How did we do?

An experimental study on the role of feedback provision and framing strategy in perceived fairness and customer engagement

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Abstract

The purpose of this research is to examine the influence of feedback provision on participants' engagement with an organisation after being rejected in an ideation contest. Moreover, the current study investigates the moderating role of framing strategy and the mediating role of fairness perceptions in this relationship. An experimental study with a 2 (feedback provision: present vs. absent) x 2 (framing strategy: community vs. competitive) factorial design was conducted by dividing respondents into four different manipulation conditions. The results showed that the presence of feedback provision significantly increased participants' post-contest engagement compared to the absence of feedback provision. Additionally, participants' fairness perception fully mediated this relationship, suggesting that fair treatment during the ideation contest can foster future engagement. While framing strategy did not significantly moderate the relationship between feedback provision and customer engagement, the results showed a significant direct effect of framing strategy, with community framing leading to a higher engagement compared to competitive framing. The current study extends the existing body of literature by highlighting the importance of providing feedback to rejected participants to increase their perceived fairness of the organization, which consequently enhances their post-ideation engagement.

Keywords: ideation contest, feedback provision, community framing, competitive framing, customer engagement.

Contents

1. Introduction

In the current market, organisations continuously look for innovations to provide more value to their customers and gain a competitive advantage (Jiang & Wang, 2020). Increasingly often, organisations do not merely rely on internal product development but also seek external help through interactions with their audience (Koh, 2019). These interactions allow customers to share their ideas with an organisation (Jiang & Wang, 2020; Kireyev, 2020; Salgado et al., 2020), providing organisations with new knowledge that reveals hidden customer needs (Gatzweiler et al., 2017). A popular way of realising this interaction and idea generation is by hosting an ideation contest: a contest in which an organisation requests new idea submissions from a targeted crowd of individuals (Leimeister et al., 2014). Currently, organisations primarily host ideation contests through online platforms, as these attract larger numbers of participants and therefore generate more submissions, which increases the efficiency of the innovation process (Kireyev, 2020).

1.1 Research problem

Providing all participants with a positive experience can be challenging as contests generally have more losers than winners, which means that the majority of ideas will be rejected. When poorly managed, the rejection of participants' ideas can negatively affect their emotions and behaviours towards the organisation (Schaarschmidt & Dose, 2023). Being rejected can reduce participants' trust in the organisation, which harms the organisation's image and consequently reduces participants' idea sharing during a contest (Fombelle et al., 2016). Moreover, rejections can also reduce participants' future engagement with the organisation (Piezunka & Dahlander, 2019). Specifically, the experience of being rejected can reduce participants' positive word-of-mouth and their intention to purchase the organisation's products (Karpukhina et al., 2024), and can even increase their negative word-of-mouth and reduce their intentions to participate in future contests (Piezunka & Dahlander, 2019).

While rejections can have negative consequences for an organisation in terms of participants' motivation, engagement, and perceptions of the organisation, they do not necessarily have to harm the relationship between participant and organisation (Schaarschmidt & Dose, 2023). Previous research suggests that providing participants with feedback when rejecting them can also positively affect this relationship (Vellera et al., 2023), as it can increase their efforts devoted to the contest and enhance the quality of their submissions (Baruch et al., 2016; Boss et al., 2017; Füller et al., 2011; Greco et al., 2021; Ye & Kankanhalli, 2017). While previous research indicates that providing participants with feedback can enhance their intention to

participate again in future contests (Piezunka & Dahlander, 2019; Schaarschmidt & Dose, 2023), research on these effects of feedback has mainly focused on behavioural expressions during a contest, leaving participants' engagement with the organisation after a contest underexplored (Jiang & Wang, 2020; Wooten & Ulrich, 2017). It is essential to investigate this post-contest engagement, as this can enhance participants' co-creation, loyalty, and advocacy, which provides long-term value for an organisation (Van Doorn et al., 2010).

While providing feedback may present an opportunity to increase future relationships with contest participants, previous research suggests that the way in which a contest is framed can also play an important role (Karpukhina et al., 2024). Traditionally, ideation contests are framed competitively through emphasizing individual achievements, which can increase participation but can also evoke negative feelings when participants lose (Karpukhina et al., 2024). Alternatively, contests can also be framed as a community activity by emphasizing that participants contribute to the shared goal of finding a solution for the organisation. This framing strategy can reduce feelings of personal failure and consequently increase participants' future engagement with the organisation (Karpukhina et al., 2024). However, this effect of community framing can depend on whether the contest outcome is consistent with participants' expectations and if those outcomes are perceived as fair (Hutter et al., 2011; Faullant & Dolfus, 2017). Participants who are strongly connected to their community are likely to experience unfairness or a lack of recognition when their ideas are rejected (Hutter et al., 2011), which can result in their disengagement from the organisation as they feel undervalued (Faullant & Dolfus, 2017). As empirical evidence of the effects of community framing remains inconclusive, further research is necessary to clarify the exact boundaries and effects of framing strategy on participants' future engagement with the organisation (Karpukhina et al., 2024).

While participants' expectations can influence the effect of framing strategy on the relationship between feedback and engagement, they can also influence their fairness perceptions, which can play an important role in enhancing participant engagement (Franke et al., 2013). When contests are perceived as fair, participants are more likely to stay committed and more willing to contribute to the contest (Franke et al., 2013: Wang et al., 2019). However, previous research has focused primarily on the direct effect of fairness perceptions on the quality of participants' outcomes during the contest (Faullant et al., 2017; Franke et al., 2013). Therefore, the further implications of fairness perceptions on post-contest engagement remain underexplored. In particular, Faullant et al. (2017) highlight the need for further research into participants' perceived fairness of decision-making procedures within ideation contests.

1.2 Objective and research question

The objective of the current study is to examine the interrelations between feedback provision, framing strategy, perceived fairness, and customer engagement following participants' rejection in an ideation contest. Specifically, the current study aims to address the following research question: "How does feedback provision influence rejected participants' engagement with the organisation after an ideation contest, and is this relationship mediated by perceived fairness and moderated by framing strategy?"

1.3 Academic relevance

In recent years, research on ideation contests has extensively examined participants' engagement and participation behaviour within a contest (Füller et al., 2011; Greco et al., 2021; Ye & Kankanhalli, 2017). Only recently, research started to consider the impact of participants' rejections on their future engagement beyond the contest itself (Karpukhina et al., 2024; Schaarschmidt & Dose, 2023). To expand the limited knowledge on participants' post-contest engagement to an organisation, the current study offers new insights into how organisations can foster long-term relationships with participants. In doing so, this study is the first to investigate the impact of feedback provision on post-contest engagement and how this relationship is affected by perceived fairness and framing strategy.

First, previous research on the effects of providing rejected participants with feedback primarily focused on their participation efforts during the contest (Baruch et al., 2016; Jiang & Wang, 2020), leaving its impact on participants' long-term engagement beyond the contest underexplored (Jiang & Wang, 2020; Wooten & Ulrich, 2017). This research aims to fill this gap by examining how feedback provision affects participants' interpretation of their rejection and how this interpretation influences their contest experience and consequently their future engagement with the organisation. This research adds to the existing literature by exploring feedback not merely as a transactional tool to inform participants of their rejection, but also as a relational tool to enhance participant-firm relationships. Focusing on feedback as a relational tool is important as it can enhance trust, commitment, and loyalty among recipients (Fruchter & Sigué, 2005). Therefore, it not only strengthens the relationship between organization and participant but also fosters positive word-of-mouth and future engagement intention, which can build a competitive advantage for the organization (Fruchter & Sigué, 2005).

Second, the current study also examines the role of community framing in shaping participants' attitudes and behaviours. Despite previous research indicating that community framing significantly increases future engagement compared to competitive framing (Karpukhina et al.,

2024), other research suggests that rejecting participants with a strong community identification may increase feelings of unfairness and disengagement (Faullant & Dolfus, 2017; Hutter et al., 2011). This suggests that participants who feel that they belong to a community can have higher expectations of recognition, which could make a rejection feel more personal and unfair. The current study aims to clarify this inconsistency in the existing literature by further investigating the impact and boundaries of community framing to answer the need for a better understanding of its full implications (Karpukhina et al., 2024). Therefore, this study aims to clarify how community framing, compared to competitive framing, moderates the relationship between feedback and engagement. Specifically, this research investigates how these framing strategies influence participants' interpretations of feedback and whether these strategies increase participants' emotional and behavioural outcomes after being rejected or if they instead negatively impact post-contest engagement.

Third, previous research examining the effects of perceived fairness on customer behaviour has focused primarily on how participants' understanding of the contest's purpose and rules affects their intention to contribute to the contest (Franke et al., 2013). However, how participants' fairness perceptions of the decision-making procedures affect their engagement beyond the contest remains underexplored (Faullant et al., 2017). Therefore, this research examines how participants' fairness perceptions mediate the relationship between feedback provision and customer engagement. Specifically, it measures how participants' interpretations of feedback impact their evaluation of the decision-making fairness and the organisation's honesty, and how this affects their post-contest engagement behaviours.

1.4 Practical relevance

As indicated before, rejecting participants' submissions in an ideation contest can have serious consequences for customer-brand relationships. The current study offers relevant insights for organisations that host ideation contests and aim to mitigate the consequences of rejections, as it investigates communication techniques to improve post-contest engagement among participants. Understanding this is crucial for organisations, as customer engagement is positively associated with firm performance (Ho et al., 2020). More specifically, engaged customers visit organisations more often and bring up to 37% more annual revenue (Pansari & Kumar, 2017). Therefore, keeping contest participants engaged with the organisation after the contest can also have financial benefits. The findings of this research will help organisations in designing communication techniques that stimulate perceived fairness and increase post-ideation engagement while providing feedback (Kim et al., 2018). Additionally, the current

study provides insights into how framing a contest as a community activity can affect future engagement (Karpukhina et al., 2024). These tactics may help organisations more effectively manage their relationships with participants by increasing their perceived fairness and strengthening their contest and brand experience (Kim et al., 2018).

1.5 Outline

This research is structured as follows. First, the concept of ideation contests will be explained, followed by a comprehensive overview of the theoretical background on customers' engagement, feedback provision, perceived fairness, and community framing. Subsequently, the research methodology will be discussed, including the research design, data collection, and data analysis procedure. Next, the empirical findings will be presented and interpreted, followed by the implications of these findings, the limitations of the current study, and the recommendations for future research.

2. Theoretical framework

2.1 Ideation contests

Ideation contests are a widely used tool for co-creation that is often applied by organisations to stimulate innovation (Gatzweiler et al., 2017; Jiang & Wang, 2020). An ideation contest is defined as the initiative of an organisation to invite specific groups to share their ideas and award the best submissions (Bettiga & Lamberti, 2019; Leimeister et al., 2014). These contests are often known to have a limited timeframe (Leimeister et al., 2014). Hosting an ideation contest can be beneficial for an organisation, as it provides the opportunity to acquire a large variety of perspectives from customers and experts (Djelassi & Decoopman, 2013; Füller et al., 2011), making it a straightforward yet cost-effective way to acquire their ideas (Jiang & Wang, 2020). Moreover, this collaboration between the organisation and participants can improve the organisation's innovation strategies, which can gain them a competitive advantage in their market (Koh, 2019).

However, having such a large number of participants in an ideation contest can also pose certain difficulties. When an ideation contest is highly competitive, participants can get the feeling that they don't have a realistic chance of winning, which may reduce their efforts and can even make them decide not to participate (Kireyev, 2020). Besides, by relying on external influences for idea generation, organisations cannot directly control the ideas that are submitted, which could result in widely different or even undesirable ideas (Gatzweiler et al., 2017). A lack of proper management can negatively impact participants' experiences, which can reduce their willingness to participate in future events (Hanine & Steils, 2019). By giving feedback, organisations can provide participants with more information, which can generate a sense of inclusivity, and can increase participants' experience and their intention to stay connected with the organisation (Jiang & Wang, 2020; Füller et al., 2010).

2.2 Customer engagement

While participants' experiences during the contest are widely investigated, less attention has been devoted to their post-contest engagement in the role of customer instead of participant. Customer engagement is defined as the emotional, cognitive, and behavioural activities through which customers provide value to an organisation (Schaarschmidt & Dose, 2023). Emotional engagement refers to bonding with the organisation through shared ideas and opinions, which generates enthusiasm, interest, and meaningfulness (Garcia Martinez, 2015; Pansari & Kumar, 2017). These emotions can influence participants' cognitive engagement, which relates to their mental processing and their decisions to devote attention and involvement to the organisation

(Pansari & Kumar, 2017). This emotional and cognitive engagements contribute to customers' behavioural engagement, which can be defined as their behavioural expressions toward an organisation as a result of an underlying motivation (Van Doorn et al., 2010). Following the customer engagement framework by Pansari and Kumar (2017), engagement can be direct and indirect. Direct engagement refers to making purchases, while indirect engagement involves influencing others and referring them to the organisation after a positive experience (Pansari & Kumar, 2017). Based on this framework, the current study focuses on purchasing behaviour as a form of direct engagement, and word-of-mouth as a form of indirect engagement. These behaviours reflect a broader approach to customer engagement beyond the ideation contest and allow for a more valuable assessment of the long-term effects of rejection.

