). Each team member in a three-person team answers ten trivia questions, but teams' social interactions during this task differ between team dynamic conditions. Team members in the stronger team dynamics condition work on the trivia questions together by chatting electronically using the Smartriqs function in Qualtrics during the task, so that they come to a collective set of answers. Conversely, team members in the weaker team dynamics condition work on the trivia questions individually without the ability to chat.

Dependent Variables

I measure two primary dependent variables. The first is team members' causal attributions of their own poor performance. Team members receive negatively framed feedback after the first round of the find-the-differences task and rate their own performance with a 6-point Likert scale, anchored at "very high performance" (5) and "very low performance" (0). Then, team members complete Russel's (1982) Causal Dimension Scale, which is commonly used to measure attribution (Motro, Ellis, Evans, and Benson 2022; Burton, Taylor, and Barber 2014; Swanson and Kelly 2001). The scale consists of nine Likert scale type questions, three each for locus of causality, stability, and controllability. Team members rate their attribution of their poor performance on a scale of one to nine (See Appendix B for the complete scale). I sum the questions related to locus of causality to create my first dependent variable, since this is the causal attribution dimension on which my theory focuses.

My second primary dependent variable is the percentage of effort adjustment. To measure effort adjustment, I subtract the time, in seconds, that team members expend to solve the

find-the-differences puzzles in round two from the time that they expend in round one. Then, in order to capture a percentage change, I divide this difference by the time team members spend in the first round. I measure effort adjustments between rounds one and two, rather than effort in round two, so that I can control for team members' skill level using their first-round performance.

I also measure two additional variables. First, I measure performance change because in supplemental analysis I examine whether team members' effort adjustment leads to performance change. To do so, I take the absolute value of the difference between the correct solution and team members' answers.[12] I sum these absolute values for all five round one puzzles to obtain round one performance. I then go through the same process for round two puzzles to calculate round two performance. Finally, I subtract round one performance from round two performance and divide by round one performance to get the percentage change in performance. I expect that effort increases (decreases) will lead to performance increases (decreases).

Manipulation Checks

I ask participants two manipulation check questions to ensure the efficacy of the study's manipulations. First, to determine the efficacy of my team success manipulation, after the team trivia scores were disclosed, I asked participants to rate their team's success on a six-point Likert scale, anchored with "Very Unsuccessful," (0) and "Very Successful" (5). Second, to determine the efficacy of my team dynamics manipulation, I measure team members' perceptions of their social bonds with their teammates in a post-experimental questionnaire, using seven social bond statements adapted from Deng (2024). Team members rate their social bond using a 9-point

[12] The find-the-differences puzzles in round 1 and round 2 have the same total number of differences to ensure all team members' measures of performance change are comparable.

Likert scale, anchored at “Strongly Disagree” (1), and “Strongly Agree” (9). See the full scale in Appendix C. Further, see my full instrument in Appendix D.

IV. RESULTS

Manipulation Checks

I manipulate team success by providing either easier or harder trivia questions to teams in the more successful and less successful conditions, respectively. To ensure the efficacy of this manipulation, I perform a 2×2 ANOVA testing the impact of team success and team dynamics on team members' perceptions of team success. Consistent with my expectations, participants in the more successful condition rated their team's success significantly higher than those in the less successful condition (4.75 vs. 1.11, $t = -21.35$, $p < 0.001$, one-tailed, untabulated).

I manipulate team dynamics by allowing teams to either chat or not chat with each other while they work on the trivia task in the stronger team dynamics and weaker team dynamics conditions, respectively. To ensure this manipulation captures team dynamics, I perform a 2×2 ANOVA of team success and team dynamics on social bonds. As shown in Table 1, Panel B, there is no significant difference between team members on teams with stronger team dynamics and those on teams with weaker team dynamics on this continuous social bond measure (37.56 vs. 36.11, $t = 0.787$, $p = 0.216$, one-tailed). This suggests that my team dynamics manipulation was not effective.

I investigate why my team dynamics manipulation was unsuccessful. While prior literature shows that chatting can increase social bonds (Bowlin et al. 2024; Deng 2024; Kachelmeier and VanLanduyt 2017), these studies use the chatting option while participants in different conditions work together on a task that is constant across all conditions. In my experiment, the task itself varies across team success conditions. Specifically, participants

answered different trivia questions depending on the team success condition to which they were assigned, such that teams in the more successful condition answer easier questions and teams in the less successful condition answer harder questions. This difference in question difficulty appears to have impacted whether participants in the chat condition talked to each other. While 29.5% of team members in the less successful condition chatted, only 7.2% in the more successful condition chatted. I conduct a 2×2 ANOVA, using word count as my dependent variable, and team members on more successful teams write significantly fewer words in the chat box than those on less successful teams (0.24 vs. 06.53, $t = 6.187$, $p < 0.001$, one-tailed). This makes sense given that members of more successful teams who received easier trivia questions could answer the questions on their own, while members of less successful teams, who received harder trivia questions, needed help from their teammates and used the chat function to get it.

Further, Table 1, Panel B, shows a significant interaction between team success and team dynamics on social bond perceptions ($t = 2.256$, $p = 0.026$, two-tailed). Simple effects tests results are shown in Panel C. The results indicate that for team members on less successful teams, social bonds were significantly higher in the stronger team dynamics condition than in the weaker team dynamics condition (37.42 vs. 33.22, $F = 4.884$, $p = 0.029$, two-tailed). However, for team members on the more successful teams, there was no significant difference between stronger (37.70) and weaker (39.72) team dynamics on social bonds ($F = 1.02$, $p = 0.313$, two-tailed). I also find a significant interaction of team success and team dynamics on word count with the same social bond perception pattern. Simple effects analysis shows that for team members on more successful teams, there is no difference in the number of words written in the chat box whether team dynamics are stronger or weaker (0.00 vs. 13.06, $F = 0.109$, $p = .7425$, two-tailed, untabulated). However, for team members on less successful teams, the number of

words written in the chat box was significantly higher for those in the stronger team dynamics condition than those in the weaker team dynamics condition (13.06 vs. 0.00, $F = 86.862$, $p < .001$, two-tailed, untabulated).

TABLE 1

Team Success and Team Dynamics on Social Bonds

Panel A: LS Mean (Std Error)

	Stronger Team Dynamics	Weaker Team Dynamics	Overall
More Team Success	37.70 (1.44) n = 33	39.72 (1.38) n = 36	38.71 (1.00) n = 69
Less Team Success	37.42 (1.44) n = 33	33.22 (1.24) n = 45	35.32 (0.95) n = 78
Overall	37.56 (1.02) n = 66	36.47 (0.93) n = 81	

Panel B: Analysis of Variance of Team Success and Team Dynamics on Social Bonds

Source	df	MS	F	t	SE	p-value[1]
Team Success	1	414.714	6.020	2.454	1.380	0.008***
Team Dynamics	1	42.840	0.620	0.787	1.380	0.216
Team Success × Team Dynamics	**1**	350.604	5.090	2.256	-0.79	0.026†,**
Error	143	68.8953				

TABLE 1 (CONTINUED)

Panel C: *Social Bonds* - Simple Effects

Source	t	p-value[1]
Higher Team Success, Stronger Team Dynamics = Higher Team Success, Weaker Team Dynamics	1.010	0.313†
Lower Team Success, Stronger Team Dynamics > Lower Team Success, Weaker Team Dynamics	-2.210	0.029†,**
Higher Team Success, Stronger Team Dynamics > Lower Team Success, Stronger Team Dynamics	-0.130	0.894†
Higher Team Success, Weaker Team Dynamics > Lower Team Success, Weaker Team Dynamics	-3.500	0.001†,***
Higher Team Success, Stronger Team Dynamics > Lower Team Success, Weaker Team Dynamics	-2.350	0.020†,**
Higher Team Success, Weaker Team Dynamics = Lower Team Success, Stronger Team Dynamics	-1.150	0.253†

Notes:

The table presents the statistical information of team success and team dynamics on the perception of social bonds. I present means in Panel A, analysis of variances in Panel B, and simple effects in Panel C.

[1]*, **, *** indicate significance at the 0.10, 0.05, and 0.01 levels, respectively. All p-values are one-tailed for directional predictions; p-values for nondirectional predictions are two-tailed and are denoted with †.

Variable Definitions:

Team Success *is the manipulated condition of team members, where more team success represents easier trivia questions, and less team success represents harder trivia questions.*

Team Dynamics (manipulated) *is the manipulated condition of team members, where stronger team dynamics represents participants being able to chat with their teammates during the trivia task, and weaker team dynamics represents participants not being able to chat with their teammates during the trivia task.*

Social Bonds *is the summation of a participant's response to the seven questions in the post-experimental questionnaire regarding their social bond with their team. A higher score on the questionnaire represents a stronger social bond with their teammates, while a lower score on the questionnaire represents a weaker social bond with their teammates. This variable will be called Team Dynamics (measured) from here on out.*

Tests of Hypotheses

Collectively, the findings above suggest that team dynamics interacts with team success to affect social bonds. Specifically, the ability to chat strengthens social bonds among teams that answer more difficult trivia questions because those teams benefit by discussing the difficult questions. They therefore take advantage of the opportunity to chat, which, in turn, results in stronger social bonds. However, chatting does not strengthen social bonds among teams answering easier questions because those teams can answer their questions without chatting with others. Consequently, they do not exercise the ability to chat and, thus, form weaker social bonds. Therefore, while I first examine my hypotheses using my manipulated team dynamics variable (i.e., whether teams are allowed to chat), I also test my hypotheses using a continuous measure of social bond perceptions (hereafter, "measured team dynamics"). Table 2 provides descriptive statistics for variables of interest by experimental condition. Panel A reports means by condition using the manipulated team dynamics variable, while Panel B reports means by condition constructed using a median split of measured team dynamics.

