

Emotional Involvement in Group Discussions: An Explorative Study

Aiko Unterweger

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First supervisor: Dr. A. H. Gijlers

Second supervisor: Dr. J. Steinrücke

Abstract

This study explores the relationship of emotional involvement and group discussions. Group discussions are an inevitable part of modern academic and working life, and understanding what moves people's behaviours and emotions in such discussions could provide valuable tools for facilitating better group discussions. Participants had an online discussion about student housing, in a group of three to four people. They were incentivised to come to a consensus about whether or not new student housing should be built. Next to participants' emotional involvement, also their quantity of group participation, the amount of new information they introduced, and the types of arguments they used were assessed. Contrary to the researcher's prospects, no significant results were found. This suggests that people's level of emotional involvement in a certain topic does not correlate with their behaviour in group discussions about this topic, concerning the amount of engagement, the introduction of new information, and the types of arguments used. Recommendations for future research are given.

Introduction

Whether in school, at university, or in a job, group discussions are a vital aspect of modern academic and working life in many fields (Majid et al., 2019). This is being recognised by multiple industries, as they are looking for people with high soft skills, including teamwork that involves group discussions (Majid et al., 2019). According to Fredrik (2008), and Okba and Soliman (2005), effective teamwork includes cycles in which participants discuss a topic thoroughly and engage in consensus building or compromising. However, the process of consensus building is not easy, as it involves a trade-off between one's personal opinion or solution and those of others, in order to find the best solution or the best option for the group as a whole. Since teamwork, and thus consensus building, is an important aspect of most 21st century jobs (Majid et al., 2019), it is important to understand the process.

Active participation forms an important part of the consensus building process. In order to achieve consensus among team members, it is necessary that people actively share their ideas with each other (Balug & Vidart-Delgado, 2015). Research indicates that consensus building is stronger in groups that actively listen to each other and explore commonalities (Katagiri et al., 2013; van Swol et al., 2022). On the other hand, van de Kerkhof (2006) rather argues for exploring differences and trying to overcome them in a constructive manner to reach strong consensus building.

However, this is a difficult process, which does not occur naturally. Therefore, understanding what moves people to more actively participate in group discussions, could provide tools to facilitate people's group participation. Enhanced participation of individuals seems to be desirable due to several reasons, such as an overall increase in the amount of input, or more efficient group communication (Balug & Vidart-Delgado, 2015). These aspects might be highly valuable to improve teamwork, minimise social loafing and perhaps even improve the education system as a whole.

As mentioned earlier, one aspect which discussion participation might facilitate is the building of consensus within the group. Van de Kerkhof (2006) characterises consensus-building as a process of negotiation, through which members of a group aim to find agreement. If no consensus can be established in a group, this could have problematic implications as it might lead to decisions which members of the group do not agree with. A possible solution for this could be discussing topics thoroughly enough. If every participant is presenting their topic and their perspective, this could help facilitate understanding each other, and incorporate other people's views into the solution of an issue at hand (van de Kerkhof, 2006). Thorough discussion might thus help facilitate consensus-building.

There are a number of factors which have previously been linked to consensus building. For example, Katagiri et al. (2013) suggest that aligning one's concerns with that of other people in a group can have a positive effect on consensus building. Van Swol et al. (2022) add to this, that creating intimacy in a group, meaning a focus on shared values and self-disclosure rather than mere facts about a topic, might also lead to an increased likelihood of reaching consensus. This is because intimate sessions, in which people are more open about how they are emotionally involved in a topic, might facilitate a setting in which people can more easily reach consensus, because they are better able to understand each other's opinion (van Swol et al., 2022). Adding to that, Asterhan and Schwarz (2016) argue that being concerned about being able to contribute to a discussion is correlated with quick consensus seeking. This showcases that such a concern might accelerate the consensus building process. However, speed does not necessarily mean higher quality of a reached consensus (Asterhan & Schwarz, 2016). It is moreover worthwhile considering that nowadays, many of the consensus-reaching discussions are held online (Asgari et al., 2021), which potentially has a negative effect on consensus-building, as non-verbal cues such as gestures and social presence are impeded (Weller, 2017).