Rejections are a specific outcome that is often perceived as negative, as they address the shortcomings of a participant's idea (Piezunka & Dahlander, 2019). Rejections can signal that the organisation is not interested in the participants' ideas, making their efforts feel wasted (Piezunka & Dahlander, 2019; Wooten & Ulrich, 2017). This can reduce participants' confidence and their future idea generation, discourage them from future interactions, and eventually lead to them leaving the organisation (Camacho et al., 2019; Yang et al., 2023). More specifically, the experience of being rejected can negatively affect engagement outcomes such as word-of-mouth and purchase intentions, which can result in temporary disengagement from the organisation (Karpukhina et al., 2024; Schaarschmidt & Dose, 2023). However, by providing proper communication and acknowledging participants' submissions, these negative effects could be mitigated (Schaarschmidt & Dose, 2023). When participants have a positive contest experience, this generates positive emotions towards the brand (Pansari & Kumar, 2017), which improves their word-of-mouth and brand endorsement (Gebauer et al., 2013; Kim et al., 2018). Therefore, organisations can benefit from understanding how to communicate rejections effectively to enhance participants' experiences. Specifically, providing participants with feedback about their rejection can enhance their contest experience and consequently their post-contest engagement (Piezunka & Dahlander, 2019; Schaarschmidt & Dose, 2023).

2.3 Feedback provision

Previous research has extensively examined the importance of feedback provision during ideation contests and its effects on customers' involvement in the contest. Providing participants with feedback can offer benefits for the organisation as it can increase customer participation (Baruch et al., 2016; Jiang & Wang, 2020). Besides, providing clear and accurate feedback can

increase participants' efforts during the contest (Jiang & Wang, 2020) as it increases their sense of collaboration with the organisation (Baruch et al., 2016; Greco et al., 2021). Moreover, providing participants with feedback increases their contest satisfaction, which leads to higher participation rates and higher-quality submissions (Baruch et al., 2016; Boss et al., 2017; Camacho et al., 2019; Ye & Kankanhalli, 2017; Zhu et al., 2019).

Besides these effects of feedback on engagement during the contest, feedback provision may also shape participants' engagement behaviours after it has ended. Providing rejected participants with feedback acknowledges their submissions and signals that their ideas are valued, which reduces their negative image of the organisation (Fombelle et al., 2016) and generates a sense of trust towards the organisation (Greco et al., 2021; Wang et al., 2019). Moreover, such feedback positively impacts participants' willingness to participate in future contests (Piezunka & Dahlander, 2019). Following the Self-Determination Theory (Deci & Ryan, 2000), an individual's intrinsic motivation increases when they are satisfied in three psychological needs: autonomy, competence, and relatedness. Autonomy refers to the extent to which participants perceive independence and freedom in their decisions; competence refers to feeling capable of fulfilling an activity; and relatedness refers to experiencing a sense of connectedness and being valued by others (Deci & Ryan, 2000). High perceptions of these needs can lead to an increased brand involvement and foster post-contest engagement behaviours, such as future purchase intentions and the willingness to help others through recommendations (Hsieh & Chang, 2016). Providing feedback can satisfy these psychological needs even when rejecting participants. It can increase autonomy by making participants understand the reason for their rejection and by helping them to relate it to their personal goals, which allows them to reflect and make their own informed decisions about how to act on this decision (Ajjawi et al., 2022). Feedback satisfies the need for competence by clarifying what was expected of participants and by indicating how they could improve in the future, which helps them to be more confident in their capabilities (Ajjawi et al., 2022). The need for relatedness is satisfied by providing personalized messages to show the participants that their efforts are valued (Ajjawi et al., 2022).

Besides satisfying these psychological needs, the customer engagement framework by Pansari and Kumar (2017) indicates that feedback provision can also influence engagement by increasing commitment and trust among participants (Pansari & Kumar, 2017). Commitment refers to how much effort a participant is willing to invest in the organisation (Pansari & Kumar, 2017). Feedback leads to such commitment as it increases submission quality, customer activity,

and intention to participate in future contests (Dahlander & Piezunka, 2014; Wooten & Ulrich, 2017). Trust involves the confidence that an organisation acts responsibly and in the interest of the participants (Pansari & Kumar, 2017). Providing feedback and explaining the rejection decision can enhance this feeling of trust, resulting in a positive attitude toward the organisation, which is expressed through engagement behaviours like referrals, positive word-of-mouth, and repeat purchases (Pansari & Kumar, 2017).

Providing feedback can enhance participants' intrinsic motivation by satisfying their need for autonomy, competence, and relatedness, while also improving their commitment and trust in the organisation (Ajjawi et al., 2022; Pansari & Kumar, 2017). As feedback can satisfy these psychological needs and increase organisational perceptions, which in turn increase customers' long-term engagement, the current study proposes that:

H1: *Feedback provision influences customer engagement, with participants who receive feedback on their rejected submission being more engaged with the organisation after the contest than those who did not receive feedback.*

2.4 Framing strategy

This direct impact of feedback on future engagement can also be influenced by the framing strategy an organisation uses to communicate the contest. A common strategy used to motivate people to participate in ideation contests is to frame the contest as a competition. For example, Lay's encourages customers to submit their ideas for a new flavour of crisps by offering a prize of 1 million dollars for the winner and motivates them to compete with each other to try and win this prize (PepsiCo, 2024). However, emphasizing individual winners can also foster participants' negative associations with the organisation when they lose (Karpukhina et al., 2024). To prevent these negative associations when losing, organisations can also frame their contest as a community activity. Community framing, which involves emphasizing the collective rather than the individual, aims to shift participants' mental focus from their personal goal of winning the contest to the shared goal of finding a solution for the organisation (Karpukhina et al., 2024). This shift can be explained by Social Identity Theory (Tajfel & Turner, 1979), which suggests that people tend to derive their personal identity, values, and behaviours from the social groups they belong to, especially when these groups are personally relevant. A more recent revision of this theory confirms that this mechanism remains valid and proposes that the cognitive shift towards group identity may even partially replace an individual's identity (Hornsey, 2008). In addition to its cognitive effects of fostering a sense of togetherness, community framing also has emotional benefits, as it reduces participants'

disappointment by shifting focus away from individual loss (Karpukhina et al., 2024; Raabe et al., 2016). Therefore, community framing is not merely a linguistic tool but also strengthens participants' social identity as it encourages them to perceive themselves as members of a collective group (Karpukhina et al., 2024). A good example of this is the OpenIDEO challenges, where the organisation encourages idea submissions by emphasizing that participants collaborate in a global community towards achieving a shared goal (OpenIDEO, 2024).

Existing literature has indicated that participants who have a sense of belonging to a community have better contest experiences (Füller et al., 2011). Besides, the feeling of togetherness increases participants' motivation to share their knowledge, which leads to more and higher-quality contributions (Füller et al., 2011; Wang et al., 2019). However, participants who do not identify themselves with the contest community, they will not benefit from this interaction (Wu & Gong, 2020). As those participants do not perceive the community as personally relevant, they prefer to focus on their personal goal of winning the contest (Posey et al., 2015; Sun et al., 2012). Furthermore, the platform that is used for a contest can also influence participants' community feeling, as third-party platforms foster more community interaction than corporate platforms that emphasize brand representation. Such third-party contests often have online platforms, which allow participants to share insights with peers, fostering a stronger sense of community (Hutter et al., 2011).

While existing literature highlights the impact of emphasizing a community feeling on contest experience, its effects on long-term engagement remain ambiguous. Previous research suggests that participants who are engaged with the community and its collective goals are more likely to perceive losing a contest as a lack of recognition (Hutter et al., 2011). This negative experience can result in disengagement from the organisation or sabotaging behaviours, which can demotivate other participants and decrease their future engagement (Faullant & Dolfus, 2017). Conversely, other studies indicate that when participants strongly identify with the community, they are less likely to perceive an organisation as threatening or unfair, which reduces their disengagement from the organisation (Fombelle et al., 2016). Furthermore, community framing can enhance participants' sense of contribution to the organisation, which in turn increases their commitment to the community (Wu & Gong, 2020). This increased commitment not only reduces their tendency to disengage from the organisation when being rejected, but even motivates them to stay more engaged with the organisation after the contest (Karpukhina et al., 2024; Wu & Gong, 2020). More specifically, the sense of belonging to a

community increases participants' positive word-of-mouth and their willingness to pay (Gebauer et al., 2013; Karpukhina et al., 2024).

Although feedback provision can increase participants' post-contest engagement (Fombelle et al., 2016; Piezunka & Dahlander, 2019), the framing strategy used to communicate the contest may affect the strength of this relationship. As community framing can enhance participants' sense of belonging and being committed (Wu & Gong, 2020), it could yield stronger engagement behaviours compared to when the competition and individual goals are emphasized (Karpukhina et al., 2024). Therefore, the current study proposes that:

H2: *Framing strategy moderates the relationship between feedback provision and customer engagement, with feedback having a stronger effect on engagement for participants who receive messages including community framing than for participants who receive messages with competitive framing.*

2.5 Perceived Fairness

While framing strategy could have an impact on the relationship between feedback and engagement, participants' fairness perceptions may also affect their engagement behaviours (Gebauer et al., 2013). Previous literature often distinguishes between distributive and procedural fairness (Faullant et al., 2017; Franke et al., 2013; Wang et al., 2019). Distributive fairness refers to the fairness of reward distributions in exchange for participants' input (Faullant et al., 2017). Procedural fairness involves fairness related to the criteria, procedures, and rules incorporated in the decision-making process of a contest (Faullant et al., 2017). A third and less often included type of fairness in research on ideation contests is interactional fairness (Franke et al., 2013). Interactional fairness comprises the personal side of organisational interactions with their customers and relates to the degree of respect and honesty with which organisations communicate with their contest participants (Cohen-Charash & Spector, 2001).

The current study focuses on participants' evaluations of the decision-making process and the organisation's communication regarding their rejection. Therefore, fairness is conceptualized as a combination of interactional and procedural fairness. Distributive fairness is excluded from this conceptualization, as prior research suggests that when reward information is unknown or absent, participants are more likely to judge an organisation's fairness based on their decision-making procedures and how these are communicated (Van Den Bos & Lind, 2002). While procedural and interactional fairness are originally treated as two distinct constructs, theoretical

and empirical evidence indicates a significant overlap between the two and suggests that their boundaries may not always be clear (Cohen-Charash & Spector, 2001). More specifically, the way in which people perceive the interactional behaviour of an organisation contributes to their perception of the overall procedural fairness (Cohen-Charash & Spector, 2001). The current study adopts the view that procedural and interactional fairness are closely related and interprets them as interconnected elements of an overarching construct measuring perceived fairness, rather than as two distinct constructs.

Besides enhancing engagement directly, feedback provision can also influence participants' perceived fairness of an ideation contest. Following the Organisational Justice Theory, people evaluate the fairness of an organisation based on the decisions it makes and the procedures that precede those decisions (Colquitt, 2001). When organisations are transparent about their decision-making procedures, participants will perceive the organisation as more fair (Franke et al., 2013). Moreover, providing participants with structured feedback on their ideas increases their perception of the organisation's transparency as it clarifies the reason for their rejection (Faullant et al., 2017; Hosseini et al., 2016). This reduces participants' uncertainty and increases their satisfaction with the decision-making process (Fombelle et al., 2016; Piezunka & Dahlander, 2019), which results in higher fairness perceptions (Franke et al., 2013). However, when participants believe the feedback is not true, they often ignore it, which nullifies its positive impact on fairness (Mihm & Schlapp, 2015). This can be prevented by delivering feedback through private channels like email or personal messages, which are considered more interactionally and procedurally fair compared to public channels (Westerman & Westerman, 2013).

In turn, these fairness perceptions can have a significant impact on participants' engagement with an organisation (Gebauer et al., 2013; Kim et al., 2018). Perceived unfairness can result in negative attitudes toward the organisation, which decreases participants' commitment, participation, and future engagement (Cohen-Charash & Spector, 2001; Grant et al., 2023). In contrast, perceived fairness enhances participants' trust in the organisation (Kim et al., 2018). Building on Social Exchange Theory, individuals intend to maximize their benefits and minimize their costs during an exchange (Blau, 1986). Trust in the organisation is a crucial element of this exchange as it provides participants with the confidence that the exchange is beneficial for them and reduces their concerns of being exploited by the organisation (Wang et al., 2019). Therefore, when participants perceive a contest as fair, they are more likely to trust

the organisation, which increases their interest in the organisation, positive word-of-mouth, and brand endorsement (Faullant et al., 2017; Gebauer et al., 2013; Kim et al., 2018).

As participants who receive feedback are more likely to perceive the contest as fair, which in turn strengthens their future engagement with the organisation, the current study proposes that:

H3: *Perceived fairness mediates the relationship between feedback provision and customer engagement.*

2.6 Conceptual Model

The proposed hypotheses form the basis for the current study and the relationships tested. The conceptual model (Figure 1) indicates how feedback provision (present vs. absent) and framing strategy (community vs. competitive) influences customer engagement. The model also shows how perceived fairness is hypothesised to mediation the relationship between feedback provision and customer engagement.

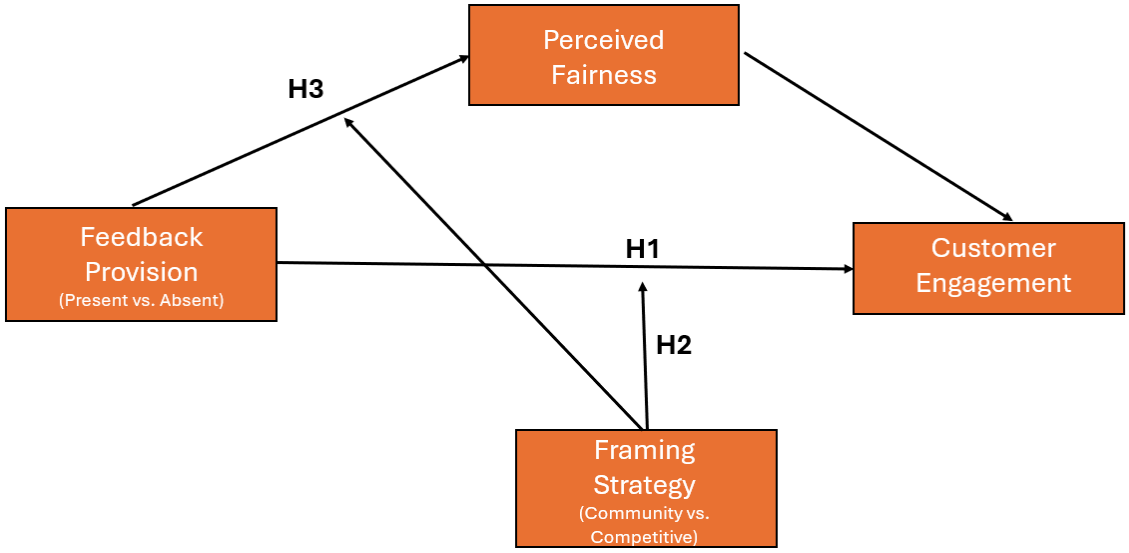

Figure 1. Conceptual Model

3. Methodology

3.1 Method and Design

The current study measured the effect of feedback provision as independent variable on customer engagement as dependent variable. The extent to which this effect was influenced by perceived fairness as mediator and by framing strategy as moderator was examined simultaneously.