TABLE 2

Descriptive Statistics of Key Variables

Panel A: LS Mean (Std Err) by Experimental Condition using Manipulated Team Dynamics

	More Team Success			Less Team Success		
n=147	*Stronger Team Dynamics*	*Weaker Team Dynamics*	*Combined Team Dynamics*	*Stronger Team Dynamics*	*Weaker Team Dynamics*	*Combined Team Dynamics*
n	n = 33	n = 36	n = 69	n = 33	n = 45	n = 78
Internal Attributions	19.00 (0.75)	18.25 (0.72)	18.63 (0.52)	18.06 (0.75)	19.27 (0.64)	18.66 (0.49)
Effort Adjustment	0.22 (0.07)	0.22 (0.07)	0.22 (0.05)	0.21 (0.07)	0.19 (0.06)	0.20 (0.05)
Performance Change	(0.05) (0.08)	(0.02) (0.08)	(0.04) (0.06)	(0.12) (0.08)	(0.12) (0.07)	(0.12) (0.06)
Accountability	6.27 (0.40)	7.03 (0.38)	6.65 (0.28)	5.45 (0.40)	6.40 (0.34)	5.93 (0.26)
Team Success Perception	4.76 (0.18)	4.75 (0.17)	4.75 (0.12)	1.33 (0.18)	0.89 (0.15)	1.11 0.12
Individual Performance Perception	0.58 (0.18)	0.56 (0.17)	0.57 (0.13)	0.88 (0.18)	0.73 (0.16)	0.81 (0.12)
Social Bond	37.70 (1.44)	39.72 (1.38)	38.71 (1.00)	37.42 (1.44)	33.22 (1.24)	35.32 (0.95)
Word Count	0.48 (1.06)	0.00 (1.02)	0.24 (0.74)	13.06 (1.06)	0.00 (0.91)	6.53 (0.70)

TABLE 2 (CONTINUED)

Panel B: LS Mean (Std Err) by Experimental Condition using Measured Team Dynamics (Split)

	More Team Success			Less Team Success		
n=147	*Stronger Team Dynamics*	*Weaker Team Dynamics*	*Total Team Dynamics*	*Stronger Team Dynamics*	*Weaker Team Dynamics*	*Total Team Dynamics*
n	n = 41	n = 28	n=69	n = 33	n = 45	n=78
Internal Attributions	19.54 (0.66)	17.25 (0.80)	18.39 (0.52)	17.82 (0.74)	19.44 (0.63)	18.63 (0.49)
Effort Adjustment	0.23 (0.06)	0.21 (0.08)	0.22 (0.05)	0.20 (0.07)	0.20 (0.06)	0.20 (0.05)
Performance Change	0.01 (0.08)	(0.10) (0.09)	(0.05) (0.06)	(0.09) (0.08)	(0.14) (0.07)	(0.12) (0.06)
Accountability	7.32 (0.34)	5.71 (0.41)	6.52 (0.27)	6.94 (0.38)	5.31 (0.33)	6.13 (0.25)
Team Success Perception	4.66 (0.16)	4.89 (0.19)	4.78 (0.13)	1.36 0.18	0.87 (0.15)	1.12 (0.12)
Individual Perf. Perception	0.61 (0.15)	0.50 (0.18)	0.55 (0.12)	1.39 (0.17)	0.36 (0.15)	0.87 (0.11)
Social Bond	44.56 (0.77)	30.25 (0.93)	37.41 (0.60)	42.73 (0.85)	29.33 (0.73)	36.03 (0.56)
Word Count	0.07 (1.18)	0.46 (1.43)	0.27 (0.93)	8.15 (1.43)	3.60 (1.13)	5.88 (0.87)

TABLE 2 (CONTINUED)

Notes: Panel A of this table displays the descriptives of team success and the manipulated team dynamics variable on the variables of interest. Panel B displays the descriptives of team success and the measured team dynamics variable, split at the median of 36, on the variables of interest.

Variable Definitions:

Team Success *is the manipulated condition of team members, where more team success represents easier trivia questions, and less team success represents harder trivia questions.*

Team Dynamics (manipulated) *is the manipulated condition of team members, where stronger team dynamics represents participants being able to chat with their teammates during the trivia task, and weaker team dynamics represents participants not being able to chat with their teammates during the trivia task.*

Internal Attributions *is the summation of participants' responses to questions 1, 5, and 7 on Russel's (1982) Causal Dimension Scale regarding how they attributed their poor performance on the find-the-differences task. A higher score indicates performance is more internally attributed.*

Effort Adjustment *is a composite variable calculated as the amount of time (in seconds) participants spent on the find-the-differences task in round two minus the amount of time spent in round one, divided by the amount of time spent in round one.*

Performance Change *is a composite variable calculated as the absolute value of the number of missed differences in the find-the-differences task in round two minus the absolute value of missed differences in round one divided by the absolute value of missed differences found in round one; a negative number means the participant was closer to the correct number of differences in round two than round one, which means their performance increased.*

Accountability *is a participant's response to the post-experimental question, "To what extent did you feel accountable to your team for your performance on the find-the-differences puzzle?" (1 = not at all; 9 = a great deal).*

Team Success Perception *is a participant's response, after receiving the team trivia score, to the question, "Based on this feedback regarding your team's score of ___ on the trivia task, please rate your team's performance on the following scale." (0 = very unsuccessful; 5 = very successful).*

Individual Perf. Perception *is a participant's response, after receiving negative feedback regarding their performance on the first round of the find-the-differences task, to the question, "Based on the feedback you just received regarding the number of correctly identified differences, please rate your own performance on the find-the-differences task on the following scale." (0 = very low performance; 5 = very high performance.*

Social Bond *is the summation of a participant's response to the seven questions in the post-experimental questionnaire regarding their social bond with their team. A higher score on the questionnaire represents a stronger social bond with their teammates, while a lower score on the questionnaire represents a weaker social bond with their teammates.*

Word Count *is the number of words each participant typed in the chat window during the trivia task.*

Hypothesis 1a

Hypothesis 1a posits that team members attribute their own poor performance more internally when their team is more successful than when their team is less successful. In Table 3, Panel B, I first perform a 2×2 ANOVA of team success and manipulated team dynamics on internal attributions. Contrary to my hypothesis, I find no evidence that team members on more successful teams internally attribute their own poor performance more than those on less successful teams (18.63 vs. 18.66, $t = 0.000$, $p = 0.479$, one-tailed). In Panel D, I perform a second ANOVA using my measured team dynamics variable. Again, I find no evidence of a main effect of team success on internal attributions (18.39 vs. 18.63, $t = 0.283$, $p = 0.391$, one-tailed).

TABLE 3

Team Success and Team Dynamics on Internal Attributions

Panel A: LS Mean (Std Error) of Team Success and Manipulated Team Dynamics on Internal Attributions

	Stronger Team Dynamics	Weaker Team Dynamics	Overall
More Team Success	19.00 (0.75) n = 33	18.25 (0.72) n = 36	18.63 (0.52) n = 69
Less Team Success	18.06 (0.75) n = 33	19.27 (0.64) n = 45	18.66 (0.49) n = 78
Overall	18.53 (0.53) n = 66	18.76 (0.48) n = 81	

Panel B: Analysis of Variance of Team Success and Manipulated Team Dynamics on Internal Attributions

Source	df	MS	F	t	SE	p-value[1]
Team Success	1	0.054	0.000	0.000	0.718	0.479
Team Dynamics	1	1.880	0.100	0.316	0.718	0.376
Team Success × Team Dynamics	**1**	34.593	1.850	1.360	1.436	0.175†
Error	143	18.653				

TABLE 3 (CONTINUED)

Panel C: LS Mean (Std Err) of Team Success and Measured Team Dynamics on Internal Attributions

	Stronger Team Dynamics	Weaker Team Dynamics	Overall
More Team Success	19.54 (0.66) n = 41	17.25 (0.80) n = 28	18.39 (0.52) n = 69
Less Team Success	17.82 (0.74) n = 33	19.44 (0.63) n = 45	18.63 (0.49) n = 78
Overall	18.68 (0.50) n = 74	18.35 (0.51) n = 73	

Panel D: Analysis of Variance of Team Success and Measured Team Dynamics on Internal Attributions

Source	df	MS	F	t	SE	p-value[1]
Team Success	1	1.313	0.080	0.283	0.718	0.391
Team Dynamics	33	22.325	1.310	1.145	0.718	0.081*
Team Success × Team Dynamics	26	21.058	1.230	1.109	1.436	0.232†
Error	86	17.057				

TABLE 3 (CONTINUED)

Notes:

This table presents the results of the analysis of variance for H1a, using the measured team dynamics variable. I obtained the means using the median split of measured team dynamics and ran the ANOVA using the continuous measured team dynamics variable.

[1]*, **, *** indicate significance at the 0.10, 0.05, and 0.01 levels, respectively. All p-values are one-tailed for directional predictions; p-values for nondirectional predictions are two-tailed and are denoted with †.

Variable Definitions:

Team Success *is the manipulated condition of team members, where more team success represents easier trivia questions, and less team success represents harder trivia questions.*

Team Dynamics (manipulated) *is the manipulated condition of team members, where stronger team dynamics represents participants being able to chat with their teammates during the trivia task, and weaker team dynamics represents participants not being able to chat with their teammates during the trivia task.*

Team Dynamics (measured) *is the summation of a participant's response to the seven questions in the post-experimental questionnaire regarding their social bond with their team. Stronger team dynamics indicates a higher score on the questionnaire and represents a stronger social bond with their teammates, while weaker team dynamics indicates a lower score on the questionnaire and represents a weaker social bond with their teammates.*

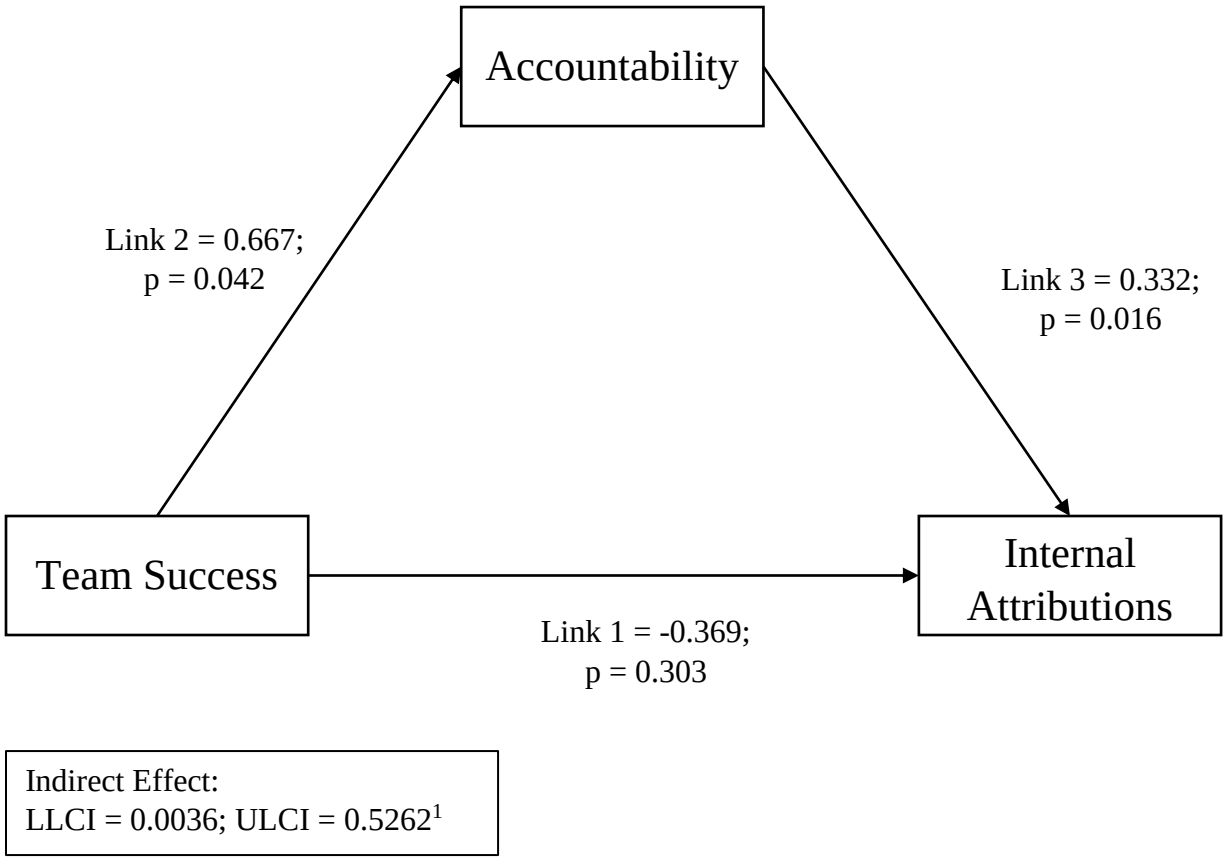
Internal Attributions *is the summation of participants' responses to questions 1, 5, and 7 on Russel's (1982) Causal Dimension Scale regarding how they attributed their poor performance on the find-the-differences task. A higher score indicates the participant more internally attributes their performance.*