As mentioned above, for consensus-building, the following aspects seem to be important: Aligning one's concerns to others, creating intimacy, and thorough discussion. This in turn implies that people need to actively participate in group discussions in order to facilitate consensus-building, and arrive at a solution which is truly shared by all participants (Balug & Vidart-Delgado, 2015). In general, there is a body of research suggesting connections of different aspects to active group participation. For example, defining and communicating what is expected of participants can enhance their level of discussion participation (Rezaei, 2022). Furthermore, in a classroom setting, personality of the teacher and students, and the perception of peers are also suggested to be influential (Abdullah et al., 2012). Moreover, group size seems to be influential too, as the following studies on academic group discussions showcase. Namely, smaller groups, and especially dyads have been shown to facilitate more participation, and less free-riding, than larger groups (Kim, 2013; Noroozi et al., 2012; Schellens & Valcke, 2006). The aforementioned points showcase that there are several aspects which through previous research are suggested to be correlated to the level of people's participation in group discussions.

Another aspect which might be correlated with participation in group discussions is emotional involvement. Emotional involvement (EI) here refers to the degree to which a person feels emotionally invested in a certain topic. Experiences of discussions in day-to-day life give the impression that the level of EI can shape the way discussions are held. However, there is relatively few scientific data about it (Ito et al., 2021).

The relevance of emotions in group discussions is gaining increased attention within the scientific community. For example, utilising emotions in favour of students' academic engagement is what Linnenbrink-Garcia and Pekrun (2011) suggest being of high relevance, as they point out that emotions are pervasive in such engagement. Other scholars make this claim specifically about emotions in group interactions (Sakai et al., 2021). Moreover, Martinovski and Mao (2009) claim that argumentation theories should include the role of emotions, which they have not done before. Generally, emotions might shape discussions in positive and negative ways, and it is of importance to understand how this works (Gilbert, 2004; Martinovski & Mao 2009). Furthermore, so far much of the research done in this field is focused on face-to-face settings (van Swol et al., 2022; Rezaei, 2022). Since the beginning of the COVID-19 pandemic, however, much of the academic group discussion is facilitated through online channels (Asgari et al., 2021). Thus, this study makes use of an online setting to contribute to the relevant scientific literature of the current time.

Summarising the presented information, we can conclude that emotional involvement is likely to be an important factor in group discussions. Nonetheless, this relation remains unclear (Linnenbrink-Garcia & Pekrun, 2011). Understanding it could prove highly useful if it enables the improvement of group-discussions and thus also teamwork.

Even though there is a lack of research with regards to the role of emotional involvement in group discussions, there are some studies suggesting a link. Firstly, Rodriguez and Rodriguez (1995) claim that group discussions can evoke certain emotions. Additionally, van Swol et al. (2022) suggest that creating intimacy in a group can increase the group's chance to reach consensus in a discussion, and can make participants more willing to change their own opinion. As showing emotions could be seen as a form of intimacy, it might positively influence group work, if there is a higher likelihood of reaching a consensus. Lastly, Trevors et al. (2016) claim that negative emotions could prevent a person from acquiring new knowledge. This can surface through different mechanisms which could impede group processes, such as subverting the arguments of the message or not even processing it in the first place (Trevors et al., 2016).

There might also be other group behaviour aspects linked to emotions. One of such behavioural aspects is the amount of participation of group-members in a group discussion. Someone with higher levels of emotional involvement might already have explored the topic more than another person. If someone already has made some effort to explore the topic in beforehand, they could be more able to contribute to a group discussion, resulting in them participating more in this discussion.

Emotional involvement might also be correlated with the amount of new information people bring into group discussions. Generally, people tend to focus on shared information within a group, rather than introducing new information (Larson et al., 1994). However, a person with high EI in a topic might be more inclined to introduce anecdotes and have more knowledge than people with lower emotional involvement. Bringing new information into the discussion creates a common ground of information among group members, which is desirable since such shared information can have a significantly higher impact on the discussion (Gigone & Hastie, 1993; Mojzisch et al., 2008). In this regard, Mojzisch et al. (2008) argue that if someone introduces information which others already know, this is being weighted more in a decision-making process than other information.

Higher emotional involvement might furthermore lead to different types of arguments. For example, if one has a strong emotional connection to a topic, they might also use arguments that are more personal and subjective rather than objective and rational. Countering this idea, Ben-Zeev (1995) argues that emotions are in fact rational in the way that they are functional, as they often provide the best response to a situation. However, Ben-Zeev (1995) also mentions that functionality is only one aspect of rationality, while the other aspect is the descriptive sense based on intellectual calculations, which emotions do not fulfil. Nevertheless, this suggests that emotionality and rationality should not be seen as the opposing extremes of a dichotomy, but rather as connected and complementing entities. Overall, literature on what types of arguments EI might facilitate is scant.