The current study performed a quantitative analysis through the means of an experiment, which tests the causal relationship between dependent and independent variables in a population through experimental manipulation (Hair et al., 2019). A 2 x 2 between-subjects design was used, in which participants were randomly and equally assigned to one of the four scenarios to eliminate any chance of biased allocation (Hair et al., 2019).

The scenarios differed in the feedback provision (present vs. absent) and framing strategy (community vs. competitive), resulting in the four different scenarios mentioned in Table 1. Except for the manipulations in feedback and framing, all four versions were identical and of the same length, to control for the potential effect of message length in participants responses. The scenarios used in the study (see Appendix A) were hypothetical and featured the fictional organisation "FlavourFusion". A fictional organisation was used to prevent existing associations with a real brand from interfering with the results. To enhance the imaginability and realism of the scenarios, they were pre-tested and adjusted based on participants' feedback to increase their understandability.

Table 1. *Scenarios*

	Presence of Feedback	Absence of Feedback
Community Framing	Scenario 1	Scenario 2
Competitive Framing	Scenario 3	Scenario 4

Scenario 1: Rejection message with presence of feedback and community framing

Scenario 2: Rejection message with absence of feedback and with community framing

Scenario 3: Rejection message with presence of feedback and with competitive framing

Scenario 4: Rejection message with absence of feedback and with competitive framing

The experimental study was conducted using a survey, which was created and distributed through the online platform Qualtrics to ensure high accessibility and ease of use for the respondents. Before completing the questionnaire, participants received general information about the purpose of the study and were introduced to the concept of ideation contests, after which they were asked to give their informed consent to participate. Subsequently, they were assigned to one of the four scenarios.

To ensure the effectiveness of the manipulations, participants were exposed to a manipulation check. This is necessary in experimental designs that include manipulations to ensure that they were perceived as intended (Hair et al., 2019). First, as the contest was imaginary, participants were asked to respond to the statement: "The scenario feels realistic", to evaluate if the scenarios were perceived as believable. To check the manipulations of feedback provision, participants received the statement: "The message provides a specific reason for rejecting my submission." To control the manipulations of framing strategy, participants received the statement: "The message emphasizes collaboration toward a shared goal." All statements used a 7-point Likert scale, ranging from "strongly disagree" to "strongly agree." Participants who answered "strongly disagree", "disagree", or "somewhat disagree" were excluded from the dataset, as their responses indicated that they did not perceive the manipulations as intended.

Moreover, it is important to ensure that participants are paying attention to and understand the instructions that were provided (Hair et al., 2019). Therefore, an attention check was included to increase the overall reliability of their responses. Participants answered the question: "What is the name of the organisation that is hosting the ideation contest?", which had four different answer options. All participants who gave the wrong answer were excluded from the dataset. After these manipulation and attention checks, the participants were asked to answer five statements on perceived fairness and six statements on customer engagement using a 7-point Likert scale. The full questionnaire can be found in Appendix A in English and in Appendix B in Dutch.

3.2 Measurements and operationalizations

Feedback provision was operationalised based on Fombelle et al. (2016) and Piezunka and Dahlander (2019), who perceive giving no feedback as the baseline for an organisation. Fombelle et al. (2016) distinguish between the presence and absence of an organisational response to submitted ideas, whereas Piezunka and Dahlander (2019) investigated the differences between providing an explicit rejection and providing no rejection at all. Therefore, the current study interpreted feedback as adequate when a message included clear and specific

reasons explaining why a participant's idea did not win the contest and interpreted the absence of feedback as merely stating that the participant did not win, without providing any explanation.

Community framing was operationalised based on Karpukhina et al. (2024), who applied community framing by stressing the ideation contest as a community activity instead of a personal competition and distinguished between a collective goal ('to help the organisation') and an individual goal ('to win the competition'). In the current study, the community framing conditions approached participants as 'community members' who contributed to a 'shared goal' through their 'valuable contributions'. For the competitive framing conditions, respondents were approached as 'individual participants' who tried to 'stand out from the others' by trying to submit the 'very best idea'.

To measure participants' engagement with the organisation after participating in an ideation contest, six statements were based on the operationalizations by Karpukhina et al. (2024) and were adapted to the context of the current study. To establish whether participants' perceived fairness of their rejection mediates the relationship between feedback provision and customer engagement, five statements based on the operationalisations by Faullant et al. (2017) and Gebauer et al. (2013) were adapted to the context of the current study. All items (see Table 2) were measured using a 7-point Likert scale, ranging from "totally disagree" to "totally agree".

Table 2. *Operationalisations*

Construct	Original Item	Adapted Item	Source
Customer Engagement	I am eager to visit the WU store sometime soon.	I would like to visit the organisation's store sometime soon	Karpukhina et al. (2024)
	In this moment, I am interested in purchasing something from the WU store.	I am interested in buying something from this organisation.	Karpukhina et al. (2024)
	I will talk positively about the WU store with my friends and peers	I will speak positively about this organisation to my friends and family.	Karpukhina et al. (2024)
	In this moment, I can easily see myself saying something positive to	At this moment, I can see myself saying something positive	Karpukhina et al. (2024)

	others about the WU store	about this organisation to others.	
	I would 'like,' 'share,' or 'follow' social media pages of the WU store.	I would 'like,' 'share,' or 'follow' the social media pages of this organisation.	Karpukhina et al. (2024)
	In this moment, I would be happy to say something positive about the WU store on social media.	At this moment, I would be happy to say something positive about this organisation on social media.	Karpukhina et al. (2024)
Perceived Fairness	The jury decision process applied objective standards so that decisions were made in a consistent manner	The organisation applied clear criteria in a consistent way.	Faullant et al. (2017)
	The jury team dealt with the contest community in an honest and truthful manner when making decisions	The organisation employed clear procedures. .	Faullant et al. (2017)
	The jury team dealt with the contest community in an honest and truthful manner when making decisions	The organisation was honest about its decisions in the ideation contest	Faullant et al. (2017)
	The organisation was honest about its decisions in the ideation contest	The organisation treated me with respect in making decisions	Gebauer et al. (2013)
	The jury decision process was free from bias	The ideation contest was free from bias	Faullant et al. (2017)

3.3 Pre-test

Before distributing the survey to all participants, it was first tested through the means of a pre-test. The purpose of this pre-test was to investigate whether respondents correctly interpreted the scenarios and measurement questions they were exposed to. During the pre-test, 17 participants were exposed to the different scenarios and the manipulation check questions, and were asked to give feedback on those. Based on the results of the pre-test, some adjustments were made to further increase the quality and clarity of the survey and its manipulations. Specifically, participants noted that the framing scenarios failed to clearly distinguish between community and competitive framing. To enhance the clarity of the manipulations and the distinction between the different scenarios, the wording of the manipulation texts was made more explicit. Additionally, some of the measurement statements were rephrased to improve participants' understanding of these statements. Lastly, some minor spelling and grammar errors were corrected. After this, the pre-test was sent out again to the same participants, who noticed significant improvements and indicated that the survey was clear and understandable.

3.4 Research sample

The survey was distributed among the target audience of individuals with a Dutch nationality. Although initially created in English, the survey was translated into Dutch to mitigate the potential bias stemming from participants' interpretation and translation of an English text. Given the limited time frame for data collection, the survey was distributed through non-probability sampling. More specifically, convenience sampling was used for the data collection, as the survey was mainly distributed to the researcher's network of personal and professional acquaintances. Because of this sampling technique, not all members of the population had an equal chance of being included in the sample, which means that the findings of the current study may not be generalizable to the broader population (Hair et al., 2019). However, in an attempt to reduce this effect, the survey was distributed through multiple social media platforms with different audiences, such as WhatsApp, LinkedIn, Instagram, and Facebook.

The survey was distributed between May 8 and May 22. During this period, 275 people participated in the survey, of whom 54 did not finish or did not give their consent to participate. From the 209 respondents who finished the survey, 22 failed to correctly answer the attention check and were therefore removed from the dataset. An additional 83 respondents answered at least one of the manipulation checks incorrectly and were therefore excluded from the dataset. Finally, one participant provided identical answers for all measurement questions and was also excluded from the dataset because of this pattern of inattentive behaviour. After removing those

participants, the total sample of the survey comprised 125 respondents. According to Hair et al. (2019), to employ the recommended power of 0.8 and a significance threshold of 0.05 while using a 2 x 2 between-subjects design with four different conditions, a minimum of 120 respondents with at least 30 participants for each condition is required. Both criteria were met as the total sample size exceeds 120 and each condition consists of at least 30 respondents (see Appendix F).

Of these respondents, 44.8% identified as male, 52.5% as female, 0.8% as non-binary, and 2.4% preferred not to disclose this information. Moreover, most respondents were between 18 and 28 years old (59.3%), followed by the age categories 29-44 years (13.6%), 45-60 years (20.0%), 61-79 years (4.8%), and 79 years and older (1.6%). The final 1.6% of respondents preferred not to disclose this information. Furthermore, almost all respondents were Dutch (95.2%), with only a marginally small percentage having another nationality (4.0%), and 0.8% of respondents preferring not to disclose this information. Finally, most respondents completed or are following an education at university (40,8%), followed by HBO (32.0%), MBO (18.4%), high school (6.4%), with a small percentage having completed or following another degree (0.8%) or preferring not to share this information (1.6%). The complete overview of participants' demographics can be found in Appendix C**.**

3.5 Data analysis procedure

The data analysis procedure involved statistical analyses using the IBM SPSS Statistics software, to which the data was imported from Qualtrics after being collected. Before conducting the analysis, the dataset was prepared and cleaned. This involved removing all unnecessary variables from the dataset, such as personal data and start dates. While dates could provide meaningful insights into response quality, a variable called 'duration' was kept in the dataset to provide this information. Therefore, the variables with dates were deleted to reduce redundancy. Besides, variables were renamed to increase clarity, the measurement scales were adjusted to the appropriate type, and respondents were deleted. Finally, compute variables were created for the mediator and dependent variable, as those were measured using multiple items.

Within the SPSS software, first the reliability of the constructs for perceived fairness and customer engagement was measured by looking at Cronbach's alpha, which calculates the internal consistency of the constructs (Hair et al., 2019). Subsequently, a two-way ANOVA was performed to investigate the main effects and interaction effect of feedback provision and framing strategy on the dependent variable, customer engagement. A two-way ANOVA was appropriate in the current study, as it compares the means of two variables and their interaction

effect on only one dependent variable (Hair et al., 2019). Besides, the mediation effect of perceived fairness was examined by using a PROCESS model 8 analysis. PROCESS model 8 is an ideal analysis tool for this research, as it enables testing mediation and moderated effects combined in one model (Hair et al., 2019). Moreover, PROCESS uses a simplified analysis model compared to the complex model specifications required for comparable analysis tools like Structural Equation Modelling (Hair et al., 2019).

3.6 Reliability and validity

To check the quality of a measurement instrument, it is important to consider its validity and reliability. Validity involves the extent to which an instrument measures what it intends to measure, while reliability involves the ability of the instrument to obtain consistent results across different measurements (Hair et al., 2019). To assess the reliability of the instruments used to measure customer engagement as a dependent variable and perceived fairness as a mediator, Cronbach's alpha was computed (see Appendix D). When Cronbach's alpha has a value of at least .80, measurement instruments can be deemed reliable (Hair et al., 2019). For customer engagement, Cronbach's alpha for the six items was .904, indicating that the reliability of this scale was excellent. As illustrated in Table 3, all corrected item-total correlations exceeded the accepted threshold of .30 and were considered strong as they were all above .50, which indicates that all items align well with the rest of the construct (Hair et al., 2019). Moreover, Table 3 shows that the reliability of the construct could not be improved by deleting any items.

Table 3. Reliability Customer Engagement

Item	Corrected Item-Total Correlation	Cronbach's alpha if item deleted
Customer Engagement 1	.799	.877
Customer Engagement 2	.804	.876
Customer Engagement 3	.756	.884
Customer Engagement 4	.708	.891
Customer Engagement 5	.706	.893
Customer Engagement 6	.658	.898

For perceived fairness, a Cronbach's alpha of .822 for the five items indicates that this scale had a good reliability. Similar to customer engagement, Table 4 indicates that all corrected item-total correlations were strong and that the reliability could not be improved by deleting any items.

Table 4. Cronbach's alpha Perceived Fairness

Item	Corrected Item-Total Correlation	Cronbach's alpha if item deleted
Perceived Fairness 1	.640	.779
Perceived Fairness 2	.617	.787
Perceived Fairness 3	.665	.771
Perceived Fairness 4	.593	.793
Perceived Fairness 5	.567	.800

Besides reliability, the validity of the current study was also assessed. First, face validity was measured through the pre-test in which participants were asked about their interpretation of the mediating and dependent variables. Moreover, a translation check was performed by three native Dutch students who acquired a high level of English proficiency after four years of university studies in English, to ensure that the survey translation was clear and adequate. In addition, construct validity was evaluated through the manipulation checks to ensure that respondents understood the manipulation they were exposed to.