Next, I use regression-based PROCESS (model four) to further examine my hypothesis and underlying theory (Hayes 2022). In the post-experimental questionnaire, I ask participants how accountable they felt to their team for their performance on the find-the-differences task.[13] My model is depicted in Figure 1. As shown in link 1, and consistent with my ANOVA results, I find no direct effect of team success on internal attributions (coeff = -0.369; p = 0.303, one-tailed). However, I do find an indirect effect of team success on internal attributions through accountability. First, consistent with my theory, team success positively impacts accountability (link 2; coeff = 0.667; p = 0.042, one-tailed). Specifically, when team members are part of more successful teams, they feel more accountable to their teammates for their individual poor performance than when team members are part of less successful teams. Then, accountability positively impacts internal attributions (link 3; coeff = 0.332; p = 0.016, one-tailed) such that as team members feel more accountable to their team, they attribute the cause of their individual poor performance more internally. A bootstrap confidence interval for the indirect effect based on 10,000 bootstrap samples is entirely above zero (LLCI = 0.0036; ULCI = 0.5262).[14]

[13] Participants answered the question "To what extent did you feel accountable to your team for your performance on the find-the-differences puzzles?" on a 9-point Likert scale, anchored at "Not at all" (1) "A great deal" (9).
[14] PROCESS (Hayes 2022) produces bootstrapped confidence intervals with significance indicated by intervals that do not include zero. My PROCESS results are statistically equivalent to a one-tailed prediction with 95% confidence, also known as a one-tailed p-value of less than 0.05.

FIGURE 1

Statistical Diagram for the Effect of Team Success on Internal Attributions (H1a)



Notes:

I use the PROCESS macro (Hayes 2022), model four, to test the statistical significance of the conditional indirect effects of team success on internal attributions, through accountability (H1a).

[1]I use 10,000 bootstrap samples and a confidence level of 90%, which is the equivalent of $p < 0.05$, one-tailed. Confidence intervals that do not include zero are considered statistically significant.

Variable Definitions:

Team Success *is the manipulated condition of team members, where more team success represents easier trivia questions, and less team success represents harder trivia questions.*

Accountability *is a participant's response to the post-experimental question, "To what extent did you feel accountable to your team for your performance on the find-the-differences puzzle?" (1 = not at all; 9 = a great deal).*

Internal Attributions *is the summation of participants' responses to questions 1, 5, and 7 on Russel's (1982) Causal Dimension Scale regarding how they attributed their poor performance on the find-the-differences task. A higher score indicates performance is more internally attributed.*

Overall, these findings suggest that while being on a more or less successful team does not directly elicit differences in how internally employees attribute their individual poor performance, being on a more successful team does evoke a sense of accountability, and this sense of accountability elicits a sense of responsibility for their own poor performance.

Hypothesis 1b

Hypothesis 1b posits that team members on more successful teams will adjust their effort more after receiving negative performance feedback than those on less successful teams. As reported in Table 4, Panel B, I first perform an ANOVA of team success and my manipulated team dynamics variable on effort adjustment. I find no evidence that team success directly affects team members' effort adjustments (0.22 vs. 0.20, $t = 0.300$, $p = 0.382$, one-tailed). Panel D shows that using my measured team dynamics variable produces the same result (0.22 vs 0.20, $t = 0.224$, $p = 0.414$ one-tailed).

TABLE 4

Team Success and Team Dynamics on Effort Adjustment

Panel A: LS Mean (Std Error) of Team Success and Manipulated Team Dynamics on Effort Adjustment

	Stronger Team Dynamics	Weaker Team Dynamics	Overall
More Team Success	0.22 (0.07) n = 33	0.22 (0.07) n = 36	0.22 (0.05) n = 69
Less Team Success	0.21 (0.07) n = 33	0.19 (0.06) n = 45	0.20 (0.05) n = 78
Overall	0.22 (0.05) n = 66	0.20 (0.05) n = 81	

Panel B: Analysis of Variance of Team Success and Manipulated Team Dynamics on Effort Adjustment

Source	df	MS	F	t	SE	p-value[1]
Team Success	1	0.015	0.090	0.300	0.068	0.382
Team Dynamics	1	0.005	0.033	0.182	0.068	0.428
Team Success × Team Dynamics	**1**	0.009	0.054	0.232	0.135	0.817†
Error	143	0.165				

TABLE 4 (CONTINUED)

Panel C: LS Mean (Std Err) of Team Success and Measured Team Dynamics on Effort Adjustment

Team Dynamics	Stronger Team Dynamics	Weaker Team Dynamics	Overall
More Team Success	0.23 (0.06) n = 41	0.21 (0.08) n = 28	0.22 (0.05) n = 69
Less Team Success	0.20 (0.07) n = 33	0.20 (0.06) n = 45	0.20 (0.05) n = 78
Overall	0.21 (0.05) n = 74	0.20 (0.05) n = 73	

Panel D: Analysis of Variance of Team Success and Measured Team Dynamics on Effort Adjustment

Source	df	MS	F	t	SE	p-value[1]
Team Success	1	0.009	0.050	0.224	0.068	0.414
Team Dynamics	33	0.089	0.480	0.693	0.068	0.495
Team Success × Team Dynamics	26	0.186	1.000	1.000	0.747	0.478†
Error	86	0.186				

Notes:

Panels A and B present the means and direct effect of team success and manipulated team dynamics on effort adjustment. Panels C and D present the means and direct effect of team success and measured team dynamics on effort adjustment (H1b).

[1]*, **, *** indicate significance at the 0.10, 0.05, and 0.01 levels, respectively. All p-values are one-tailed for directional predictions; p-values for nondirectional predictions are two-tailed and are denoted with †.

Variable Definitions:

Team Success *is the manipulated condition of team members, where more team success represents easier trivia questions, and less team success represents harder trivia questions.*

Team Dynamics (manipulated) *is the manipulated condition of team members, where stronger team dynamics represents participants being able to chat with their teammates during the trivia task, and weaker team dynamics represents participants not being able to chat with their teammates during the trivia task.*

Team Dynamics (measured) *is the summation of a participant's response to the seven questions in the post-experimental questionnaire regarding their social bond with their team. Stronger team dynamics indicates a higher score on the questionnaire and represents a stronger social bond with their teammates, while weaker team dynamics indicates a lower score on the questionnaire and represents a weaker social bond with their teammates.*

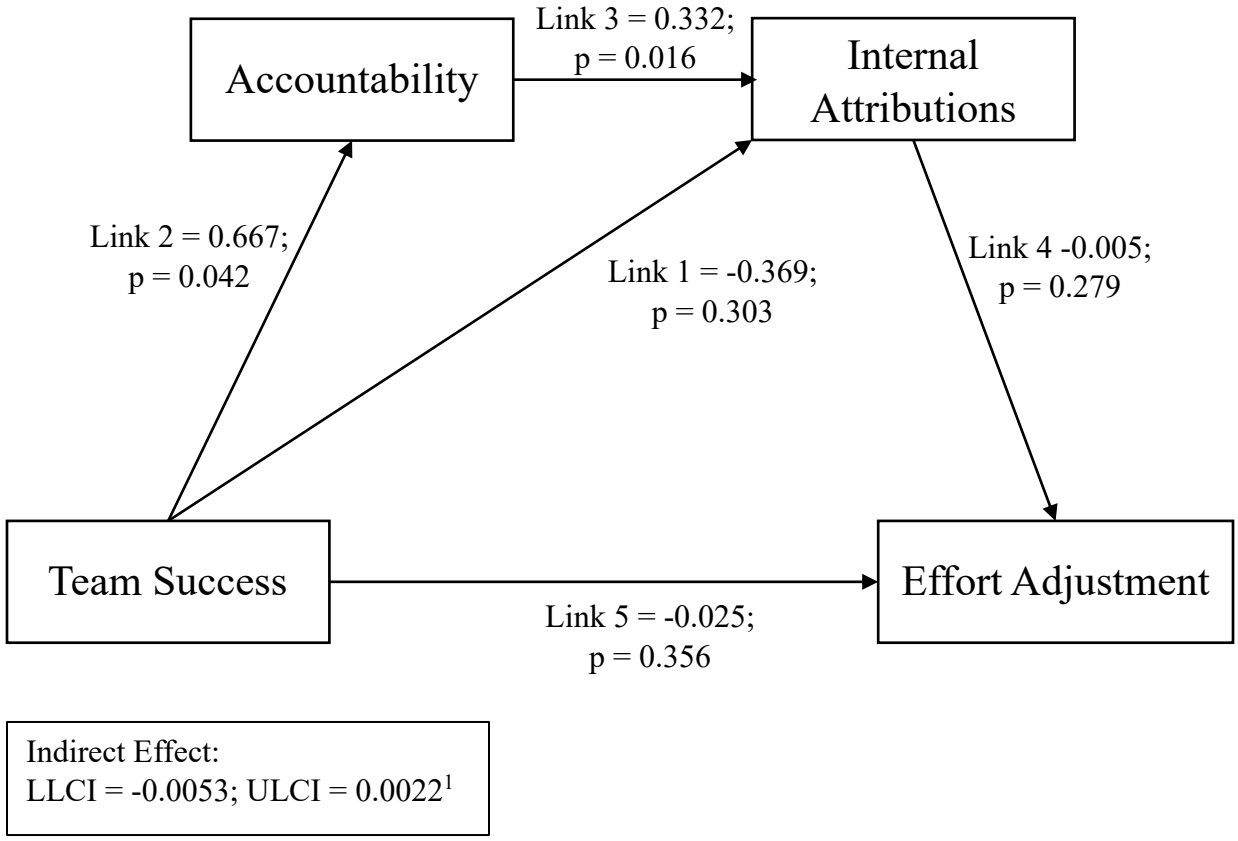
Effort Adjustment *is a composite variable calculated as the amount of time (in seconds) participants spent on the find-the-differences task in round two minus the amount of time spent in round one, divided by the amount of time spent in round one.*

Next, in Figure 2, I use regression-based PROCESS (model 6) to examine whether there is an indirect effect of team success on effort adjustment through team members' accountability and internal attributions (Hayes 2022). I find no evidence that internal attributions affect effort adjustment (link 4; coeff = -0.005; p = 0.279, one-tailed). A bootstrap confidence interval for the indirect effect based on 10,000 bootstrap samples includes zero, which indicates insignificance (LLCI = -0.0053; ULCI = 0.0022).[15] Further, consistent with my ANOVA results, I find no evidence of a direct effect of team success on effort adjustment (link 5; coeff = 0.025, p = 0.356, one-tailed). This finding suggests that team members on more successful teams, who feel more accountable to their teams and then more internally attribute their own poor performance, do not, in turn, increase their effort.