Building on the mentioned points, it might be interesting to explore what other group behaviour could be linked to emotions. Aiming to do this, while complementing limited previous literature, and opening a so far rather scarce area of research, this study aims to explore how EI is related to participants' participation in an online consensus building task. In this study, the sample consists of university students, which is why the topic of student housing was chosen, because it might elicit different emotions in students. When discussing whether or not new student housing should be built in a student city, people might find housing issues important, but also sustainability arguments against building more houses are popular among this group. Next to emotional involvement, three aspects of participation in group discussions will be measured in this study, namely the quantity of engagement, the quantity of introducing new information, and what type of arguments are being used. The three research questions therefore are as follows: *Is emotional involvement related to engagement in group discussions? Is emotional involvement related to introducing new information to group discussions? Is emotional involvement related to the type of arguments used in group discussions?* Based on these research questions, three main hypotheses are formulated:

Hypotheses

H1: Emotional involvement is correlated to the amount of engagement in group discussions.

H2: Emotional involvement is correlated to the amount of new information brought into a group discussion.

H3: Emotional involvement is correlated to the types of arguments people use in group discussions.

- H3.1: Emotional involvement is correlated to using the argument ‘Landscaping’.
- H3.2: Emotional involvement is correlated to using the argument ‘Space Efficiency’.
- H3.3: Emotional involvement is correlated to using the argument ‘Restricting Student Intake Into University’.
- H3.4: Emotional involvement is correlated to the argument ‘Yes’, thus arguing for building new student housing.
- H3.5: Emotional involvement is correlated to the argument ‘No’, thus arguing against building new student housing.

Note: the types of arguments will be explained later, as they are specific to the discussion topic.

Methods

Participants

The study was conducted in April and May 2022, and focuses on students at the University of Twente in the Netherlands. Inclusion criteria were studying at the University of Twente, and being at least 18 years old. The only exclusion criterion was not being able to video call, thus not having an internet connection or not having audio- and video-equipment. Recruitment of participants was done via the recruitment system SONA, as well as social media (WhatsApp groups, Instagram) and contacting friends of the researcher. Thus, a convenient / snowballing method was used. 30 students participated in the study, of which 63.3% are female and 36.7% are male (Table 1). The participants’ age ranges from 19 to 26 years ($M=21.93$; $SD=1.64$). All participants partook in this study voluntarily, after giving their informed consent, and those who are part of the SONA credit system received one SONA point in return. All 30 participants gave informed consent. Ethical approval for the study has been obtained from the BMS Ethics Committee of the University of Twente.

Table 1

Demographic Characteristics

| Baseline Characteristic | Full Sample |
|-------------------------|-------------|
| | <i>n</i> % |
| Gender | |

| | | |
|----------------------|----|------|
| Female | 19 | 63.3 |
| Male | 11 | 36.7 |
| Divers | 0 | 0 |
| Age | | |
| 19-20 | 5 | 16.7 |
| 21-23 | 21 | 70 |
| 24-26 | 4 | 13.3 |
| Nationality | | |
| German | 22 | 73.3 |
| Dutch | 3 | 10 |
| Indian | 3 | 10 |
| Egyptian | 1 | 3.3 |
| Zambian / Portuguese | 1 | 3.3 |
| All | 30 | 100 |

Materials

Technology Used

The study made use of an online setting, due to the increased relevance of professional online group discussions around the world since the beginning of the COVID-19 pandemic. When signing up for the study, either via SONA or via the researcher directly, participants chose a timeslot, and instantly received a link to the scheduled meeting. For this online video call, Microsoft Teams was used. MS Teams was also used to audio- and video-record the meetings, as well as to auto-transcribe the conversations of participants. Furthermore, the platform Qualtrics (<https://www.qualtrics.com>) was used to ask participants for informed consent, present them with a text, and a short questionnaire.