Finally, an exploratory factor analysis was conducted. This analysis was performed after confirming that all data was normally distributed, adequately sampled, and suitable for factor analysis. As the kurtosis and skewness of all items were within the range of -2 and 2, the Kaiser-Meyer-Olkin for sample adequacy was above the threshold of 0.5 (0.853), and Bartlett's test of sphericity was significant, a factor analysis was conducted (see Appendix E). The factor analysis revealed a satisfactory two-factor loading for the items, with all items for customer engagement loaded strongly together, while all items for perceived fairness loaded strongly together on another factor, without any significant cross-loadings (see Table 5). Therefore, the factor analysis supports the intended two-dimensional structure and provides strong evidence of construct validity. While two items for customer engagement score just below the .60 threshold for a strong loading (Hair et al., 2019), as illustrated before in Table 3, deleting these items would reduce the strength of the reliability of the construct. Moreover, to maintain

instrumental alignment with prior research and because these loadings are only marginally off the required threshold and do not pose a serious threat to compromise the factor loadings, it was decided to retain those items as part of the construct.

Table 5. Pattern matrix

	Factor 1	Factor 2
Customer Engagement 1	.749	
Customer Engagement 2	.757	
Customer Engagement 3	.595	
Customer Engagement 4	.540	
Customer Engagement 5	.864	
Customer Engagement 6	.780	
Perceived Fairness 1		.664
Perceived Fairness 2		.601
Perceived Fairness 3		.718
Perceived Fairness 4		.671
Perceived Fairness 5		.723

3.7 Ethical considerations

To ensure that the process of data collection was in line with ethical standards, several measures were taken to preserve the rights of all respondents. Before making their decision to participate in the current study, respondents were informed about the purpose of the study. It was also clarified that the data would be collected for Radboud University Nijmegen and would be used for educational purposes only. Moreover, it was mentioned that participants were free to quit the survey at any time and that the collected data would be treated confidentially, as it would be kept anonymous and would not be shared with third parties. After providing this information, participants were asked to give their informed consent before participating in the study.

4. Results

4.1 ANOVA assumptions

Before conducting the analysis, several assumptions were verified to ensure that the data met the requirements to perform an ANOVA. Those assumptions include the normality of sample distribution, the homogeneity of variance, the independence of responses, and the independence of errors (Hair et al., 2019).

To check the normality of the sample distribution, a Shapiro-Wilk test was conducted. The results show that three of the four conditions had a non-significant Shapiro-Wilk score (see Appendix F), which indicates that they were normally distributed (Hair et al., 2019). However, one condition did have a significant Shapiro-Wilk score, which indicates that this condition is not normally distributed. Nevertheless, the skewness and kurtosis values for this condition remain between -2 and 2 (see Appendix F), which suggests that the variance of the distribution was not extremely high. Therefore, the assumption is considered to be met. Moreover, as ANOVA tolerates mild deviations when the data has sufficiently large sample size with balanced group sizes, which was the case in the current study (Hair et al., 2019). To check the assumption of homogeneity of variance between groups, a Levene's test was conducted. As shown in Appendix F, the score of .886 is insignificant, which indicates that there were no significant differences in the variance between the groups, meeting this assumption.

The assumptions of independent responses and errors were supported by looking at the design of the current study. As participants were randomly assigned to one of the four conditions, without any participants being exposed to multiple conditions, this assumption is met. Furthermore, the residuals, which reflect the differences between the observed and predicted scores, were examined to check normality. As visualized in the P-Plot and the scatterplot (see Appendix F), all data points were close to the diagonal line and were evenly spread without any clusters, confirming the normal distribution of the residuals.

In addition to checking these assumptions, it is also important to examine the presence of potential outliers. ANOVA tests are sensitive to outliers, as they can significantly change the mean and variance of the conditional groups, which can distort the data and may result in inaccurate conclusions (Hair et al., 2019). As the boxplot in Appendix F indicates, three outliers were detected. However, these are only mild outliers, and all assumptions to conduct an ANOVA are met. Moreover, as an ANOVA is considered robust enough to tolerate mild outliers, they were maintained in the analysis.

4.2 ANOVA

Hypothesis 1 examined the effect of feedback provision on customer engagement, expecting that participants who received feedback on their rejected submission would be more engaged with the organisation after the contest than those who did not receive feedback. To examine this main effect of the current study, an ANOVA test was conducted (see Appendix G). The results from the ANOVA (see Table 6) indicated that the main effect of feedback on customer engagement was significant ($F(1,121) = 15.723$, $p < .001$, $\eta^2 = .115$). This illustrates that feedback accounted for approximately 11.5% of the variance in customer engagement, indicating a moderate-to-large effect size. As shown in Table 7, participants who received feedback were more engaged with the organisation ($M = 4.23$, $SD = 1.16$) compared to those who did not receive feedback ($M = 3.49$, $SD = 1.18$), supporting Hypothesis 1. However, there was no significant interaction effect between feedback and framing strategy ($F(1,121) = 2.543$, $p = .113$, $\eta^2 = .021$). In addition to these primary findings, the results of the ANOVA also showed a significant direct effect of framing strategy on customer engagement ($F(1,121) = 21.582$, $p < .001$, $\eta^2 = .15$). This illustrates that framing strategy accounted for approximately 15% of the variance in customer engagement, indicating a large effect size. As indicated in Table 7, participants were more engaged with the organisation when the contest was framed as a community activity ($M = 4.31$, $SD = 1.09$) compared to when it was framed as a competition ($M = 3.44$, $SD = 1.19$).

Table 6. Test of Between-Subjects effects.

Dependent Variable: Customer Engagement

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	44.937	3	14.979	12.915	<.001	.243
Intercept	1861.572	1	1861.572	1605.109	<.001	.930
Feedback	18.236	1	18.236	15.723	<.001	.115
Framing	25.030	1	25.030	21.582	<.001	.151
Feedback * Framing	2.949	1	2.949	2.543	.113	.021
Error	140.333	121	1.160			
Total	2058.028	125				
Corrected Total	185.270	124				

a. R Squared = .243 (Adjusted R Squared = .224)

Table 7. Descriptive statistics

Dependent Variable: Customer Engagement

Feedback	Framing	Mean	Std. Deviation	N
Absent	Competitive	2.8778	1.01609	30
	Community	4.0806	1.02186	31
	Total	3.4891	1.17846	61
Present	Competitive	3.9495	1.12537	33
	Community	4.5376	1.13342	31
	Total	4.2344	1.15879	64
Total	Competitive	3.4392	1.19486	63
	Community	4.3091	1.09472	62
	Total	3.8707	1.22234	125

Hypothesis 2 predicted a moderation effect of framing on the relationship between feedback provision and customer engagement, expecting that participants who received messages with community framing would be more engaged with the organisation after the contest compared to participants who received messages with competitive framing. Table 8 illustrates the pairwise comparisons of the conducted ANOVA, which examined participants' engagement levels for both conditions of feedback within both framing conditions. The pairwise comparisons indicate that when participants received feedback, they were more engaged with the organisation when they were exposed to community framing compared to competitive framing (Mdiff = .588, p = .031). Surprisingly, this effect was even stronger when feedback was absent (Mdiff = 1.203, p <.001), which suggests that community framing could reduce the negative impact of a rejection even when feedback is absent. However, despite this significant positive impact of community framing compared to competitive framing on engagement for both conditions of feedback, the aforementioned ANOVA (see Table 6) indicated a non-significant interaction effect between feedback provision and framing strategy on engagement. Moreover, the effect size of this interaction was rather small (η^2 = .021), which indicated the interaction effect would only have explained a minimal part of the variance of customer engagement. Therefore, the significant effects from the pairwise comparisons should be interpreted as additive effects of feedback

provision and framing strategy rather than as evidence of an interaction or moderation. As a result, Hypothesis 2 is rejected.

Table 8. Pairwise Comparisons

Dependent Variable: Customer Engagement

						95% Confidence Interval for Difference	
Feedback	Framing (I)	Framing (J)	Mean Difference (I-J)	Std, Error	Sig.	Lower Bound	Upper Bound
Absent	Competitive	Community	-1.203	.276	<.001	-1.749	-.657
	Community	Competitive	1.203	.276	<.001	.657	1.749
Present	Competitive	Community	-.588	.269	.031	-1.121	-.055
	Community	Competitive	.588	.269	.031	.055	1.121

4.3 PROCESS

Hypothesis 3 investigated the mediation effect of perceived fairness on the effect of feedback provision on customer engagement. To assess this, model 8 of the PROCESS macro in SPSS was utilized. The results of the analysis (see Appendix H) showed significant effects of feedback provision on perceived fairness ($b = 1.30$, $t = 5.61$, $p < .001$), and perceived fairness on customer engagement ($b = 0.47$, $t = 4.75$, $p < .001$). Moreover, the indirect effect of feedback on engagement through perceived fairness was also significant (effect = 0.6062, 95% CI [0.2857, 0.9943]), which supports H3 by indicating a mediation effect of perceived fairness on the relationship between feedback provision and customer engagement. More specifically, when fairness was included in the model, the direct effect of feedback provision on customer engagement was no longer significant ($b = 0.47$, $t = 1.66$, $p = .100$), which indicates a full mediation effect of perceived fairness on the relationship between feedback provision and customer engagement. Moreover, only a marginally significant interaction was found between feedback provision and framing strategy on perceived fairness ($b = -0.57$, $t = -1.75$, $p = .083$), which did not yield a significantly moderated mediation effect (index = -0.2681, 95% CI [-0.6284, 0.0236]).

4.4 Robustness check

To check the robustness of these results, the potential influence of age, gender, and education as control variables on these outcomes was examined. For both the ANOVA and PROCESS, including these control variables in the analysis did not change the significance of the results, which indicates that the observed results were not influenced by these demographic factors. This indicates that the observed relationships are stable are not confounded by other variables that were actively measured. Since the control variables did not significantly impact the results (Appendix I), both original analysis models were used, not including these control variables. This decision helps to maintain the highest statistical power by avoiding unnecessary noise and complexity within the model.

5. Conclusion

To examine the interrelations between feedback provision, framing strategy, perceived fairness, and engagement, the current study aimed to answer the research question: "How does feedback provision influence rejected participants' engagement with the organisation after an ideation contest, and is this relationship mediated by perceived fairness and moderated by framing strategy?". Table 9 provides the results of the hypotheses used to investigate this question.

The results show that participants who received feedback as part of their rejection message reported significantly higher engagement levels compared to those who did not receive feedback. Therefore, Hypothesis 1 is accepted. Moreover, while participants who were exposed to community framing messages demonstrated higher engagement levels for both types of feedback than those who received competitive framing messages, this interaction effect between feedback provision and framing strategy was not significant, rejecting Hypothesis 2. Furthermore, participants' perceived fairness mediated the effect of feedback provision on engagement, accepting Hypothesis 3. Specifically, with the inclusion of fairness as a mediator, the direct effect of feedback on engagement turned insignificant, which indicates a full mediation effect.

Table 9. Summary of hypothesis.

Hypothesis	Results
H1: *Feedback provision predicts customer engagement, with participants who receive feedback on their rejected submission being more engaged with the organisation after the contest than those who did not receive feedback*	Accepted
H2: *Framing strategy moderates the relationship between feedback provision and customer engagement, with feedback having a stronger effect on engagement for participants who receive messages including community framing than for participants who receive messages with competitive framing.*	Rejected
H3: *Perceived fairness mediates the relationship between feedback provision and customer engagement.*	Accepted

6. Discussion

6.1 Discussion and theoretical contributions

Hypothesis 1 illustrated a positive main effect of feedback provision on customer engagement, with participants who received feedback being more engaged with the organisation compared to those who did not receive feedback in their rejection message. This result is in line with previous research suggesting that feedback leads to acknowledgement, which reduces participants' negative image of the organisation when their ideas are rejected (Fombelle et al., 2016). It also corroborates existing literature suggesting that providing feedback can foster customer activity and future participation intention (Dahlander & Piezunka, 2014; Wooten & Ulrich, 2017). This research contributes to the existing body of literature by extending the understanding of the impact of feedback provision when rejecting contest participants by demonstrating that it can significantly improve their engagement with the organisation beyond the contest itself. Therefore, the current study suggests that feedback provision does not merely function as a transactional tool but also as a relational tool to increase participants' engagement. A possible explanation for this positive impact could be that providing participants with feedback may fulfil their needs for autonomy, competence, and relatedness, which can encourage engagement behaviours (Hsieh & Chang, 2016). While these mechanisms were not directly measured in the current study, they present an interesting opportunity for future research. Moreover, the positive effect of feedback provision on engagement could be explained by its increase in trust and commitment, which are core components that stimulate engagement (Pansari & Kumar, 2017).

The second hypothesis predicted a moderating effect of framing strategy on the relationship between feedback and engagement. More specifically, participants who were exposed to messages with community framing were expected to experience a stronger effect of feedback provision on engagement compared to participants who were exposed to messages with competitive framing. However, the interaction effect between feedback and framing was not significant. A possible explanation for this could be that participants who were committed to the community and its collective goal perceived their rejection as a lack of recognition, which can evoke negative emotions that reduce their engagement behaviours (Hutter et al., 2011). Another explanation could be that participants struggled to identify with the organisation or perceived community as irrelevant, which may have hindered their cognitive switch from personal rewards to a shared goal (Posey et al., 2015; Wu & Gong, 2020). Moreover, the fact

that the organisation and the contest in the present study were fictitious could also have hindered participants' identification with the organisation.