[15] PROCESS (Hayes 2022) produces bootstrapped confidence intervals with significance indicated by intervals that do not include zero. My PROCESS results are statistically equivalent to a one-tailed prediction with 95% confidence, also known as a one-tailed p-value of less than 0.05.

FIGURE 2

Statistical Diagram for the Effect of Team Success on Effort Adjustment (H1b)



Notes:

I use the PROCESS macro (Hayes 2022), model six, to test the statistical significance of the conditional indirect effects of team success on effort adjustment, through accountability and internal attributions (H1b).

[1]I use 10,000 bootstrap samples and a confidence level of 90%, which is the equivalent of $p < 0.05$, one-tailed. Confidence intervals that do not include zero are considered statistically significant.

FIGURE 2 (CONTINUED)

Variable Definitions:

Team Success *is the manipulated condition of team members, where more team success represents easier trivia questions, and less team success represents harder trivia questions.*

Accountability *is a participant's response to the post-experimental question, "To what extent did you feel accountable to your team for your performance on the find-the-differences puzzle?" (1 = not at all; 9 = a great deal).*

Internal Attributions *is the summation of participants' responses to questions 1, 5, and 7 on Russel's (1982) Causal Dimension Scale regarding how they attributed their poor performance on the find-the-differences task. A higher score indicates performance is more internally attributed.*

Effort Adjustment *is a composite variable calculated as the amount of time (in seconds) participants spent on the find-the-differences task in round two minus the amount of time spent in round one, divided by the amount of time spent in round one.*

Hypothesis 2

Hypothesis 2 posits that poor-performing team members on less successful teams will adjust their effort more positively when they are part of a team with stronger team dynamics than when they are part of a team with weaker team dynamics. Additionally, poor-performing team members on more successful teams will always have more positive effort adjustments than those on less successful teams, and weaker versus stronger team dynamics will not differently impact effort adjustments. I use a custom contrast test that reflects both the main effect in H1b and the predicted effects of team dynamics for more and less team success.[16] Results from contrast testing are in Table 5. Using my manipulated team dynamics variable, I find no evidence of my expected team success and team dynamics ordinal interaction ($t = 0.390$, $p = 0.347$, one-tailed). Using my measured team dynamics variable, I continue to find no evidence of my expected ordinal interaction ($t = -0.340$, $p = 0.368$, one-tailed). Therefore, H2 is unsupported. I investigate this surprising finding in supplemental analysis.

[16] My planned analysis was less team success / stronger team dynamics (-1), less team success / weaker team dynamics (-3), more team success / stronger team dynamics (2), and more team success / weaker team dynamics (2).

TABLE 5

Planned Contrasts of Team Success and Team Dynamics on Effort Adjustment

Panel A: Planned Contrast of Team Success and Manipulated Team Dynamics

Source	t-stat	SE	df	p-value[1]
H1b: More Team Success > Less Team Success	-0.300	0.068	143	0.382
H2: More Team Success, Stronger Team Dynamics = More Team Success, Weaker Team Dynamics > Less Team Success, Stronger Team Dynamics > Less Team Success, Weaker Team Dynamics	0.390	0.277	143	0.347

Panel B: Planned Contrast of Team Success and Measured Team Dynamics

Source	t-stat	SE	df	p-value
H2: More Team Success, Stronger Team Dynamics = More Team Success, Weaker Team Dynamics > Less Team Success, Stronger Team Dynamics > Less Team Success, Weaker Team Dynamics	-0.340	1.614	86	0.368

Notes:

Panel A presents the results of the planned contrast testing of team success and manipulated team dynamics on effort adjustment (H1b and H2). Panel B presents the results of the planned contrast testing of team success and measured team dynamics on effort adjustment (H2).

[1]*, **, *** indicate significance at the 0.10, 0.05, and 0.01 levels, respectively. All p-values are one-tailed for directional predictions; p-values for nondirectional predictions are two-tailed and are denoted with †.

TABLE 5 (CONTINUED)

Variable Definitions:

Team Success *is the manipulated condition of team members, where more team success represents easier trivia questions, and less team success represents harder trivia questions.*

Team Dynamics (manipulated) *is the manipulated condition of team members, where stronger team dynamics represents participants being able to chat with their teammates during the trivia task, and weaker team dynamics represents participants not being able to chat with their teammates during the trivia task.*

Team Dynamics (measured) *is the summation of a participant's response to the seven questions in the post-experimental questionnaire regarding their social bond with their team. Stronger team dynamics indicates a higher score on the questionnaire and represents a stronger social bond with their teammates, while weaker team dynamics indicates a lower score on the questionnaire and represents a weaker social bond with their teammates.*

Effort Adjustment *is a composite variable calculated as the amount of time (in seconds) participants spent on the find-the-differences task in round two minus the amount of time spent in round one, divided by the amount of time spent in round one.*

Supplemental Analysis

I run several supplemental analysis tests. First, I examine whether the feedback I give participants is perceived as negative. This negative feedback setting is an important aspect of my study design because it provides the foundation for studying ways to mitigate the undesirable effects of receiving such feedback. Second, I examine the effect of team success and team dynamics on performance change rather than effort adjustment. It is possible that performance can change, even if effort does not. Third, I run post-hoc analyses to further examine H2 and the indirect effects of team success and team dynamics on effort adjustment.

First, I ensure that team members perceived the feedback regarding their own performance on the find-the-differences task as negative. After they complete the first round of the find-the-differences task, I remind team members of their perception of their team's success from the trivia task and then frame their individual feedback negatively. Specifically, I tell them "Unfortunately, you correctly identified all the differences in __ puzzles. A higher score would be more helpful to your team." Following this feedback, I ask them to rate their own performance on the find-the-differences task on a six-point Likert scale, "Very Low Performance" (0), and "Very High Performance" (5). The mean was 0.69, and the median was 0, with 82% of participants stating they had either very low or somewhat low performance. This suggests that team members did perceive the feedback as negative and admitted they did poorly on the find-the-differences task.

Next, I examine the impact of team success and the manipulated team dynamics variable on performance change, rather than effort adjustment. Recall that I measure performance change as the absolute value of the difference between the correct solutions and team members' answers on the five find-the-differences puzzles in round one and round two. I then subtract the round

two absolute value from the round one absolute value and divide by the round one absolute value to obtain a percentage change in performance. Using the same custom contrast code that I used to test hypothesis 2, I examine whether team success and team dynamics interact to affect performance change. In untabulated analyses, I find no evidence of an effect using either my manipulated team dynamics variable (t = 1.00; p = 0.159, one-tailed) or my measured team dynamics variable, (t = 0.-1.90; p = 0.461, one-tailed).

Finally, I evaluate two path models to further investigate my surprising hypothesis 2 result. First, I examine whether team success and team dynamics interact to indirectly impact effort adjustments through internal attributions. While my hypothesis 2 results indicate no interactive direct effect of these independent variables on effort adjustments, my theory also suggests that team success will *indirectly* impact team members' effort adjustments through internal attributions. Additionally, because my theory also specifies the importance of accountability, I also examine a second path model in which team success indirectly impacts effort adjustments through both accountability and internal attributions.

To examine my first path model, I use model 59 of the PROCESS macro (Hayes 2022). I depict the path model in Figure 3. First, team success has a significant effect on internal attributions. Contrary to my expectations in hypothesis 1a, when team members are on more successful teams, they decrease how much they internally attribute their poor performance on the find-the-difference task compared to team members on less successful teams (link 1; coeff = -10.058; p = 0.002, two-tailed). Second, the interaction of team success and team dynamics significantly impacts internal attributions (link 2; coeff = 0.271; p = 0.001, two-tailed). I probe this interaction and find that consistent with the main effect, at weaker levels of team dynamics (one standard deviation below the mean) increases in team success decrease the level of team

members' internal attributions (LLCI = -4.1644; ULCI = -0.7768). However, at stronger levels of team dynamics (one standard deviation above the mean), my findings are consistent with hypothesis 1a. That is, for these team members, increases in team success increase team members' internal attributions (LLCI = 0.8632; ULCI = 4.4924). Confidence intervals are based on 10,000 bootstrap samples.[17]

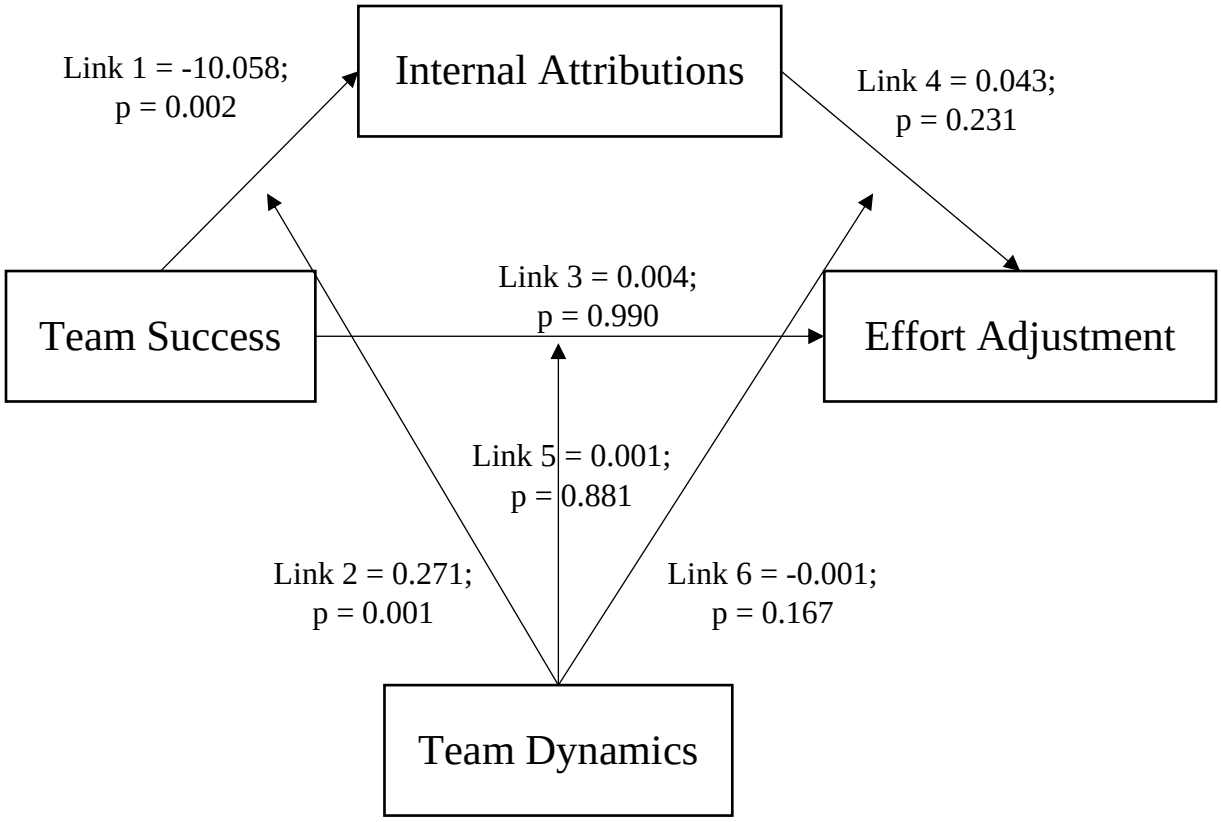
Similar to my earlier findings, I find no evidence of a direct effect of team success or internal attributions on effort adjustment (link 3; coeff = 0.004; p = 0.990, two-tailed and link 4; coeff = 0.043; p = 0.231, two-tailed, respectively), but there is an ordinal interaction. Specifically, at weaker levels of team dynamics (one standard deviation below the mean), team success does not affect effort adjustment through internal attributions (LLCI = -0.0659; ULCI = 0.0333). However, at stronger levels of team dynamics (one standard deviation above the mean), team success causes team members to lower their effort (LLCI = -0.1384; ULCI = -0.0038), which is contrary to what I predict in H2.[18]

[17] PROCESS (Hayes 2022) produces bootstrapped confidence intervals with significance indicated by intervals that do not include zero. My PROCESS results are statistically equivalent to a one-tailed prediction with 95% confidence, also known as a one-tailed p-value of less than 0.05.