Questionnaire and Text About Student Housing

Four aspects were included in the platform Qualtrics. Firstly, the consent form (Appendix A). Secondly, a text about student housing, which presents the topic of the group discussion in this study (Appendix B). Here, the hypothetical scenario of a student city with too few student housing

was presented, asking the participants to come to a conclusion whether or not new student housing should be built. To facilitate group discussion, it was mentioned in the text that for building new housing, parts of a forest would need to be cut down, and that the city then has less budget for other projects. Thirdly, a short questionnaire including a question about emotional involvement (5-point Likert scale), and three more questions to distract from the emotional involvement question were presented (Appendix C). Lastly, a short message was presented in Qualtrics which asked participants to return to the video call.

Coding Scheme

The participants discussed the topic of whether or not new student housing should be built in a fictional city. The group discussions were transcribed, and this transcribed data was then analysed for patterns. The following coding scheme serves the purpose of naming the different aspects identified in the pattern analysis of the transcript. Eight codes were developed in total, which cover arguments strongly for or against building new student housing, or a compromise between those two extremes.

The following codes were applied to the transcripts: *'Yes'*, *'No'*, *'Compromise'*, *'Landscaping'*, *'Space Efficiency'*, *'Restrict Student Intake Into University'*, *'Info From Text'* and *'Info Not From Text'*. The codes *'Yes'* or *'No'* were only applied if a participant indicated that new student housing should either be built, or not, without naming a condition. The following showcases an example for the code *'Yes'*: *'Well, first of all, my position is that I prefer uh, building new houses for the incoming students because yeah, we are lacking of it. And I think international students have it pretty hard to find the different houses'*. An example for the code *'No'* is *'And then when it came to the, that they had to cut down some of the forest, then I was like ohh no. Then it's not a good thing. So I was really like no, it's it's super bad'*.

The other arguments were covered by *'Compromise'*, which was further divided into *'Landscaping'*, *'Space Efficiency'*, and *'Restrict Student Intakt Into University'*. *'Landscaping'* covers arguments which were suggesting a more environmentally sustainable solution, such as building housing further away from the university where no forest needs to be cut down, planting trees elsewhere, or introducing green areas on rooftops. This is an example for the code *Landscaping*: *'And maybe as a compensation for taking away these five to ten percent of the forest, uhm, maybe cultivate that somewhere else at some other place'*.

The code *'Space Efficiency'* refers to all arguments where participants suggested a more efficient use of space, such as building higher houses, or using housing that is either empty or not yet licensed for student housing. An example thereof is *'Uhm, I think a solution that might be good to start with is the houses that are already existing but are not licensed for students'*.

The last sub-code of *'Compromise'* is *'Restrict Student Intake Into University'*. As the name suggests, this code covers arguments by participants where a limit to the number of new students at the university was suggested in order to reduce demand for student housing. Accordingly, the example: *'I also think that there should be maybe a limit on the number of students you allow each year, because like in the current scenario like the capacity is not really being able to meet the number of students [inaudible] need to cancel their study program because they couldn't find housing'*.

Finally, two codes were introduced which indicate whether participants mention new information in the discussion, which either was presented to them in the text (Appendix B), or which they brought from their personal knowledge. An example of the code *'Info From Text'* is *'And also in the text it said and the issue is that then nature will be taken away'*. The code *'Info Not From Text'* was applied to for example this phrase: *'Because also like I know, there is a lot of new students, but the capacity was about right the last few years, like it was always the same amount of student moving out as it needs to be in. And I think it raised about, I don't know, maybe 7%'*.

In total, eight codes were identified on the basis of the transcribed data, including six codes regarding content (*'Yes'*, *'No'*, *'Compromise'*, *'Landscaping'*, *'Space Efficiency'*, and *'Restrict Student Intake Into University'*), and two codes regarding introduction of new information. All arguments brought up by participants were categorised using the aforementioned codes.

Procedure

Non-random sampling was used to approach participants. First, participants received a link to the scheduled MS Teams meeting via email. Six of the video calls consisted of four participants and one researcher, and two video calls consisted of three participants and one researcher. The reason for this difference is that all video calls were intended to include four participants, however, once no fourth participant was found, and once one person did not show up.

In the video meeting, participants were thanked for their participation, and the general procedure of the study was explained by the researcher, within five minutes. Following, participants were provided with the Qualtrics link. Via this link, they went through the process of giving or denying informed consent to participate in the study (Appendix A), read the text about student housing (Appendix B), filled out the questionnaire (Appendix C), and finally returned to the video call. This process took approximately five minutes.