While the interaction between feedback and framing was found to be insignificant, the results showed a significant direct effect of framing strategy on engagement, suggesting that participants who received community framing in their messages were more engaged with the organisation compared to participants who received competitively framed messages. This finding corroborates previous research suggesting that community framing leads to stronger engagement behaviours than competitive framing (Karpukhina et al., 2024). A possible explanation for this might be that community framing fosters a stronger sense of belonging and commitment among participants, which makes them more tolerant of personal rejections when the shared goal is still achieved, thereby enhancing their engagement behaviours (Karpukhina et al., 2024; Wu & Gong, 2020).

The third hypothesis illustrated a full mediation effect of fairness on the relationship between feedback provision and customer engagement. This suggests that feedback provision does not directly enhance their engagement, but has an indirect effect on engagement by increasing participants' fairness perceptions of the organisation, which in turn improves their post-contest engagement. This result corroborates previous research suggesting that participants show higher engagement behaviours when they perceive an organisation as fair (Gebauer et al., 2013; Kim et al., 2018). The present study contributes to this knowledge by demonstrating that by demonstrating that providing feedback that informs participants about the decision-making of the organization enhances these fairness perceptions. A possible explanation for this is that participants may only convert feedback into engagement behaviours when they feel that the organisation treats them fairly (Franke et al., 2013). Moreover, providing participants with feedback can enhance their sense of transparency, which in turn can increase fairness perceptions (Franke et al., 2013; Faullant et al., 2017). Consequently, these perceptions can increase participants' trust in the organisation (Kim et al., 2018), as it can reduce their concerns of being exploited by the organisation, which in turn enhances their future engagement (Kim et al., 2018; Wang et al., 2019).

6.2 Practical implications

This research offers actionable insights for organisations that seek to utilise their ideation contests not merely as an innovation strategy but also as an opportunity to build long-term relationships with their participants. The study highlights the importance of feedback provision, framing strategy, and fairness perceptions in enhancing participants' post-contest engagement. Organisations that host ideation contests should aim to provide losing participants with clear feedback on their idea, in which they are transparent about the decision-making processes that were applied. This can enhance participants' perception of being treated fairly, which increases their engagement with the organisation after the contest (Colquitt, 2001; Franke et al., 2013). Furthermore, the full mediation effect of fairness found in the current study suggests that participants' fairness perceptions play a significant role in enhancing their engagement behaviours. This suggests that fostering future engagement is not merely about providing feedback, but also about what this feedback signals. Organisations should ensure that their feedback does not just inform participants but also acknowledges and respects their contributions to foster feelings of trust and commitment, which ultimately enhances their engagement (Pansari & Kumar, 2017).

While the current study found no meaningful moderation of framing strategy on the effects of feedback on fairness and engagement, it did establish a positive direct impact of framing strategy on engagement. Therefore, when organisations aim to increase participants' post-contest engagement despite rejecting them, they could emphasize the common goal of the contest in their messages to generate a sense of community among participants, which is likely to be more effective than emphasizing the individual and competitive aspects of the contest (Karpukhina et al., 2024). Ultimately, when organisations approach feedback as a relational tool rather than a procedural obligation, they are likely to improve participants' experiences, enhance their fairness perceptions, and stimulate future engagement behaviours.

6.3 Research limitations and future recommendations.

While the current study offers interesting contributions to the field of innovation and ideation contests, several limitations need to be considered when evaluating its findings. First, the current study employed a scenario-based approach instead of a real-life experiment. Although the scenarios were carefully written to maximise realism, and a manipulation check controlled for the credibility of the scenarios, the hypothetical nature of the setting could have limited the quality of responses. The participants were asked to imagine their involvement in the ideation contest and had to evaluate a fictitious organisation based on imaginary feedback and framing

conditions, which could have reduced the authenticity of their responses. Future research should acknowledge this limitation and conduct similar research in a real-life organisational context to more accurately investigate participants' post-contest emotions and behaviours.

Second, while this study was based on English research, the questionnaire and manipulated scenarios were translated into Dutch and distributed among Dutch participants. Although this translation was reviewed by native Dutch speakers with a high academic English proficiency, the meaning of the manipulated scenarios and measurement statements could have been changed during this translation process. This may have affected how respondents interpreted the manipulations of feedback provision and framing strategy, which could have influenced their engagement behaviours. Additionally, respondents' cultural values of individualism and power distance could also have influenced their perception of the manipulated variables (Hofstede, 1980). Following Hofstede's cultural dimensions, the Netherlands scores relatively high on individualism, which suggests a preference for personal acknowledgement and autonomy. Moreover, the Netherlands scores low on power distance, suggesting that they prefer transparency and equal treatment (Hofstede, 1980; Hofstede Insights, n.d.; Rienties & Tempelaar, 2013). These cultural preferences may have affected respondents' interpretation of the feedback and framing manipulations and its influence on their fairness perceptions and engagement behaviours. As participants from different cultures might respond differently to similar manipulation conditions, future research should examine the impact of cultural differences by conducting research with similar manipulation conditions across different cultural settings.

Third, the current study combined procedural and interactional fairness into a single construct of perceived fairness. This approach is supported by theoretical and empirical evidence suggesting a strong overlap between the two types of fairness (Cohen-Carash & Spector, 2001) and supported this research's approach to investigate fairness as a broader mediating variable. However, this combination limits the ability to examine the individual impact of procedural and interactional fairness on engagement, which may yield more specific insights into how fairness perceptions influence engagement. Future research should acknowledge this conceptual cluster and consider separate measurements for procedural and interactional fairness for a more nuanced understanding of the mediation role of fairness.

Furthermore, the age category of 18-28 year old respondents was overrepresented (59.3 %) compared to the other categories. Therefore, the sample of current study was not representative

of the general population, which negatively impacts the generalizability of the results. Additionally, while it was established that age, gender, and education as control variables did not influence the results, the current study did not control for respondents' prior experience with ideation contests. However, previous experiences with ideation contests may influence respondents' expectations and emotions (Hanine & Steils, 2019). Therefore, future research should control for participants' previous experiences to more accurately clarify the effects of the feedback provision and framing strategy on respondents' perceived fairness and future engagement.

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Appendices

Appendix A: Survey and scenarios in English

Introduction

Dear Participant,
Thank you for your interest in participating in this questionnaire conducted as a part of my Master Thesis. My name is Bas Wienholts and I am a Marketing Master student at Radboud University Nijmegen, The Netherlands. The purpose of this questionnaire to gain insights into customers' engagement to an organisation after participating in an ideation contest. An ideation contest is a competition in which organisations invite consumers to contribute ideas and solutions for specific problems or challenges the organisation is facing.

The questionnaire is about an ideation contest organised by the fictional organisation FlavourFusion, which is looking for a new flavour of ice cream. Please imagine that you have already participated in this fictitious contest, and that you have just received a message from the organisation about your submission. After you have read this message, you will be asked to answer some questions about the content of the message.

The questionnaire will not take longer than 5 minutes to complete. There are no right and wrong answers to the questions, its most important that you answer all questions honestly. Please note that participation in this study is voluntary, and that you have the right to withdraw at any point, without any consequences. Your responses will be treated anonymously and kept confidential, and will only be used for educational purposes. If you have any questions or concerns about the research, you can contact me via email: bas.wienholts@ru.nl.

By selecting ‘I agree to participate’ below, you confirm that you have read and understood the provided information and that you voluntarily agree to participate in this study. If you do not wish to participate, please select ‘I do not wish to participate’.

- I agree to participate
- I do not wish to participate

Introduction of scenarios

In the next section of this questionnaire, you will be asked to read a short text fragment. This fragment will outline a scenario. Please read the text carefully, and try to relate to the scenario.

Scenarios

Scenario A: Feedback Provision x Community Framing

Imagine that you have already participated in the ideation contest and that you are now receiving the following message about your participation.

Dear community member,

Thank you for participating in our ideation contests. With this submission you, together with all the other participants, contribute to our shared goal: discovering a new flavour of ice cream. This contest is about all your ideas and dedication. Thanks to all your valuable contributions, we are shaping the future of ice cream together.

After careful consideration, we regret to inform you that your idea was not selected at the winning submission. We would like to explain this decision. Your idea is very creative and clearly has potential as a real product. Unfortunately, the combination of ingredients is quite complex, which makes it difficult to produce at this time.

Thank you again for your contribution.

Kind regards,

Your FlavourFusion Team

Scenario B: No Feedback Provision x Community framing

Imagine that you have already participated in the ideation contest and that you are now receiving the following message about your participation.

Dear community member,

Thank you for participating in our ideation contests. With this submission you, together with all the other participants, contribute to our shared goal: discovering a new flavour of ice cream. This contest is about all your ideas and dedication. Thanks to all your valuable contributions, we are shaping the future of ice cream together.

After careful consideration, we regret to inform you that your idea was not selected at the winning submission.

Thank you again for your contribution.

Kind regards,

Your FlavourFusion Team

Scenario C: Feedback Provision x Competitive framing

Imagine that you have already participated in the ideation contest and that you are now receiving the following message about your participation.

Dear Participant,

Thank you for participating in our ideation contest. As an individual participant, you are competing against all other participants who submitted their ideas. This contest is about your individual performance and your ability to stand out from the others in the search for one winner with the very best idea.

After careful consideration, we regret to inform you that your idea was not selected at the winning submission. We would like to explain this decision. Your idea is very creative and clearly has potential as a real product. Unfortunately, the combination of ingredients is quite complex, which makes it difficult to produce at this time

Thank you again for your participation.

Kind regards,

The FlavourFusion Team

Scenario D: No Feedback provision x Competitive Framing

Imagine that you have already participated in the ideation contest and that you are now receiving the following message about your participation.

Dear Participant,

Thank you for participating in our ideation contest. As an individual participant, you are competing against all other participants who submitted their ideas. This contest is about your individual performance and your ability to stand out from the others in the search for one winner with the very best idea.

After careful consideration, we regret to inform you that your idea was not selected at the winning submission.

Thank you again for your participation.

Kind regards,

The FlavourFusion Team

Manipulation check

Given the message you just read, please indicate to what extent you agree with the following statements:

- The scenario feels realistic
- The message provides a specific reason for rejecting my submission.
- The message emphasizes collaboration toward a shared goal.

Attention check

What is the name of the organisation that is hosting the ideation contest?

- TelecomStore
- InnovateIntelligence
- FlavourFusion
- ContestCrashers

Perceived fairness

In the following statements, you will be asked about your perceived fairness of the ideation contest based on the message you read earlier. Please indicate to what extent you agree with the following statements:

- The organisation applied clear criteria in a consistent way.
- The organisation employed clear procedures.
- The organisation was honest about its decisions in the ideation contest.
- The organisation treated me with respect in making decisions**.**
- The ideation contest was free from bias.

Customer Engagement

In the following statements, you will be asked about your intention to engage with the organisation in the future based on the message you read earlier. Please indicate to what extent you agree with the following statements:

- I would like to visit the organisation’s store sometime soon.
- I am interested in buying something from this organisation.
- I will speak positively about this organisation to my friends and family.
- At this moment, I can see myself saying something positive about this organisation to others.
- I would 'like,’ ‘share,’ or ‘follow’ the social media pages of this organisation.
- At this moment, I would be happy to say something positive about this organisation on social media.

Demographics

In this final part of the survey, some questions will be asked about your demographics.

Gender

What is your gender?

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

Age

What is your age?

- 18-28
- 29-44
- 45-60
- 61-79
- 79 or older
- Prefer not to say

Nationality

What is your nationality?

- Dutch
- Other
- Prefer not to say

Education

What is your highest completed education/education you are currently following?

- High school
- Vocational education (MBO)
- Higher vocational education (HBO)
- University
- Other
- Prefer not to say

End of survey

Thank you for taking the time to fill out this survey! You have reached the end of this survey. You can know close this page.

Appendix B: Survey and scenarios in Dutch

Introductie

Beste deelnemer,

Bedankt voor je interesse in het deelnemen aan deze enquête, die wordt afgenomen als onderdeel van mijn masterscriptie. Ik ben Bas Wienholts, een student van de masteropleiding Marketing aan de Radboud Universiteit Nijmegen, Nederland. Het doel van deze enquête is om inzicht te krijgen in hoe deelnemers betrokken blijven bij een bedrijf na deelname aan een ideeënwedstrijd. Een ideeënwedstrijd is een wedstrijd waarin bedrijven consumenten uitnodigen om mee te denken over nieuwe ideeën en oplossingen voor bepaalde problemen of uitdagingen van het bedrijf.

Deze enquête gaat over een ideeënwedstrijd georganiseerd door het fictieve bedrijf FlavourFusion, dat op zoek is naar een nieuwe ijssmaak. Stel je voor dat je al hebt deelgenomen aan deze fictieve wedstrijd en dat je zojuist een bericht hebt ontvangen van het bedrijf over jouw inzending. Nadat je dit bericht hebt gelezen, zullen er enkele vragen gesteld worden over de inhoud van het bericht.

Het invullen van de enquête duurt maximaal 5 minuten. Op de vragen zijn geen goede of foute antwoorden, het is alleen belangrijk dat je de vragen eerlijk beantwoordt. Deelname aan dit onderzoek is geheel vrijwillig en je hebt te allen tijde het recht om je deelname stop te zetten, zonder gevolgen. Jouw antwoorden worden anoniem en vertrouwelijk behandeld en zullen uitsluitend voor educatieve doeleinden worden gebruikt. Heb je vragen of opmerkingen over dit onderzoek, kun je contact met me opnemen via e-mail: bas.wienholts@ru.nl

Door hieronder op ‘Ik ga akkoord met deelname’ te klikken, bevestig je dat je de verstrekte informatie hebt gelezen en begrepen, en dat je vrijwillig deelneemt aan dit onderzoek. Als je niet wenst deel te nemen, selecteer dan “Ik wens niet deel te nemen”.