[18] I also examine the model with an additional path between effort and performance change. I find no significant impact of effort adjustment on performance change (t = -0.8441; p = 0.200, one-tailed, untabulated).

FIGURE 3

Statistical Diagram for the Effect of Team Success and Team Dynamics on Effort Adjustment (H2)



Overall model for the indirect effect of team success on internal attributions:

One SD below the mean	LLCI = -4.1644; ULCI = -0.7768
Mean	LLCI = -1.4843; ULCI = 0.8786
One SD above the mean	LLCI = 0.8632; ULCI = 4.4924[1]

Overall model for the indirect effect of team success on effort adjustment:

One SD below the mean	LLCI = -0.0659; ULCI = -0.0333
Mean	LLCI = -1.4843; ULCI = 0.8786
One SD above the mean	LLCI = -0.1384; ULCI = -0.0038

FIGURE 3 (CONTINUED)

Notes:

I use the PROCESS macro (Hayes 2022), model 59, to test the statistical significance of the conditional indirect effects of team success on internal attributions through accountability, with measured team dynamics moderating (H2).

[1]I use 10,000 bootstrap samples and a confidence level of 90%, which is the equivalent of $p < 0.05$, one-tailed. Confidence intervals that do not include zero are considered statistically significant.

Variable Definitions:

Team Success *is the manipulated condition of team members, where more team success represents easier trivia questions, and less team success represents harder trivia questions.*

Team Dynamics (measured) *is the summation of a participant's response to the seven questions in the post-experimental questionnaire regarding their social bond with their team. A higher score on the questionnaire represents a stronger social bond with their teammates, while a lower score on the questionnaire represents a weaker social bond with their teammates.*

Internal Attributions *is the summation of participants' responses to questions 1, 5, and 7 on Russel's (1982) Causal Dimension Scale regarding how they attributed their poor performance on the find-the-differences task. A higher score indicates performance is more internally attributed.*

Effort Adjustment *is a composite variable calculated as the amount of time (in seconds) participants spent on the find-the-differences task in round two minus the amount of time spent in round one, divided by the amount of time spent in round one.*

Theory suggests, and H1a supports, that accountability can be an important factor in whether team members attribute their poor performance more or less internally. I examine a second path model, similar to the path depicted in Figure 3, which includes accountability as a mediator between team success and internal attributions. I use model 92 of the PROCESS macro (Hayes 2022). Results show the addition of team dynamics into the model overrides the effect that team success had on accountability in H1a ($t = 0.411$; $p = 0.681$, one-tailed). This new model suggests that team dynamics now has a significant effect on accountability, such that as team dynamics become stronger, team members feel more accountable ($t = 3.212$; $p = 0.002$, one-tailed). However, accountability no longer impacts internal attributions as it did in H1a ($t = 1.4942$; $p=.137$, one-tailed). Therefore, when team dynamics is part of the model, accountability loses its effect on members' attributions. A bootstrap confidence interval for the indirect effect based on 10,000 bootstrap samples includes zero (LLCI = -0.0089; ULCI = 0.0044).[19]

Overall, this path model analysis suggests that whether an employee's team is successful or not, as well as the strength of an employee's social bond with their teammates, has an impact on how they attribute their own poor performance. When teams are successful as a whole but have *weaker* social bonds, team members tend to think their poor performance is not their fault. It appears that employees are not concerned with helping their weakly bonded teams outperform their existing success, so there is no need to take responsibility for their own poor performance. Conversely, when team members' teams are successful as a whole and have *stronger* social bonds, they want to help contribute to their team's success and thus tend to take responsibility for their own poor performance.

[19] PROCESS (Hayes 2022) produces bootstrapped confidence intervals with significance indicated by intervals that do not include zero. My PROCESS results are statistically equivalent to a one-tailed prediction with 95% confidence, also known as a one-tailed p-value of less than 0.05.

However, contrary to my prediction in H2, this higher level of internal attribution does not positively impact subsequent effort adjustment. It is possible that the find-the-differences task was too difficult and team members could not see a way to improve their score. If this is the case, team members on teams with stronger team dynamics may have ascribed their poor performance to a lack of ability, rather than a lack of effort. This ascription still leads team members to more internally attribute their poor performance. However, lack of ability is a more stable cause, and does not lead to effort improvements.

V. CONCLUSION

In this study I experimentally examine the impacts of team success and team dynamics on poor performing employees' internal attributions, which capture the extent to which people accept personal responsibility for outcomes, and effort adjustments. Drawing on theories of attribution and social identity, I find that employees on more successful teams feel more accountable to their teammates and, subsequently, attribute their poor individual performance more internally, relative to employees on less successful teams. However, I find no support for the prediction that employees on more successful teams have more positive effort adjustments than employees on less successful teams. Lastly, I find that team dynamics impacts the level of internal attribution, such that when team success is higher, employees with stronger team dynamics increase their internal attribution, while employees with weaker team dynamics decrease their internal attribution. However, again, there is no effect on effort adjustment.

My study contributes to both the academy and practice. First, I add to the attribution literature by answering the call for further exploration of the integration of social identity with attribution theory (McDonald 2018). While the attribution literature generally suggests that poor performing employees will attribute their performance less internally, my study provides more nuance to the literature. Specifically, I find that being part of a more successful team prompts poor performing employees to attribute the cause of their poor performance more internally than employees on less successful teams because they feel more accountable to their teammates. However, drawing on social identity theory but inconsistent with my expectations, I find no evidence that stronger team dynamics overcomes the lack of internal attributions among poor

performers on less successful teams to yield improved effort. Future research can build on this knowledge not only to further investigate the impact of others-centered teams on internal attributions and effort adjustments, but also to examine alternative behaviors that these factors could impact.

Second, my study adds to the performance feedback literature, specifically regarding negative feedback. Negative performance feedback is used to prompt positive changes in employees' poor performance. However, some employees do not react to this type of feedback very well. It is important to understand the factors that impact employees' reactions to negative feedback. My study, which highlights team success and team dynamics in a negative feedback setting, sheds light on how these factors affect employees' attributions and adjustments in effort.

Third, I contribute to the social bond literature. While prior research reveals that chatting increases social bonds, my research adds a subtle distinction to these findings by suggesting that social bonds are not driven by simply the *ability* to chat, but rather, the *action* of chatting. Employees may discern that there is no benefit to themselves to engage in conversation with team members, and, thus, decide not to engage in chatting, even though the ability is there. Deciding not to chat impacts researchers' ability to test theory about how social bonds affect subsequent behavior.

Lastly, I contribute to practice. Hiring new employees is costlier than improving the performance of poor performing employees, and one way to improve poor performing employees' performance is to provide feedback. However, managers struggle to effectively provide negative feedback. My study suggests that management control systems that highlight team success discourages poor performing employees within largely successful teams from

blame-shifting, and, instead, encourage these employees to take more responsibility for their performance than employees on less successful teams.

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APPENDIX

Appendix A: Participant Instructions

Ground Rules

- **NO TALKING**

I hope that you enjoy participating in this study, but it is serious research. As such, I ask that you refrain from talking to each other during the session – comments, even if intended in jest, could contaminate others' decisions. If you have a question, please raise your hand. Finally, please keep your eyes on your own screen and do not look at others' screens.

- **NO DECEPTION**

I promise that I will conduct the experiment in the exact manner described in these instructions, without any form of deception.

Please do not remove these instructions or other materials from the laboratory, except for the copy of your information sheet.

How will you be compensated?

Your instructors have agreed to give you extra credit in exchange for your participation today. In addition, a $20 Amazon gift card will be awarded randomly to one participant in each experimental session.

OVERVIEW OF SESSION

This is a computerized study that I expect to last no more than 30 minutes. The session will consist of two simple, computerized tasks.

The following pages outline the detailed procedure for each task.

TASK 1

General

- Participants will be assigned to 3-person teams to answer a set of trivia questions.
- Each team member will submit answers by selecting his or her choices from a list of possible answers.
- You will have a total of 4 minutes to complete this task.
- You will use your computer mouse to select your choices, and no question may be left unanswered.

Earning Points

- Your team score will be the sum of correct answers submitted by each team member divided by three.

Feedback

- You will learn your team score after all team members have completed task 1.

TASK 2

General

- Each team member will work to count the differences in 5 sets of similar pictures
- There are two rounds of this task.
- You will use your keyboard to enter the number of differences you find in the answer box underneath each set of pictures.
- You will have unlimited time to count the differences.

Earning Points

- You will earn one point for each set of pictures in which you identify the correct number of differences.

Feedback

- After submitting your answers for five sets of puzzles you will learn how many puzzles you correctly found all the differences in (from 0 to 5) in round 1.

QUESTIONNAIRES AND PAYMENT

Throughout the experiment, there will be short questionnaires about your experiences today. At the end of the experiment, if you opt for class extra credit, you will be taken to another screen to enter your identifying information. This information will not be connected to your experimental answers.

When you see the screen saying you are finished, please minimize the browser, and wait for the experimenter to award the gift card and dismiss everyone.

APPENDIX B: Causal Dimension Scale

Is the cause of your performance something:

1.	That reflects an aspect of yourself	or	reflects an aspect of the situation
2.	Controllable by you or other people	or	uncontrollable by you or other people
3.	Permanent	or	temporary
4.	Intended by you or other people	or	unintended by you or other people
5.	Outside of you	or	inside of you
6.	Variable over time	or	stable over time
7.	About you	or	something about others
8.	Changeable	or	unchanging
9.	No one is responsible	or	someone is responsible

APPENDIX C: Post-Experimental Questionnaire

Social Bond	1. I feel the successes of my team are my successes 2. When referring to other people on my team, I think of "we" rather than "them." 3. I truly feel like I was on a team with the people I was working with. 4. I wanted the other people on my team to succeed. 5. I feel close to the people on my team. 6. I have positive feelings toward the people on my team. 7. I feel like I was working together with the other people on my team.
Accountability	1. To what extent did you feel accountable to your team for your performance on the find-the-differences puzzles? 2. To what extent do you feel that your performance on the find-the-differences puzzles impacted your team's success?
Demographics	1. What is your gender? 2. What is your highest education level? 3. How many years of professional work experience do you have?