After all four participants of a group had indicated that they had completed the Qualtrics part of the study, they were again notified that the following part of the meeting will be recorded, and the group discussion was opened by the researcher. The participants were asked at this point to share their opinions about the topic whether or not new student housing should be built and why, and to in the end come to a collective decision within the group. For this discussion process, the researcher was muted and their camera was turned off. The group discussions took between 6.25 and 18.75 minutes ($M=12.69$; $SD=4.56$). After the group discussion, participants were debriefed by the researcher about the full purpose of the study, and were again thanked for their participation. The procedure went as anticipated.

Data Analysis

Transcription and Coding

The online discussions were transcribed to text via the Microsoft Teams automatic transcription function, and then afterwards manually corrected and completed by the researcher. This was facilitated by audio- and video-recordings of the online discussions. With regards to the data collected, an inductive, bottom-up approach was used in this study. On the basis of the collected data, the aforementioned coding scheme was developed. This coding scheme development was done by two members of the research team, in order to facilitate intersubjectivity. The coding scheme was then applied to the transcribed video calls, with help of the recordings, to detect facial expressions and other non-verbal communication relevant to the coding.

For the coding process, the application Atlas.ti, version 8.4, was used to code the transcripts. Inter-coder reliability was checked by another member of the research-team coding 25% of the transcripts, after receiving training by the main researcher on one other transcript. Based on this, the inter-coder reliability coefficient is Krippendorff's $\alpha = .56$, which is indicating a rather low reliability. However, there seems to be a systematic difference in the coding procedure of the two

inter-coders. After observing the coding patterns, it became apparent that the second coder did not code certain entire sections of the transcripts. All of the coded sections by the researchers were nearly identical, suggesting that only the quantity of codes was unequal. A possible reason for this might be that the transcripts might have been coded too speedy, resulting in overseeing some possibly relevant sections. After correcting for this systematic error, by removing codes of the first researcher, where the second researcher did not code multiple abstracts in a row, the corrected coefficient is $\alpha = .92$, indicating high inter-coder reliability.

Analysis

The statistical analyses were performed using IBM's software SPSS 28.0. Firstly, some demographics of the participants were explored to get an overview of the sample. More specifically, the variables age, gender and nationality were investigated, making use of descriptive statistics. All three hypotheses were tested using Spearman's ranks correlation analyses. The reasons for using a Spearman's rank correlation analysis are that it takes into account non-linear relationships, all hypotheses have merely two variables per analysis, and all variables are continuous.

For all three hypotheses, the independent variable is '*Emotional Involvement*', which had been indicated by participants on a 5-point Likert scale, thus ranging from values 1 to 5, increasing in emotional involvement (Appendix C). Participants chose one of the five options about how emotionally involved they feel about student housing: '*Not at all*', '*Slightly*', '*Somewhat*', '*Moderately*', or '*Extremely*', which were coded into values 1 to 5 respectively.

For the first hypothesis *H1: Emotional involvement is correlated to the amount of engagement in group discussions*, the dependent variable is the amount of engagement in group discussions, which was measured by the newly computed variable '*Talking*'. This variable was computed by adding up the number of words said by each participant, dividing it by the number of minutes the discussion lasted, and then multiplying it by the number of participants in the group (Table 2). This was done due to the fact that the video calls had different lengths as well as the fact that in two of the eight calls, only three instead of four participants engaged in a group discussion. The variable '*Talking*' thus accounts for both the length of the discussion as well as the size of the group.

In the second hypothesis *H2: Emotional involvement is correlated to the amount of new information brought into a group discussion*, the dependent variable is '*Information*'. This includes

both the codes ‘*Info From Text*’ and ‘*Info Not From Text*’ (Table 2). To test the third hypothesis and its five sub-hypotheses, the corresponding dependent variables are each of the types of arguments, thus *Yes*, *No*, *Landscaping*, *Space Efficiency*, and *Restrict Student Intake Into University*. The independent variable ‘Emotional Involvement’ was applicable for all three hypotheses, including sub-hypotheses.

Like for both H1 and H2, Spearman’s rho was also calculated for all five sub-hypotheses of H3: *Emotional involvement is correlated to the types of arguments people use in group discussions*. If two of the five correlational analyses show significance, H3 will be accepted, as this would indicate that at least for two types of arguments, emotional involvement plays a role. This cut-off score was decided upon by the researcher.