- Ik ga akkoord met deelname.
- Ik wens niet deel te nemen.

Introductie van de scenario’s

In het volgende gedeelte van de enquête krijg je een kort tekstfragment te lezen. Dit fragment zal een scenario schetsen. Lees de tekst zorgvuldig door, en probeer je in te leven in het scenario.

Scenario's

Scenario A: Feedback Provision x Community framing

Stel u voor dat u al deel heeft genomen aan de ideeënwedstrijd, en dat u nu het volgende bericht ontvangt over uw deelname:

Beste communitylid,

Bedankt voor je deelname aan onze ideeënwedstrijd. Met jouw inzending draag je samen met alle andere deelnemers bij aan ons gezamenlijke doel: het ontdekken van een nieuwe ijssmaak. Deze wedstrijd draait dan ook om al jullie ideeën en toewijding. Dankzij al jullie waardevolle bijdragen geven we samen vorm aan de toekomst van ijs.

Na een zorgvuldige beoordeling moeten we je helaas meedelen dat jouw idee niet als winnende inzending is geselecteerd. We willen deze beslissing graag toelichten. Je idee is erg creatief en heeft duidelijk potentie als echt product. Helaas is de combinatie van ingrediënten erg complex, waardoor het op dit moment moeilijk is om het te produceren.

Nogmaals bedankt voor je bijdrage.

Met vriendelijke groet,

Jouw FlavourFusion-team.

Scenario B: No Firm Feedback x Community framing

Stel u voor dat u al deel heeft genomen aan de ideeënwedstrijd, en dat u nu het volgende bericht ontvangt over uw deelname:

Beste communitylid,

Bedankt voor je deelname aan onze ideeënwedstrijd. Met jouw inzending draag je samen met alle andere deelnemers bij aan ons gezamenlijke doel: het ontdekken van een nieuwe ijssmaak. Deze wedstrijd draait dan ook om al jullie ideeën en toewijding. Dankzij al jullie waardevolle bijrdagen geven we samen vorm aan de toekomst van ijs.

Na een zorgvuldige beoordeling moeten we je helaas meedelen dat jouw idee niet als winnende inzending is geselecteerd.

Nogmaals bedankt voor je bijdrage.

Met vriendelijke groet,

Jouw FlavourFusion-team.

Scenario C: Firm Feedback x Competitive framing

Stel u voor dat u al deel heeft genomen aan de ideeënwedstrijd, en dat u nu het volgende bericht ontvangt over uw deelname:

Beste deelnemer,

Bedankt voor je deelname aan de ideeënwedstrijd. Als individuele deelnemer strijd je tegen alle andere deelnemers die hun idee hebben ingestuurd. Deze wedstrijd draait dan ook om je individuele prestatie en de kracht om jezelf te onderscheiden van de rest in een zoektocht naar één winnaar met het allerbeste idee.

Na een zorgvuldige beoordeling moeten we je helaas meedelen dat jouw idee niet als winnende inzending is geselecteerd. We willen deze beslissing graag toelichten. Je idee is erg creatief en heeft duidelijk potentie als echt product. Helaas is de combinatie van ingrediënten erg complex, waardoor het op dit moment moeilijk is om het te produceren.

Nogmaals bedankt voor je deelname.

Met vriendelijke groet,

Het FlavourFusion-team

Scenario D: No Feedback + Competitive framing

Stel u voor dat u al deel heeft genomen aan de ideeënwedstrijd, en dat u nu het volgende bericht ontvangt over uw deelname:

Beste deelnemer,

Bedankt voor je deelname aan de ideeënwedstrijd. Als individuele deelnemer strijd je tegen alle andere deelnemers die hun idee hebben ingestuurd. Deze wedstrijd draait dan ook om je individuele prestatie en de kracht om jezelf te onderscheiden van de rest in een zoektocht naar één winnaar met het allerbeste idee.

Na een zorgvuldige beoordeling moeten we je helaas meedelen dat jouw idee niet als winnende inzending is geselecteerd.

Nogmaals bedankt voor je deelname.

Met vriendelijke groet,

Het FlavourFusion-team

Manipulatie check

Geef aan in hoeverre je het eens bent met de volgende stellingen:

- Het scenario voelt realistisch
- Het bericht geeft een specifieke reden voor het afwijzen van mijn inzending.
- Het bericht benadrukt samenwerking aan een gezamenlijk doel

Attentive check

Wat is de naam van het bedrijf dat de ideeënwedstrijd organiseerde?

- TelecomStore
- InnovateIntelligence
- FlavourFusion
- ContestCrashers

Ervaren eerlijkheid

De volgende stellingen gaan over hoe eerlijk je de ideeënwedstrijd hebt ervaren, gebaseerd op het bericht dat je zojuist hebt gelezen. Geef aan in welke mate je het eens bent met de volgende stellingen:

- Het bedrijf paste duidelijke regels steeds op dezelfde manier toe.
- Het bedrijf hanteerde een duidelijke werkwijze.
- Het bedrijf was eerlijk over haar beslissingen in de ideeënwedstrijd.
- Het bedrijf behandelde mij met respect tijdens het nemen van beslissingen.
- De ideeënwedstrijd was vrij van vooroordelen.

Klantbetrokkenheid:

De volgende stellingen gaan over jouw intentie om betrokken te blijven bij het bedrijf in de toekomst, gebaseerd op het bericht dat je zojuist hebt gelezen. Geef aan in welke mate je het eens bent met de volgende stellingen:

- Ik zou graag binnenkort de winkel van dit bedrijf bezoeken.
- Ik ben geïnteresseerd om iets van dit bedrijf te kopen.
- Ik zal positief praten over dit bedrijf tegen mijn vrienden en familie.
- Op dit moment zie ik mezelf iets positiefs zeggen over dit bedrijf tegen anderen.
- Ik zou de sociale media pagina's van dit bedrijf 'liken', 'delen' of 'volgen'.
- Op dit moment zou ik graag iets positiefs over dit bedrijf willen zeggen op sociale media.

Demografische gegevens

In dit laatste gedeelte van de enquête worden enkele vragen gesteld over je demografische gegevens.

Geslacht

Wat is je geslacht?

- Man
- Vrouw
- Non-binair / derde geslacht
- Zeg ik liever niet

Leeftijd

Wat is je leeftijd?

- 18-28
- 29-44
- 45-60
- 61-79
- 79 of ouder
- Zeg ik liever niet

Nationaliteit

Wat is je nationaliteit

- Nederlands
- Anders
- Zeg ik liever niet

Opleiding

Was is je hoogst afgeronde opleiding/ opleiding die je momenteel volgt

- Middelbare school
- Middelbaar beroeps onderwijs (MBO)
- Hoger beroeps onderwijs (HBO)
- Universiteit
- Anders
- Zeg ik liever niet

Einde van enquête

“Bedankt dat je de tijd hebt genomen om deze enquête in te vullen! Dit is het einde van de enquete, je kunt deze pagina nu sluiten.

Appendix C: Demographic information

Demographic statistics

Statistics

		Wat is uw geslacht?	Wat is uw leeftijd?	Wat is uw nationaliteit?	Was is uw hoogst afgeronde opleiding/ de opleiding die u momenteel volgt?
N	Valid	125	125	125	125
	Missing	0	0	0	0
Mean		1,61	1,79	1,06	3,16
Median		2,00	1,00	1,00	3,00
Std. Deviation		,634	1,131	,263	1,003
Variance		,402	1,279	,069	1,006
Skewness		1,130	1,440	5,167	-,279
Std. Error of Skewness		,217	,217	,217	,217
Kurtosis		2,761	1,883	28,987	,125
Std. Error of Kurtosis		,430	,430	,430	,430

Gender

Wat is uw geslacht?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Man	56	44,8	44,8	44,8
	Vrouw	65	52,0	52,0	96,8
	Non-binair / derde geslacht	1	,8	,8	97,6
	Zeg ik liever niet	3	2,4	2,4	100,0
	Total	125	100,0	100,0	

Age

Wat is uw leeftijd?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18-28	74	59,2	59,2	59,2
	29-44	17	13,6	13,6	72,8
	45-60	25	20,0	20,0	92,8
	61-79	6	4,8	4,8	97,6
	79 of ouder	1	,8	,8	98,4
	Zeg ik liever niet	2	1,6	1,6	100,0
	Total	125	100,0	100,0	

Nationality

Wat is uw nationaliteit?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Nederlands	119	95,2	95,2	95,2
	Anders	5	4,0	4,0	99,2
	Zeg ik liever niet	1	,8	,8	100,0
	Total	125	100,0	100,0	

Education

Was is uw hoogst afgeronde opleiding/ de opleiding die u momenteel volgt?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Middelbare school	8	6,4	6,4	6,4
	Middelbaar Beroepsonderwijs (MBO)	23	18,4	18,4	24,8
	Hoger Beroepsonderwijs (HBO)	40	32,0	32,0	56,8
	Universiteit	51	40,8	40,8	97,6
	Anders	1	,8	,8	98,4
	Zeg ik liever niet	2	1,6	1,6	100,0
	Total	125	100,0	100,0	

Appendix D: Reliability analyses

Perceived Fairness

Cronbach's Alpha

Reliability Statistics

Cronbach's Alpha	N of Items
,822	5

Item statistics

Item Statistics

	Mean	Std. Deviation	N
Perceived Fairness 1	3,78	1,383	125
Perceived Fairness 2	3,80	1,561	125
Perceived Fairness 3	4,92	1,522	125
Perceived Fairness 4	5,31	1,298	125
Perceived Fairness 5	4,67	1,300	125

Inter-item correlation

Inter-Item Correlation Matrix

	Perceived Fairness 1	Perceived Fairness 2	Perceived Fairness 3	Perceived Fairness 4	Perceived Fairness 5
Perceived Fairness 1	1,000	,679	,501	,375	,400
Perceived Fairness 2	,679	1,000	,509	,389	,337
Perceived Fairness 3	,501	,509	1,000	,539	,504
Perceived Fairness 4	,375	,389	,539	1,000	,573
Perceived Fairness 5	,400	,337	,504	,573	1,000

Item-total statistics

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Perceived Fairness 1	18,70	19,549	,640	,507	,779
Perceived Fairness 2	18,69	18,555	,617	,504	,787
Perceived Fairness 3	17,57	18,312	,665	,447	,771
Perceived Fairness 4	17,18	20,614	,593	,421	,793
Perceived Fairness 5	17,82	20,861	,567	,397	,800

Customer Engagement

Cronbach's Alpha

Reliability Statistics

Cronbach's Alpha	N of Items
,904	6

Item statistics

Item Statistics

	Mean	Std. Deviation	N
Customer Engagement 1	4,1600	1,53665	125
Customer Engagement 2	4,1200	1,52188	125
Customer Engagement 3	4,1760	1,38578	125
Customer Engagement 4	4,0160	1,34395	125
Customer Engagement 5	3,6960	1,67151	125
Customer Engagement 6	3,0560	1,44414	125

Inter-item correlation

Inter-Item Correlation Matrix

	Customer Engagement 1	Customer Engagement 2	Customer Engagement 3	Customer Engagement 4	Customer Engagement 5	Customer Engagement 6
Customer Engagement 1	1,000	,850	,676	,663	,616	,472
Customer Engagement 2	,850	1,000	,693	,658	,579	,518
Customer Engagement 3	,676	,693	1,000	,735	,514	,531
Customer Engagement 4	,663	,658	,735	1,000	,465	,457
Customer Engagement 5	,616	,579	,514	,465	1,000	,769
Customer Engagement 6	,472	,518	,531	,457	,769	1,000

Item-total statistics

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Customer Engagement 1	19,0640	36,577	,799	,774	,877
Customer Engagement 2	19,1040	36,658	,804	,758	,876
Customer Engagement 3	19,0480	38,820	,756	,641	,884
Customer Engagement 4	19,2080	39,956	,708	,596	,891
Customer Engagement 5	19,5280	36,703	,706	,676	,893
Customer Engagement 6	20,1680	39,722	,658	,636	,898

Appendix E: Factor analysis

Skewness and Kurtosis

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Perceived Fairness 1	125	1	7	3,78	1,383	,043	,217	-,667	,430
Perceived Fairness 2	125	1	7	3,80	1,561	,054	,217	-1,067	,430
Perceived Fairness 3	125	1	7	4,92	1,522	-,853	,217	-,077	,430
Perceived Fairness 4	125	1	7	5,31	1,298	-1,141	,217	,930	,430
Perceived Fairness 5	125	1	7	4,67	1,300	-,263	,217	-,033	,430
Customer Engagement 1	125	1,00	7,00	4,1600	1,53665	-,395	,217	-,865	,430
Customer Engagement 2	125	1,00	7,00	4,1200	1,52188	-,318	,217	-,850	,430
Customer Engagement 3	125	1,00	7,00	4,1760	1,38578	-,432	,217	-,355	,430
Customer Engagement 4	125	1,00	7,00	4,0160	1,34395	-,212	,217	-,584	,430
Customer Engagement 5	125	1,00	7,00	3,6960	1,67151	,020	,217	-1,019	,430
Customer Engagement 6	125	1,00	7,00	3,0560	1,44414	,423	,217	-,359	,430
Valid N (listwise)	125								

.