Appendix D: Qualtrics Survey Screenshots:

[Consent Page]

Consent to Participate in Research

Study Title: Business Decision Processes

Investigator	Advisor
Tina S. Owens	Christine Nielson, Ph.D.
Patterson School of Accountancy	Patterson School of Accountancy
200 Conner Hall	200 Conner Hall
The University of Mississippi	The University of Mississippi
(662) 915-5754	(662) 915-9769

Key Information for You to Consider

- **Voluntary Consent.** You are being asked to volunteer for a research study. It is up to you whether you choose to participate or not. There will be no penalty or loss of benefits to which you are otherwise entitled if you choose not to participate or discontinue participation.
- **Purpose.** The purpose of this research is to gain insights into business decision processes.
- **Duration**. It is expected that your participation will take no more than 30 minutes.
- **Procedures and Activities.** You will be anonymously matched with other participants and asked to complete a trivia task and puzzle task, as well as complete post-experimental questions.
- **Risks.** There are no foreseeable risks or discomforts related to your participation
- **Benefits.** There is no direct benefit to you, but the researchers hope to learn more about decision making.
- **Alternatives.** Participation is voluntary and the only alternative is not to participate.

What you will do for this study

- This study will take place in the lab in Conner 5.
- You will complete two tasks. The first is a trivia task, in which you will answer a series of trivia questions. The second is a puzzle where you are required to find differences between two similar images.
- Additionally, you will answer several sets of survey questions. One set asks questions regarding your team. The second set asks your opinion on some performance items. The third set asks demographic questions.

Time required for this study

This study will take about 30 minutes to complete.

Possible risks from your participation

There are no anticipated risks to you from participating in this study.

Benefits from your participation

You should not expect benefits from participating in this study. However, you might experience satisfaction from contributing to scientific knowledge.

Incentives

You will get class extra credit from your instructor if you complete this study. In addition, your name will be entered into a drawing for a $20 Amazon gift card. We estimate that your chance of winning a gift card is about 1 out of 30.

Confidentiality

All information in the study will be collected from you anonymously; it will not be possible for anyone, even the researchers, to associate you with your responses.

Right to Withdraw

You do not have to volunteer for this study, and there is no penalty if you refuse. If you start the study and decide that you do not want to finish, just tell the experimenter. Whether or not you participate or withdraw will not affect your current or future relationship with the Department of Accounting, or with the University, and it will not cause you to lose any benefits to which you are entitled.

IRB Approval

This study has been reviewed by The University of Mississippi's Institutional Review Board (IRB). The IRB has determined that this study fulfills the human research subject protections obligations required by state and federal law and University policies. If you have any questions or concerns regarding your rights as a research participant, please contact the IRB at (662) 915-7482 or irb@olemiss.edu.

Please ask the researcher if there is anything that is not clear or if you need more information. When all your questions have been answered, then decide if you want to be in the study or not.

Statement of Consent

I have read the above information. I have been given an unsigned copy of this form. I have had an opportunity to ask questions, and I have received answers. By clicking "yes, I consent" below, I verify that I am at least 18 years old and give my consent to participate in the study.

- ◯ Yes, I consent
- ◯ No, I do not consent

Next >>

[Commitment Question]

I care about the quality of my survey data. For me to get the most accurate information from this study, it is important that you pay attention to each task. Do you commit to providing quality answers in this study?

- ◯ Yes
- ◯ No

Next >>

[Team Creation]

You will now be matched with two other individuals to form a three-person team.

Next >>

We are currently trying to match you with other participant(s). Please wait patiently to be matched. This may take a few minutes. Please do NOT minimize this window or navigate to another page.

Waiting for 2 participant(s) to join.

You have been successfully matched with 2 other participants.

Next >>

You are now part of a three-person team. Your performance on the next task will be combined with your teammates' performance to form a team score.

Next >>

[Trivia task instructions for stronger team dynamics condition, with chat ability]

You will now work on a trivia task with your team members. The difficulty of these questions will be randomly assigned between teams. You will have **four minutes** to chat about the ten trivia questions with your team members and then submit your answers. Each team member will individually enter the trivia answers the team **collectively** decides are correct, and your score will be averaged with your team members' scores to form a team score.

These are multiple choice questions. Please click the radio button to select your answers. At the end of the ten questions, click the arrow to move to the next screen.

Please click the arrow to start Task 1.

>>

You will have four minutes to chat with your team about the answers to the trivia questions. Hit 'Enter' or the 'Send message' button to send a message.

REMAINING
TIME: 3:55

*** c has joined the chat ***
*** a has joined the chat ***
*** b has joined the chat ***

Type message...

SEND MESSAGE

[Trivia task instructions for weaker team dynamics condition, with no chat ability]

You will now work on a trivia task with your team members. The difficulty of these questions will be randomly assigned between teams. You will have **four minutes** to submit your answers to ten trivia questions. Each team member will individually submit their trivia answers, and your score will be averaged with your team members' scores to form a team score.

These are multiple choice questions. Please click the radio button to select your answers. At the end of the ten questions, click the arrow to move to the next screen.

Please click the arrow to start Task 1.

>>

[Trivia questions for the more successful team condition]

1. Adolf Hitler was the leader of which party?

- ◯ Nazi
- ◯ Republican
- ◯ Federalist
- ◯ Democratic

2. According to Forrest Gump, "life was like..."

- ◯ A bag of lemons
- ◯ A handful of roses
- ◯ A lollipop
- ◯ A box of chocolates

3. Who was the first president of the United States?

- ◯ John Adams
- ◯ George Washington
- ◯ James Madison
- ◯ Thomas Jefferson

4. How many degrees are in a circle?

- ◯ 360
- ◯ 180
- ◯ 150
- ◯ 359

5. What does the "U" stand for in "UFO"?

- ◯ Unidentified
- ◯ Under
- ◯ United
- ◯ Unique

6. Which Olympic sport is Michael Phelps known for?

- ◯ Snowboarding
- ◯ Skiing
- ◯ Running
- ◯ Swimming

7. Which of the following animals can run the fastest?

- ◯ Cheetah
- ◯ Leopard
- ◯ Tiger
- ◯ Lion

8. Which company is known for publishing the Mario video games?

- ◯ Xbox
- ◯ Nintendo
- ◯ SEGA
- ◯ Playstation

9. Mickey, Minnie, Donald, and Goofy are all characters from what film company?

- ◯ Nickelodeon
- ◯ Warner Brothers
- ◯ PBS
- ◯ Disney

10. Pepsi, Coca-Cola, and Dr. Pepper are what kind of beverages?

- ◯ Coffee
- ◯ Soda
- ◯ Orange juice
- ◯ Energy drink

>>

[Trivia questions for the less successful team condition]

1. How long did dinosaurs live on the earth?

- ◯ 50-100 million years
- ◯ 101-150 million years
- ◯ 151-200 million years
- ◯ 201+ million years

2. What measurement scale is used to determine wind speed?

- ◯ Beaufort scale
- ◯ Richter scale
- ◯ Synoptic scale
- ◯ Gusting scale

3. In which city were the 1992 Summer Olympics held?

- ◯ Atlanta
- ◯ Barcelona
- ◯ Sydney
- ◯ Seoul

4. How many sides does a dodecahedron have?

- ◯ 12
- ◯ 24
- ◯ 14
- ◯ 20

5. The fear of insects is known as what?

- ◯ Entomophobia
- ◯ Arachnophobia
- ◯ Ailurophobia
- ◯ Agoraphobia

6. Which female holds the most Wimbledon titles?

- ◯ Martina Navratilova
- ◯ Serena Williams
- ◯ Venus Williams
- ◯ Martina Hingis

7. The phrase "I think, therefore I am" was coined by which philosopher?

- ◯ Socrates
- ◯ Plato
- ◯ Aristotle
- ◯ Descartes

8. What language is most spoken worldwide?

- ◯ Chinese
- ◯ Spanish
- ◯ Arabic
- ◯ English

9. How many ribs are in the human body?

- ◯ 16
- ◯ 24
- ◯ 19
- ◯ 29

10. How many time zones are there in the world?

- ◯ 7
- ◯ 24
- ◯ 23
- ◯ 9

>>

[Calculation of team score]

Waiting for 2 participant(s).

Your team averaged **8.67** correct answers on this trivia task, compared to an average of 6 correct answers among participants who have previously answered a subset of questions from the same trivia pool.

Based on this feedback regarding your team's score of **8.67** on the trivia task, please rate your team's performance on the following scale.

0	1	2	3	4	5
Very Unsuccessful	Moderately Unsuccessful	Slightly Unsuccessful	Slightly Successful	Moderately Successful	Very Successful
○	○	○	○	○	○

Next >>

[Practice round puzzle task instructions]

You will now complete a find-the-differences puzzle task. You will be shown two similar images in which there are a number of minor differences. Your task is to count all the differences and enter that number into the answer box below the set of images. You will first complete a practice round to get familiar with the task and ensure understanding.

Next >>

[Find-the-differences puzzle practice round]

THE UNIVERSITY of MISSISSIPPI

How many differences are there between the two images above?

Next >>

[Round 1 puzzle directions]

You have completed the practice round and are now ready to start round 1. You will be shown five sets of images, one set at a time. Please count the number of differences you find between the two images and enter the total number into the answer box below the set of images. Click the next button to move on to the next set of images.

Next >>

[Five find-the-differences puzzles for round 1]

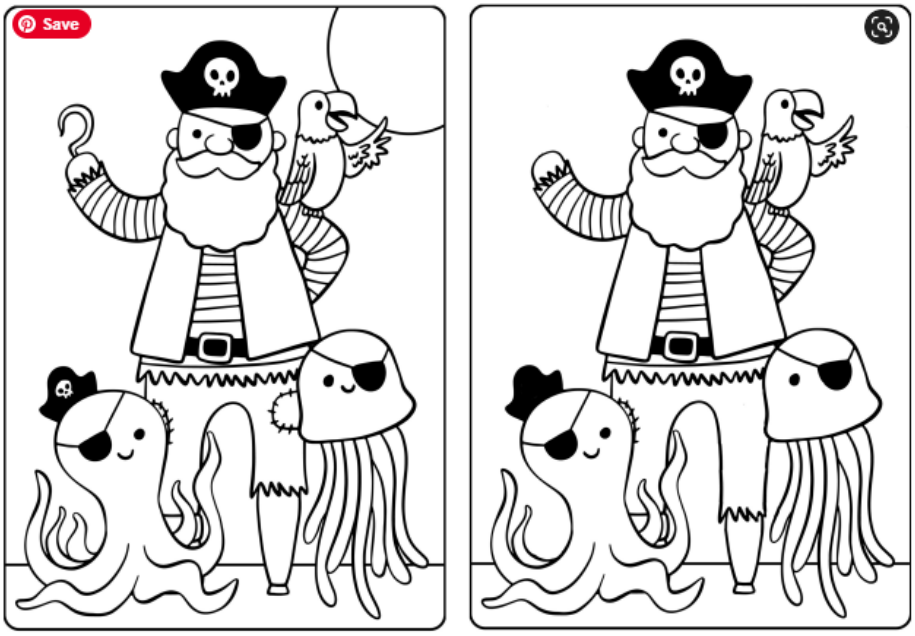
THE UNIVERSITY of MISSISSIPPI

Puzzle 1

How many differences are there between the two images above?