Table 2

Computation of variables

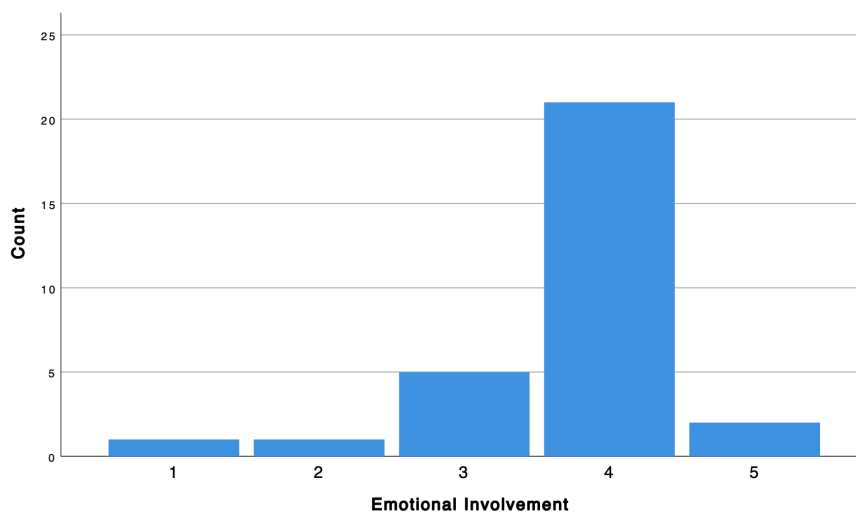
| Variable name | Description of variable | Computation of variable |
|---------------|---|--|
| Talking | The amount that people verbally engaged with the group | Total amount of words said by a participant, divided by the minutes of the video call, multiplied by the number of participants in the group |
| Information | The amount of new information people introduced into the discussion | Information from text + info not from text |

Results

In the following, the results of this study will be presented, divided into the results concerning hypothesis one, two and three, followed by the results regarding correlations of demographic variables and the independent variables under investigation. The participant’s scores of emotional involvement (EI) can be seen in Figure 1.

Figure 1

Number of participants x emotional involvement in student housing



H1: Emotional involvement is correlated to the amount of engagement in group discussions.

Spearman's rank correlation was computed to assess the relationship between emotional involvement and the amount of engagement (*Talking*). No significant correlation between the two variables was found, $r(28) = .32$, $p = .083$. Thus, people with higher emotional involvement seem not to be more likely to engage more in group discussions.

H2: Emotional involvement is correlated to the amount of new information brought into a group discussion.

Firstly, a new variable *Information* was computed, by adding up the two variables *Info From Text* and *Info Not From Text*. A Spearman's rank correlation analysis for the relationship between emotional involvement and introducing new information to the discussion (*Information*) revealed no significant correlation, $r(28) = .21$, $p = .271$. This indicates that emotional involvement does not seem to be associated with the amount of new information people bring into group discussions.

H3: Emotional involvement is correlated to the types of arguments people use in group discussions.

A Spearman's rank analysis for each of the five sub-hypotheses of H3 revealed no significant correlations (Table 3). As for the hypothesis to be accepted, two of the five relationships

should have shown significance, there seems to be no evidence of a correlation between emotional involvement and using certain arguments in group discussions.

Table 3

Nonparametric Correlation Analysis with Emotional Involvement as predictor, and the variables below as dependent variables (DV)

| Dependent variable | Spearman's rho | Significance p |
|--|----------------|----------------|
| Talking | .32 | .083 |
| Information | .21 | .271 |
| Landscaping | -.06 | .758 |
| Space Efficiency | .24 | .198 |
| Restricting Student Intake Into University | .03 | .859 |
| Yes | .07 | .727 |
| No | .18 | .336 |

Lastly, correlations of the dependent variables, with the recorded demographic variables, namely *Gender*, *Age*, and *Nationality*, were analysed. As can be seen in Table 4, there were no strong correlations found. However, there is one Eta value above .5 between age and Restricting Student Intake Into University, which suggests a moderate interaction ($\eta = .505$). After reviewing the data, it became apparent that younger students tend more to suggest restricting such intake than older students. For the other variables, there seems to be no evidence for an interaction between the dependent variables and participant's gender, age, and nationality.