KMO and Bartlett's Test

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		,853
Bartlett's Test of Sphericity	Approx. Chi-Square	827,376
	df	55
	Sig.	<,001

Total Variance

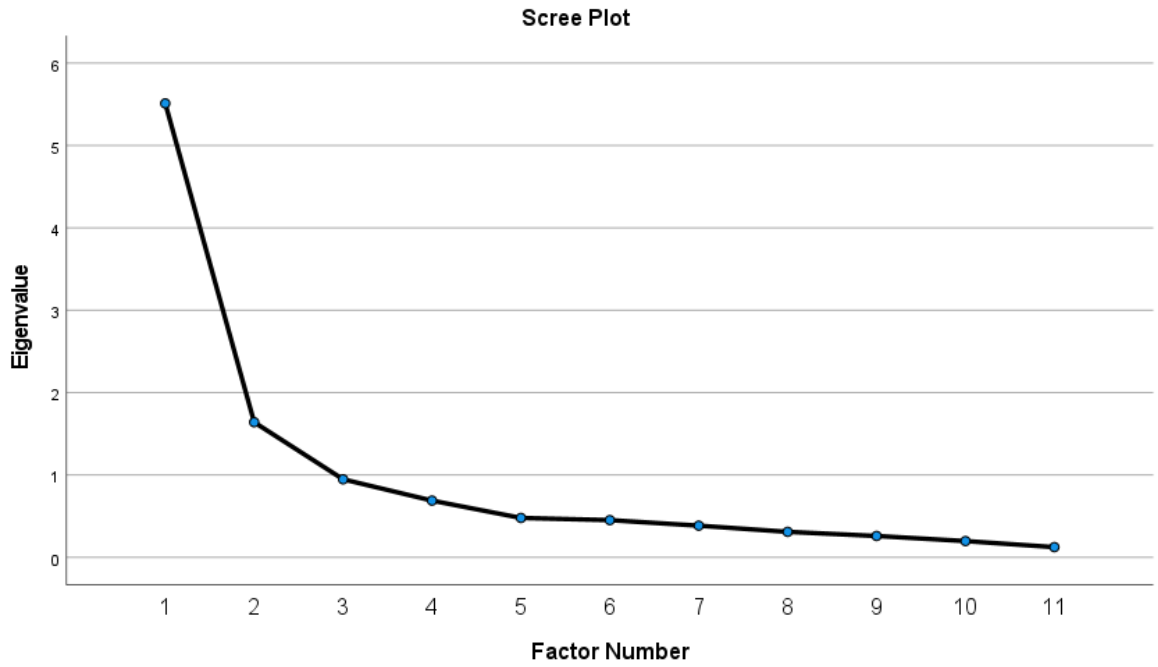
Total Variance Explained

	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings[a]
Factor	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	5,511	50,104	50,104	5,109	46,446	46,446	4,325
2	1,641	14,918	65,023	1,183	10,754	57,200	3,908
3	,948	8,619	73,642				
4	,689	6,268	79,909				
5	,479	4,355	84,265				
6	,452	4,113	88,378				
7	,385	3,503	91,881				
8	,310	2,820	94,701				
9	,260	2,364	97,065				
10	,198	1,802	98,867				
11	,125	1,133	100,000				

Extraction Method: Principal Axis Factoring.

a. When factors are correlated, sums of squared loadings cannot be added to obtain a total variance.

Scree plot



Factor Matrix

Factor Matrix[a]

	Factor	
	1	2
Customer Engagement 1	,804	
Customer Engagement 2	,800	
Customer Engagement 3	,824	
Customer Engagement 4	,779	
Customer Engagement 5	,661	-,460
Customer Engagement 6	,608	-,408
Perceived Fairness 1	,568	
Perceived Fairness 2	,606	
Perceived Fairness 3	,643	
Perceived Fairness 4	,619	
Perceived Fairness 5	,493	,455

Extraction Method: Principal Axis Factoring.

a. 2 factors extracted. 6 iterations required.

Pattern Matrix

Pattern Matrix[a]

	Factor	
	1	2
Customer Engagement 1	,749	
Customer Engagement 2	,757	
Customer Engagement 3	,595	
Customer Engagement 4	,540	
Customer Engagement 5	,864	
Customer Engagement 6	,780	
Perceived Fairness 1		,664
Perceived Fairness 2		,601
Perceived Fairness 3		,718
Perceived Fairness 4		,671
Perceived Fairness 5		,723

Extraction Method: Principal Axis Factoring.
Rotation Method: Oblimin with Kaiser Normalization.

a. Rotation converged in 8 iterations.

Factor correlation

Factor Correlation Matrix

Factor	1	2
1	1,000	,498
2	,498	1,000

Extraction Method: Principal Axis Factoring.
Rotation Method: Oblimin with Kaiser Normalization.

Appendix F: ANOVA assumptions

Normality of distributions

Condition statistics

Case Processing Summary

		Cases					
		Valid		Missing		Total	
	Condition	N	Percent	N	Percent	N	Percent
EngageM	FBPres_Comm	31	100,0%	0	0,0%	31	100,0%
	FBAbs_Comm	31	100,0%	0	0,0%	31	100,0%
	FBPres_Comp	33	100,0%	0	0,0%	33	100,0%
	FBAbs_Comp	30	100,0%	0	0,0%	30	100,0%

Shapiro-Wilk Test

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Condition	Statistic	df	Sig.	Statistic	df	Sig.
EngageM	FBPres_Comm	,106	31	,200*	,981	31	,841
	FBAbs_Comm	,146	31	,089	,889	31	,004
	FBPres_Comp	,102	33	,200*	,960	33	,262
	FBAbs_Comp	,125	30	,200*	,974	30	,640

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Descriptives

Descriptives

	Condition			Statistic	Std. Error
EngageM	FBPres_Comm	Mean		4,5376	,20357
		95% Confidence Interval for Mean	Lower Bound	4,1219	
			Upper Bound	4,9534	
		5% Trimmed Mean		4,5418	
		Median		4,5000	
		Variance		1,285	
		Std. Deviation		1,13342	
		Minimum		2,00	
		Maximum		7,00	
		Range		5,00	
		Interquartile Range		1,17	
		Skewness		-,081	,421
		Kurtosis		,071	,821
	FBAbs_Comm	Mean		4,0806	,18353
		95% Confidence Interval for Mean	Lower Bound	3,7058	
			Upper Bound	4,4555	
		5% Trimmed Mean		4,1559	
		Median		4,3333	
		Variance		1,044	
		Std. Deviation		1,02186	
		Minimum		1,00	
		Maximum		5,33	
		Range		4,33	
		Interquartile Range		1,50	
		Skewness		-1,223	,421
		Kurtosis		1,347	,821
	FBPres_Comp	Mean		3,9495	,19590
		95% Confidence Interval for Mean	Lower Bound	3,5505	
			Upper Bound	4,3485	
		5% Trimmed Mean		3,9717	
		Median		4,0000	
		Variance		1,266	
		Std. Deviation		1,12537	
		Minimum		1,67	
		Maximum		5,83	
		Range		4,17	
		Interquartile Range		1,75	
		Skewness		-,399	,409
		Kurtosis		-,722	,798
	FBAbs_Comp	Mean		2,8778	,18551
		95% Confidence Interval for Mean	Lower Bound	2,4984	
			Upper Bound	3,2572	
		5% Trimmed Mean		2,8457	
		Median		3,0000	
		Variance		1,032	
		Std. Deviation		1,01609	
		Minimum		1,00	
		Maximum		5,50	
		Range		4,50	
		Interquartile Range		1,71	
		Skewness		,421	,427
		Kurtosis		,093	,833

Homogeneity of variance

Levene's test

Levene's Test of Equality of Error Variances[a,b]

		Levene Statistic	df1	df2	Sig.
Engagement Mean	Based on Mean	,215	3	121	,886
	Based on Median	,276	3	121	,843
	Based on Median and with adjusted df	,276	3	119,369	,843
	Based on trimmed mean	,246	3	121	,864

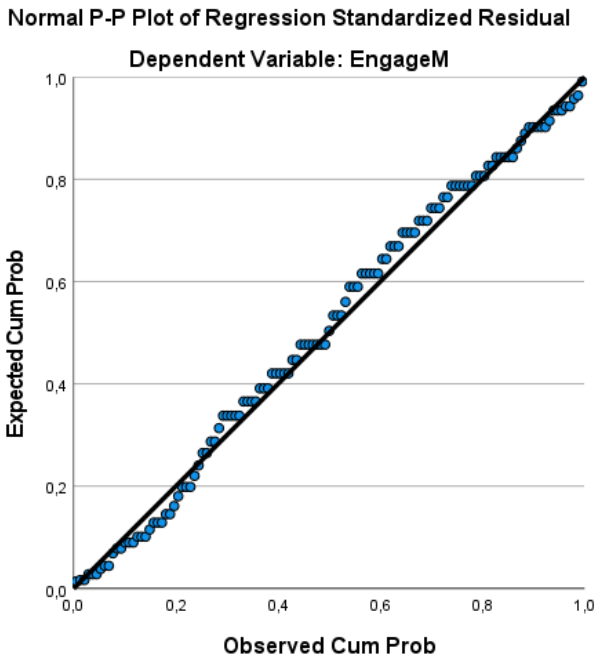
Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Dependent variable: Engagement Mean

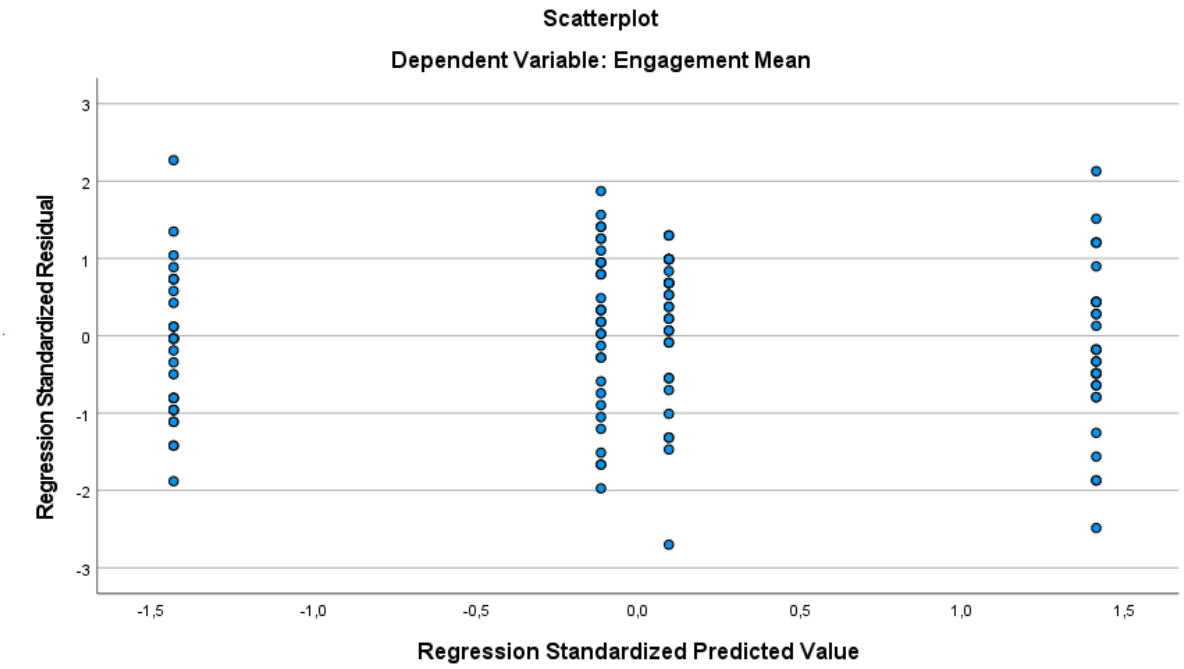
b. Design: Intercept + Feedback + Framing + Feedback * Framing

Independence of errors

P-Plot

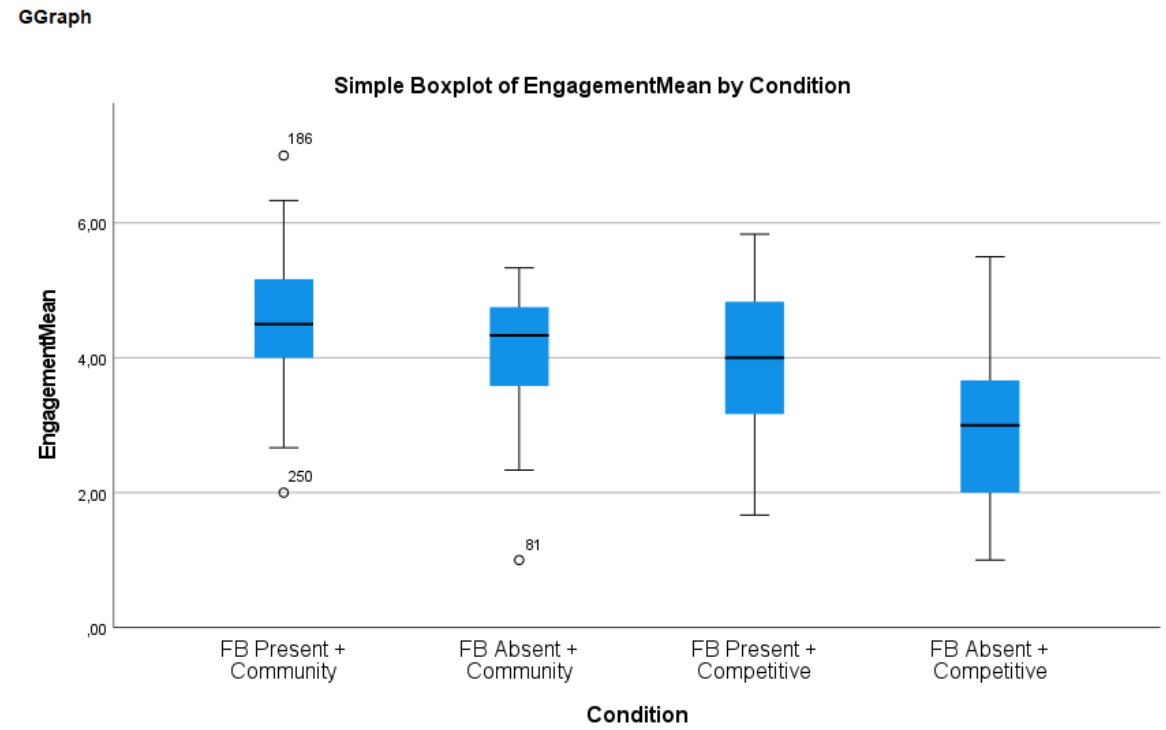


Scatterplot



Outliers

Boxplot



Appendix G: ANOVA results

Numbers of Manipulation

Between-Subjects Factors

		Value Label	N
Feedback	,00	Absent	61
	1,00	Present	64
Framing	,00	Competitive	63
	1,00	Community	62