Next >>

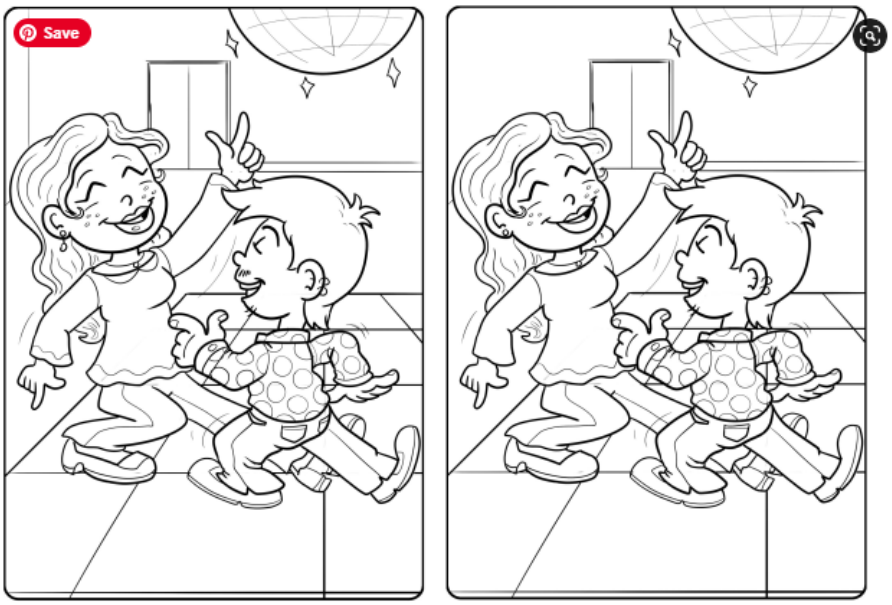
Puzzle 2



How many differences are there between the two images above?

Next >>

Puzzle 3



How many differences are there between the two images above?

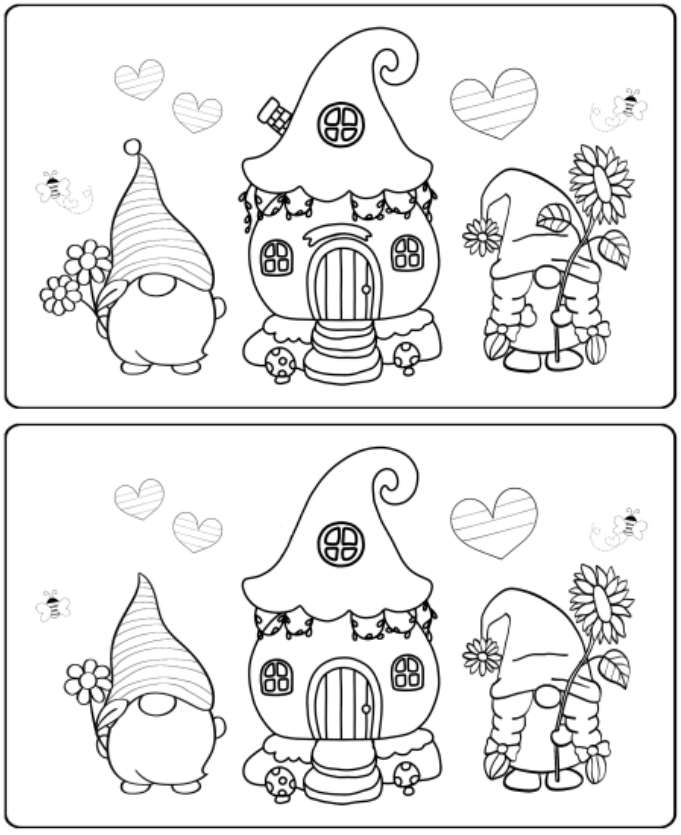
Next >>

Puzzle 4

How many differences are there between the two images above?

Next >>

Puzzle 5



How many differences are there between the two images above?

Next >>

[Negative feedback screen]

Recall that earlier you said your team was "**Very Unsuccessful**".

Unfortunately, you correctly identified all the differences in **1** puzzle(s) out of 5. A higher score would be more helpful to your team.

Next >>

Based on the feedback you just received regarding the number of correctly identified differences, please rate your own performance on the find-the-differences task on the following scale.

0 Very Low Performance	1 Moderately Low Performance	2 Slightly Low Performance	3 Slightly High Performance	4 Moderately High Performance	5 Very High Performance
○	○	○	○	○	○

Next >>

[Attribution survey directions]

On the next page is a questionnaire about your thoughts regarding your performance on the find-the-differences task. Please think about the reason(s) for your performance while answering the questions.

Next >>

[Attribution survey]

Please think about the reason(s) for your performance on the first five sets of find-the-differences puzzles. Click one number on the scale of 1-9 for each of the following questions regarding your reason(s).

1. Is the cause(s) of your performance something that:

	1	2	3	4	5	6	7	8	9	
Reflects an aspect of the situation	○	○	○	○	○	○	○	○	○	Reflects an aspect of yourself

2. Is the cause(s) of your performance something that is:

	1	2	3	4	5	6	7	8	9	
Uncontrollable by you or other people	○	○	○	○	○	○	○	○	○	Controllable by you or other people

3. Is the cause(s) of your performance something that is:

	1	2	3	4	5	6	7	8	9	
Temporary	○	○	○	○	○	○	○	○	○	Permanent

4. Is the cause(s) of your performance something:

	1	2	3	4	5	6	7	8	9	
Unintended by you or other people	○	○	○	○	○	○	○	○	○	Intended by you or other people

5. Is the cause(s) of your performance something that is:

	1	2	3	4	5	6	7	8	9	
Inside of you	○	○	○	○	○	○	○	○	○	Outside of you

6. Is the cause(s) of your performance something that is:

	1	2	3	4	5	6	7	8	9	
Stable over time	○	○	○	○	○	○	○	○	○	Variable over time

7. Is the cause(s) of your performance:

	1	2	3	4	5	6	7	8	9	
Something about others	○	○	○	○	○	○	○	○	○	Something about you

8. Is the cause(s) of your performance something that is:

	1	2	3	4	5	6	7	8	9	
Unchangeable	○	○	○	○	○	○	○	○	○	Changeable

9. Is the cause(s) of your performance something for which:

	1	2	3	4	5	6	7	8	9	
Someone is responsible	○	○	○	○	○	○	○	○	○	No one is responsible

Next >>

[Round 2 puzzle instructions]

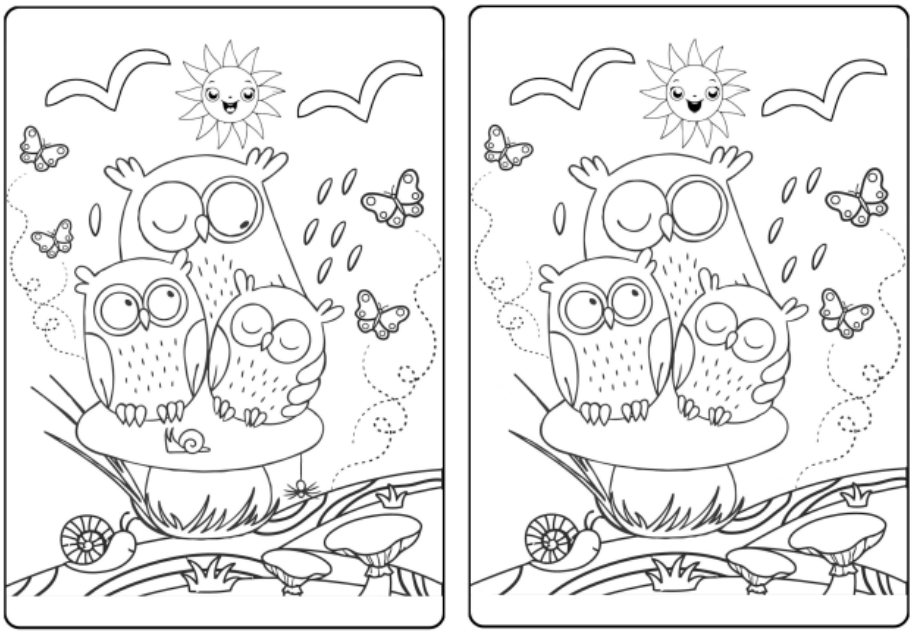
You are now ready to start round 2. You will again be shown five sets of images, one set at a time. Please count the number of differences you find between the two images and enter the total number into the answer box below the set of images. Click the next button to move on to the next set of images.

Next >>

[Five find-the-differences puzzles for round 2]

THE UNIVERSITY of MISSISSIPPI

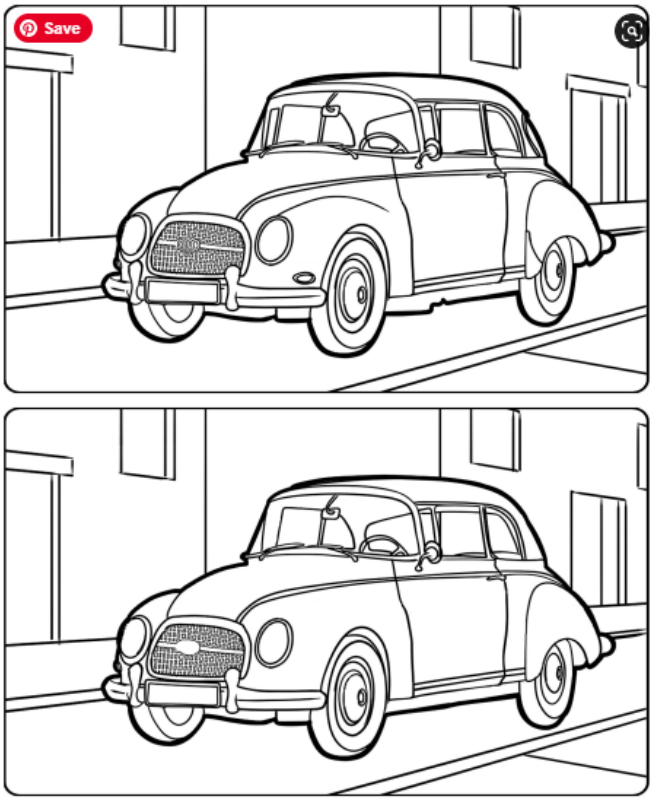
Puzzle 1



How many differences are there between the two images above?

Next >>

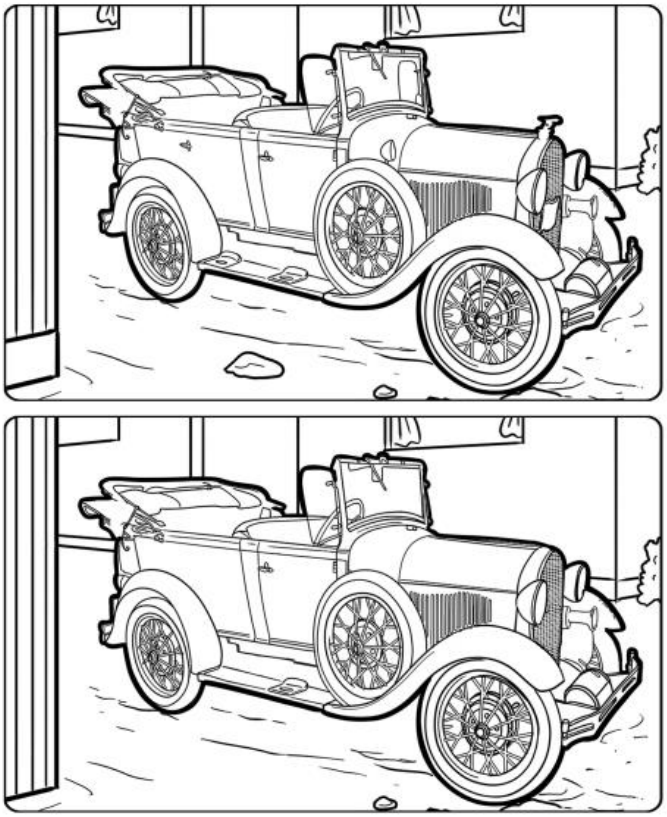
Puzzle 2



How many differences are there between the two images above?