Table 4

Correlation analysis of Gender Age, and each Nationality of the sample, with the DVs: Eta Coefficient Test

| Dependent variable | Gender | Age | German | Dutch | Indian | Zambian | Egyptian |
|--|--------|-------|--------|-------|--------|---------|----------|
| Talking | .051 | .364 | .188 | .107 | .225 | .267 | .177 |
| Information | .208 | .330 | .250 | .225 | .035 | .222 | .077 |
| Landscaping | .130 | .450 | .234 | .051 | .204 | .019 | .302 |
| Space Efficiency | .242 | .404 | .020 | .081 | .106 | .045 | .045 |
| Restricting Student Intake Into University | .071 | .505* | .202 | .079 | .079 | .102 | .337 |
| Yes | .211 | .488 | .062 | .248 | .166 | .007 | .007 |
| No | .141 | .308 | .112 | .062 | .062 | .034 | .034 |

Note: All five nationalities were investigated separately, with e.g. 'Dutch' comparing being Dutch to not being Dutch. All values represent the corresponding Eta Coefficients.

Discussion

The goal of this study was to explore the relationship between emotional involvement in a certain topic and one's behaviour in group discussions about this topic. Eight video calls were hosted in which participants held a group discussion about student housing, and their emotional involvement was assessed. Contrary to the researcher's prospects, no significant results were found. This suggests that people's level of emotional involvement in a certain topic does not correlate with their behaviour in group discussions about this topic, concerning the amount of engagement, the introduction of new information, and the types of arguments used.

Such a finding might come as a surprise, considering the research of Ito et al. (2021), who claim that in fact emotional involvement and group discussion behaviour are correlated. Moreover, Linnenbrink-Garcia and Pekrun (2011) claim that students' emotions stand in high correlation with academic engagement.

However, there is a body of research indicating that the relationship between EI and group discussion behaviour is complex, and not understood well enough yet. For example, even though Ito et al. (2021) state that emotions are indeed playing a role in consensus building, they also indicate that there is no evidence on what this role might be. Furthermore, what Pekrun and Linnenbrink-Garcia (2012) call 'social-behavioural engagement', including academic discussions, is suggested to be correlated with emotions. Nonetheless, Pekrun and Linnenbrink-Garcia (2012) also state that this interaction is highly complex. Emotion's complexity in general is what scholars long agree upon (Greenberg & Safran, 1989; Lindsley, 1951). The complexity pointed out by such authors imply a higher chance of third variables, such as mediating or moderating variables, having a significant effect on the relationship of EI and group discussions. There still is not a sufficient understanding of what such third variables are, and how they affect the relationship between EI and socio-behavioural engagement. In this study, the lack of evidence for a correlation might be explained by such unknown third variables. Emotion's complexity, and possible unknown third variables, result in this exploration remaining a challenging task.

Strengths and limitations

As elaborated on earlier, the relationship between EI and group discussion behaviour is an area of research rather unexplored. Linnenbrink-Garcia and Pekrun (2011) also state that the role of emotions should be much more explored in the academic setting. The study at hand aims to join researchers in exploring the connection between emotional involvement and academic behaviour. More specifically, this study tries to open the floor for scientific exploration of emotional involvement in group discussions, contributing to an important first step. By conducting the group discussions online, this study reflects relevant work- and academic settings of its time, as especially with the beginning of the COVID-19 pandemic, a shift to online interaction has taken place (Asgari et al., 2021). Another strong point of this study is that the topic of student housing seems to be a good choice, as the sample consisted of only university students. The topic arguably represents a relevant point of interest for the people in the sample, who, as the results show, are emotionally

involved in the presented topic of student housing. Student housing was thus a fitting topic for the sample of this study.

Regarding possible limitations of this study, the following should be considered. Firstly, the sample consisted of 30 participants. Brysbaert (2019) claims that a sample size of 50 should be aimed at to enable confident conclusions. Such larger samples can for example be observed in studies by Rezaei (2022) and Abdullah et al. (2012). Furthermore, the sample exclusively included academic, young adults, who mostly were German, thus forming a rather non-diverse sample. One should note, however, that this non-diversity at the same time leads to a better comparability among the participants, as less socioeconomic differences might interfere with the variables under investigation. This was also shown by the results of the correlation analyses of demographic variables and the dependent variables of this study.