Statistics

Descriptive Statistics

Dependent Variable: EngagementMean

Feedback	Framing	Mean	Std. Deviation	N
Absent	Competitive	2,8778	1,01609	30
	Community	4,0806	1,02186	31
	Total	3,4891	1,17846	61
Present	Competitive	3,9495	1,12537	33
	Community	4,5376	1,13342	31
	Total	4,2344	1,15879	64
Total	Competitive	3,4392	1,19486	63
	Community	4,3091	1,09472	62
	Total	3,8707	1,22234	125

Test of Between-Subjects Effects

Tests of Between-Subjects Effects

Dependent Variable: EngageM

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	44,937[a]	3	14,979	12,915	<,001	,243
Intercept	1861,572	1	1861,572	1605,109	<,001	,930
Feedback	18,236	1	18,236	15,723	<,001	,115
Framing	25,030	1	25,030	21,582	<,001	,151
Feedback * Framing	2,949	1	2,949	2,543	,113	,021
Error	140,333	121	1,160			
Total	2058,028	125				
Corrected Total	185,270	124				

a. R Squared = ,243 (Adjusted R Squared = ,224)

Pairwise Comparisons

Pairwise Comparisons

Dependent Variable: EngagementMean

Feedback	(I) Framing	(J) Framing	Mean Difference (I-J)	Std. Error	Sig.[b]	95% Confidence Interval for Difference[b]	
						Lower Bound	Upper Bound
Absent	Competitive	Community	-1,203*	,276	<,001	-1,749	-,657
	Community	Competitive	1,203*	,276	<,001	,657	1,749
Present	Competitive	Community	-,588*	,269	,031	-1,121	-,055
	Community	Competitive	,588*	,269	,031	,055	1,121

Based on estimated marginal means

*. The mean difference is significant at the ,05 level.

b. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

Univariate Tests

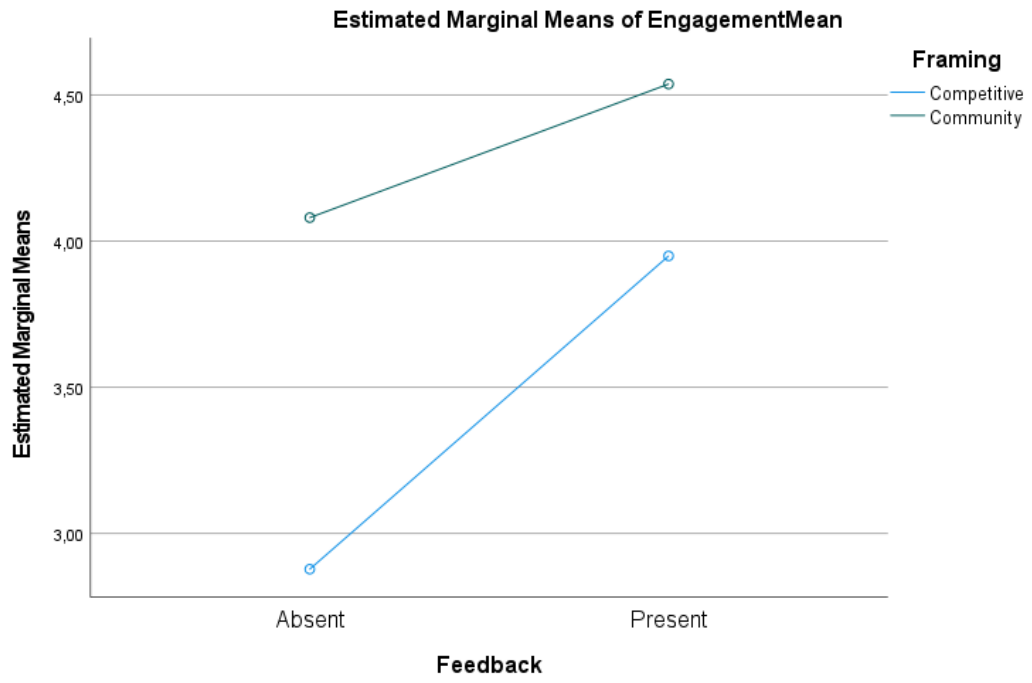
Univariate Tests

Dependent Variable: Engagement Mean

Feedback		Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Absent	Contrast	22,059	1	22,059	19,020	<,001	,136
	Error	140,333	121	1,160			
Present	Contrast	5,529	1	5,529	4,767	,031	,038
	Error	140,333	121	1,160			

Each F tests the simple effects of Framing within each level combination of the other effects shown. These tests are based on the linearly independent pairwise comparisons among the estimated marginal means.

Plot Feedback x Framing



Appendix H: PROCESS results

Run MATRIX procedure:

***************** PROCESS Procedure for SPSS Version 4.2 *****************

Written by Andrew F. Hayes, Ph.D. www.afhayes.com

Documentation available in Hayes (2022). www.guilford.com/p/hayes3

****

Model : 8

Y : EngageM

X : Feedback

M : FairM

W : Framing

Sample

Size: 125

****

OUTCOME VARIABLE:

FairM

Model Summary

R	R-sq	MSE	F	df1	df2	p
,5497	,3022	,8377	17,4639	3,0000	121,0000	,0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	3,5467	,1671	21,2245	,0000	3,2158	3,8775

Feedback	1,2958	,2309	5,6121	,0000	,8387	1,7529
Framing	,8662	,2344	3,6955	,0003	,4022	1,3303
Int_1	-,5732	,3276	-1,7494	,0828	-1,2218	,0755

Product terms key:

Int_1 : Feedback x Framing

Test(s) of highest order unconditional interaction(s):

	R2-chng	F	df1	df2	p
X*W	,0176	3,0603	1,0000	121,0000	,0828

Focal predict: Feedback (X)

Mod var: Framing (W)

Conditional effects of the focal predictor at values of the moderator(s):

Framing	Effect	se	t	p	LLCI	ULCI
,0000	1,2958	,2309	5,6121	,0000	,8387	1,7529
1,0000	,7226	,2325	3,1082	,0023	,2623	1,1828

Data for visualizing the conditional effect of the focal predictor:

Paste text below into a SPSS syntax window and execute to produce plot.

```
DATA LIST FREE/
  Feedback   Framing    FairM      .
BEGIN DATA.
     ,0000      ,0000     3,5467
    1,0000      ,0000     4,8424
     ,0000     1,0000     4,4129
```

```
    1,0000     1,0000     5,1355
END DATA.
GRAPH/SCATTERPLOT=
 Feedback WITH     FairM    BY       Framing  .

************************************************************************
OUTCOME VARIABLE:
 EngageM

Model Summary
        R       R-sq        MSE          F        df1         df2          p
     ,6019      ,3623      ,9846    17,0426     4,0000   120,0000      ,0000

Model
             coeff         se          t          p       LLCI       ULCI
constant     1,2186      ,3937     3,0952      ,0024      ,4391     1,9981
Feedback      ,4655      ,2810     1,6567      ,1002     -,0908     1,0219
FairM         ,4678      ,0986     4,7466      ,0000      ,2727      ,6630
Framing       ,7976      ,2681     2,9753      ,0035      ,2668     1,3284
Int_1        -,3466      ,3597     -,9636      ,3372    -1,0587      ,3656

Product terms key:
 Int_1    :       Feedback x        Framing

Test(s) of X by M interaction:
         F        df1         df2          p
    4,4782     1,0000   119,0000      ,0364

Test(s) of highest order unconditional interaction(s):
```

	R2-chng	F	df1	df2	p
X*W	,0049	,9285	1,0000	120,0000	,3372

Focal predict: Feedback (X)

Mod var: Framing (W)

Data for visualizing the conditional effect of the focal predictor:

Paste text below into a SPSS syntax window and execute to produce plot.

```
DATA LIST FREE/
  Feedback   Framing    EngageM    .
BEGIN DATA.
      ,0000      ,0000     3,3226
     1,0000      ,0000     3,7882
      ,0000     1,0000     4,1203
     1,0000     1,0000     4,2392
END DATA.
GRAPH/SCATTERPLOT=
 Feedback WITH     EngageM  BY       Framing  .
```

***************** DIRECT AND INDIRECT EFFECTS OF X ON Y ****************

Conditional direct effects of X on Y

Framing	Effect	se	t	p	LLCI	ULCI
,0000	,4655	,2810	1,6567	,1002	-,0908	1,0219
1,0000	,1190	,2619	,4542	,6505	-,3996	,6375

Conditional indirect effects of X on Y:

INDIRECT EFFECT:

Feedback -> FairM -> EngageM

Framing	Effect	BootSE	BootLLCI	BootULCI
,0000	,6062	,1803	,2857	,9943
1,0000	,3380	,1312	,1097	,6281

Index of moderated mediation (difference between conditional indirect effects):

	Index	BootSE	BootLLCI	BootULCI
Framing	-,2681	,1663	-,6284	,0236

********** ANALYSIS NOTES AND ERRORS **********

Level of confidence for all confidence intervals in output:

95,0000

Number of bootstrap samples for percentile bootstrap confidence intervals:

5000

NOTE: Standardized coefficients are not available for models with moderators.

------ END MATRIX -----

Appendix I: Robustness check

ANOVA

Tests of Between-Subjects Effects

Dependent Variable: MeanEngagementAfterDeletion

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	45,416[a]	6	7,569	5,271	<,001	,211
Intercept	83,140	1	83,140	57,896	<,001	,329
Gender	,187	1	,187	,130	,719	,001
Age	,636	1	,636	,443	,507	,004
Edu	7,278E-5	1	7,278E-5	,000	,994	,000
Feedback	16,571	1	16,571	11,539	<,001	,089
Framing	26,625	1	26,625	18,541	<,001	,136
Feedback * Framing	2,445	1	2,445	1,703	,194	,014
Error	169,451	118	1,436			
Total	1980,188	125				
Corrected Total	214,867	124				

a. R Squared = ,211 (Adjusted R Squared = ,171)

PROCESS

OUTCOME VARIABLE:

FairM

Model Summary

R	R-sq	MSE	F	df1	df2	p
,5746	,3301	,8246	9,6926	6,0000	118,0000	,0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	3,1489	,3909	8,0555	,0000	2,3748	3,9230
Feedback	1,3243	,2308	5,7387	,0000	,8674	1,7813
Framing	,9094	,2351	3,8685	,0002	,4439	1,3749
Int_1	-,6142	,3303	-1,8595	,0654	-1,2683	,0399
Gender	,2476	,1334	1,8558	,0660	-,0166	,5118
Age	-,0930	,0744	-1,2506	,2136	-,2404	,0543
Edu	,0445	,0825	,5393	,5907	-,1188	,2077

Product terms key:

Int_1 : Feedback x Framing

Test(s) of highest order unconditional interaction(s):

	R2-chng	F	df1	df2	p
X*W	,0196	3,4579	1,0000	118,0000	,0654

Focal predict: Feedback (X)

Mod var: Framing (W)

Conditional effects of the focal predictor at values of the moderator(s):

Framing	Effect	se	t	p	LLCI	ULCI
,0000	1,3243	,2308	5,7387	,0000	,8674	1,7813
1,0000	,7101	,2335	3,0417	,0029	,2478	1,1725

****

OUTCOME VARIABLE:

EngageM

Model Summary

R	R-sq	MSE	F	df1	df2	p
,6056	,3668	1,0027	9,6810	7,0000	117,0000	,0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	1,1193	,5367	2,0857	,0392	,0565	2,1822
Feedback	,4610	,2878	1,6018	,1119	-,1090	1,0311
FairM	,4796	,1015	4,7245	,0000	,2786	,6807
Framing	,7927	,2752	2,8805	,0047	,2477	1,3376

Int_1	-,3665	,3695	-,9917	,3234	-1,0983	,3654
Gender	-,0285	,1492	-,1913	,8486	-,3241	,2670
Age	,0734	,0826	,8887	,3760	-,0902	,2370
Edu	-,0094	,0910	-,1034	,9178	-,1897	,1709

Product terms key:

Int_1 : Feedback x Framing

Test(s) of X by M interaction:

F	df1	df2	p
5,0828	1,0000	116,0000	,0260

Test(s) of highest order unconditional interaction(s):

	R2-chng	F	df1	df2	p
X*W	,0053	,9834	1,0000	117,0000	,3234

Focal predict: Feedback (X)

Mod var: Framing (W)

********** DIRECT AND INDIRECT EFFECTS OF X ON Y **********

Conditional direct effects of X on Y

Framing	Effect	se	t	p	LLCI	ULCI
,0000	,4610	,2878	1,6018	,1119	-,1090	1,0311
1,0000	,0946	,2674	,3537	,7242	-,4349	,6241

Conditional indirect effects of X on Y:

INDIRECT EFFECT:

Feedback -> FairM -> EngageM

Framing	Effect	BootSE	BootLLCI	BootULCI
,0000	,6352	,1867	,3028	1,0370
1,0000	,3406	,1366	,1163	,6406

Index of moderated mediation (difference between conditional indirect effects):

	Index	BootSE	BootLLCI	BootULCI
Framing	-,2946	,1749	-,6701	,0291