Next >>

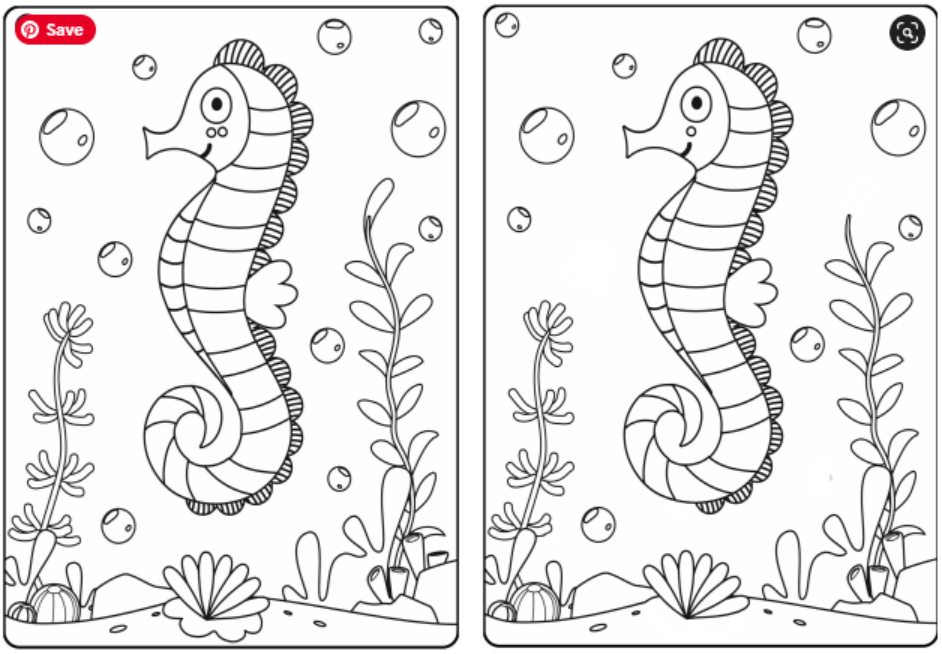
Puzzle 3



How many differences are there between the two images above?

Next >>

Puzzle 4



How many differences are there between the two images above?

Next >>

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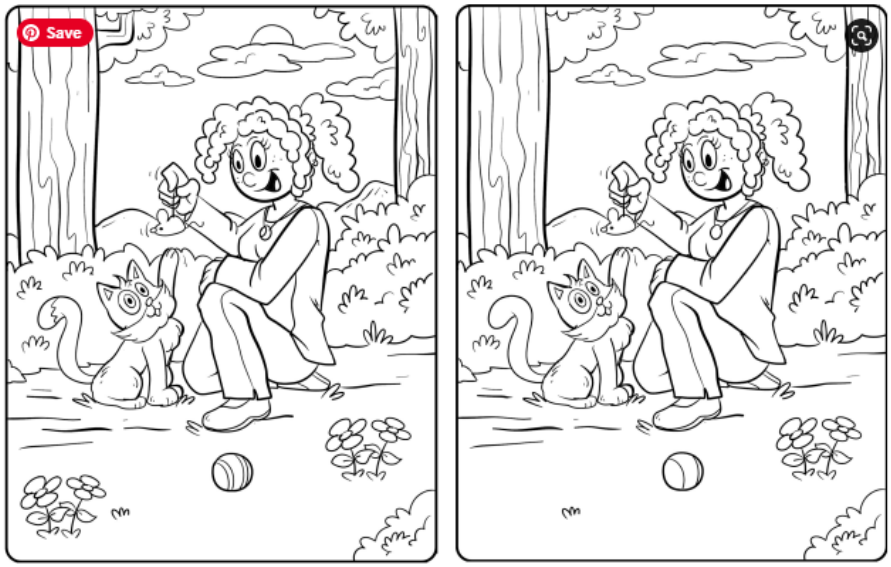
Puzzle 5



How many differences are there between the two images above?

Next >>

[Puzzle completion and social bond questionnaire instructions]

You have completed Round 2 of the Find the Differences puzzles.

You will now answer several sets of survey questions.

Next >>

On the next page is a questionnaire about your thoughts regarding your team. Please think about how much you agree or disagree with each statement and answer accordingly.

Next >>

[Social bond questionnaire]

Please choose on the scale how much you agree or disagree with each statement below.

	Strongly Disagree 1	2	Disagree 3	4	Neutral 5	6	Agree 7	8	Strongly Agree 9
I feel the successes of my team are my successes.	○	○	○	○	○	○	○	○	○
When referring to other people on my team, I think of "we" rather than "them."	○	○	○	○	○	○	○	○	○
I truly feel like I was on a team with the people I was working with.	○	○	○	○	○	○	○	○	○
I wanted the other people on my team to succeed.	○	○	○	○	○	○	○	○	○
I feel close to the people on my team.	○	○	○	○	○	○	○	○	○
I have positive feelings toward the people on my team.	○	○	○	○	○	○	○	○	○
I feel like I was working together with the other people on my team.	○	○	○	○	○	○	○	○	○

Next >>

[Team impact questions]

On the following page, you will be asked about how your performance on the find-the-differences task impacted your team. Please think about your performance and answer the scales accordingly.

Next >>

To what extent did you feel accountable to your team for your performance on the find-the-differences puzzles?

Not at all 1	2	3	4	5	6	7	8	A great deal 9
○	○	○	○	○	○	○	○	○

To what extent do you feel that your performance on the find-the-differences puzzles impacted your team's success?

Not at all 1	2	3	4	5	6	7	8	A great deal 9
○	○	○	○	○	○	○	○	○

Next >>

[Demographics Questions]

You are almost done! Only one short set of demographic questions remain.

Next >>

Please circle your classification in school.

- ◯ Freshman
- ◯ Sophomore
- ◯ Junior
- ◯ Senior
- ◯ Graduate Student

Please choose how many years of work experience you have.

- ◯ Less than one year
- ◯ Two years
- ◯ Three years
- ◯ More than three years

Please choose your gender.

- ◯ Female
- ◯ Male
- ◯ Non-binary / third gender
- ◯ Prefer not to say

Next >>

[Extra credit option]

Would you like extra credit for your participation?

Note: Answering yes will take you to another page that is not part of this study so that your identifying information cannot be associated with the answers provided in this study.

- ◯ Yes
- ◯ No

Next >>

[Extra credit information]

Please enter your first name.

Please enter your last name.

Please enter your email address.

Please enter the class you are receiving extra credit in (e.g., ACCY303-01).

[End of survey]

I greatly appreciate your time and attention, and thank you for participating in this survey.

Your responses have been recorded.

VITA

EDUCATION

Ph.D. in Accountancy (Minor: Psychology) **Anticipated May 2024**
University of Mississippi Oxford, MS
Co-Chairs – Dr. Kendall Bowlin and Dr. Christy Nielson
Committee Members – Dr. Jeremy Griffin and Dr. Paul Johnson

Master of Accountancy **2015**
Valdosta State University Valdosta, GA

Bachelor of Business Administration, Accounting **2014**
Valdosta State University Valdosta, GA

RESEARCH

Research Interests
Experimental research in performance feedback, teamwork, and diversity.

Working Papers
"Ouch! Unconstructive, Negative Relative Performance Feedback Can Hurt" with Dr. Kendall Bowlin and Dr. Christy Nielson, revising for journal submission.

Works in Progress
Dissertation, final data analysis phase:
"The Impact of Team Success and Team Dynamics on Employee Effort"
Co-chairs: Dr. Kendall Bowlin and Dr. Christy Nielson

Pre-Doctoral Work Publication
Owens, T. & R.J. Elson. (2016). The Property Tax Deduction – Impact on Governments and Taxpayers. *Journal of Legal, Ethical, and Regulatory Issues.* 19(2), 57-67.

TEACHING

Teaching Interests:
Managerial/Cost Accounting, Auditing, Data Analytics, Financial Accounting

Teaching Experience

University of Mississippi Accounting Instructor Fall 2018 – present

Cost Control
2 sections (4.05/5.0)
Principles of Managerial Accounting (average 4.09/5.0)
3 sections
Principles of Financial Accounting (average 3.64/5.0)
3 sections

Valdosta State University Accounting Instructor Spring 2016

Principles of Managerial Accounting (4.16/5.0)
1 section

Teaching Assistant Experience

University of Mississippi Fall 2018 – present

Accounting Information Processes and Analytics (audit focus)
3 sections – graduate students
Accounting Data Modeling and Visualization
8 sections – graduate students
Contemporary Taxation (data analytics focus)
1 section – graduate students
Auditing Seminar
1 section – graduate students
Becker CPA Prep Course
5 sections – graduate students

INVITED PRESENTATIONS AND CONFERENCE PARTICIPATION

Invited Presentations

2023 AAA Annual Meeting "Ouch! Unconstructive, Negative Relative Performance Feedback Can Hurt" August 2023.

Coastal Carolina University. "The Impact of Team Success and Team Dynamics on Employee Effort" January 2023.

2015 Midwest Business Administration Association International Conference – "The Property Tax Deduction – Impact on Governments and Taxpayers" August 2015.

Conference Participation

2023 AAA Annual Meeting (Presenter)	Denver, CO
2023 AAA MAS Midyear Meeting and Doctoral Consortium	Atlanta, GA
2022 AAA ABO Meeting	Phoenix, AZ
2022 AAA Annual Meeting (Reviewer)	San Diego, CA
2022 AAA MAS Midyear Meeting and Doctoral Consortium	Virtual
2021 AAA MAS Midyear Meeting and Doctoral Consortium	Virtual
2020 AAA MAS Midyear Meeting and Doctoral Consortium	San Antonio, TX

PROFESSIONAL HISTORY

Staff Accountant **2016-2018**
Tillman & Tillman, LLP Valdosta, GA
-Tax in the first half of each year and audit in the second half
Graduate Assistant in Accounting **2014-2015**
Valdosta State University Valdosta, GA
-Principles of accounting tutor and research data collection

CERTIFICATIONS AND AFFILIATIONS

Certified Public Accountant (Georgia)
American Accounting Association (AAA) 2018 – present
AAA MAS Section 2018 – present
AICPA 2018 – present

HONORS AND AWARDS

Doctoral Teaching Award Spring 2023
Alteryx SparkED Scholarship Spring 2021
Graduated summa cum laude, Valdosta State University 2014
Member of Beta Gamma Sigma Honor Society 2013 – present