Another possible limitation is that the group which participants were assigned to could have influenced the way they interacted. Levendusky et al. (2016) suggest that especially in homogenous groups, partisanship among its participants can be increased. As already mentioned, the sample of this study was rather homogenous, which might have increased the likelihood of participants to adopt more extreme positions towards the discussion topic (Levendusky et al., 2016). Next to that, Davidson-Shivers et al. (2001) argue that people tend to continue with a certain topic within a group discussion rather than switching the topic. This indicates that perhaps, if a group mostly talked about environmental concerns connected to building new student housing, one also brings up more arguments connected to this topic, ultimately possibly skewing the results.

Another point worth mentioning is that this study was conducted online. This could have impeded the interaction between participants, as they were not able to engage in eye contact and body postures towards each other. In this regard, more insight into the difference between online and offline discussions is needed. Furthermore, it should be mentioned that the scale for emotional involvement was not validated in advance. Most participants chose the option of being 'moderately' emotionally involved, with only a low variety across the scale. A validated questionnaire could lead to more normally distributed, and thus facilitate better results. Lastly, some of the participants already knew each other from studying together, or they were acquainted otherwise. As this was not the same starting point for every participant, because some people did not know anyone, this might have skewed the results of this study: People might feel more willing

and confident to speak their mind and participate in a discussion where they know at least part of the group already.

Recommendations for future research

The ambiguity and scarcity of previous research highlight that more research is needed about what role emotions play in group discussions. Firstly, the researcher recommends a larger sample size, including at least 50 participants. For this early stage of exploration, a rather non-diverse sample might still be appropriate in order to minimise other possible mediating factors such as socio-economic variables. For later, however, samples should be more diverse, to be more representative of the general population. To facilitate this, a different topic of discussion should be chosen, applicable to a wider range of demographics. In future research, it might be interesting to include personality traits as moderator variables. Here, one could research whether emotionally involved people tend engage more in a group discussion, or whether they disagree more with other people, while controlling for different personality traits. Specifically, the researcher recommends including Leadership Motivation or Assertiveness, as reported in the Business-focused Inventory of Personality, due to likely having an influence on people's interaction in groups (BIP, 2015). Lastly, using a validated scale for emotional involvement, future research could measure EI multiple times along the group discussion process, exploring how emotions might change along the course of a discussion.

Conclusion

In a world that is continuously coming closer together, and where diversity is as relevant as never before, working in a team and having group discussions are vital aspects of modern academic and working life. Understanding what role emotions play in such interactions, can be highly valuable in order to be able to optimise group discussions, and team work respectively. Aiming to work towards this goal, this study lays the groundwork for exploring the connection between emotional involvement and group discussion behaviour. The researcher hopes that other scholars will, considering the stated recommendations, explore this field further.

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Appendix

Appendix A

Consent form

Goal of the study:

Whether in school, at university, or in a job, group discussions are often a vital aspect of modern academic and working life in many fields. Therefore, understanding what moves people to more actively participate in group discussions could provide tools to facilitate people's group participation.

Method of the study:

Participants will join an online call via Microsoft Teams, where they first individually read a text about a certain topic, answer a few questions, and then engage in a group discussion about this pre-determined topic (groups of 4). In the end of the discussion, you are asked to come to an agreement as a group. The group discussion will take a maximum of 20 minutes. All in all, the participation of the study will take around 30-40 minutes. The group discussion phase will be audio- and video-recorded!

If you have any questions regarding the study or your participation, you may ask them in the beginning of the video call or send an email to a.j.unterweger@student.utwente.nl.

Please also read the following information carefully:

You will be asked again for permission before the recordings.

Only the research team will have access to the recordings.

The recordings are used exclusively for my bachelor project.

The recordings are deleted at the latest on July 1st, 2022.

All data will be handled confidentially by the research team only.

There is the possibility that certain said sentences will be quoted in the research paper, however this data will be anonymised in advance.

You can withdraw your consent at any time. If you choose to withdraw your consent, I will then give a written confirmation thereof and delete the recordings.

You can withdraw your consent at any time. If you choose to withdraw your consent, I will then give a written confirmation thereof and delete the recordings.

Researchers' names: Aiko Unterweger & Hannie Gijlers

Contact information: a.j.unterweger@student.utwente.nl

March 25, 2022

Name of participant

Declaration of consent of the participant

I have been informed about the aim and procedure of the study. I have had the possibility to ask questions to the researcher. I do understand the information above and give Aiko Unterweger permission to video- and audio-record the conversation and use the recordings as described above. I also understand I can withdraw from this study at any time, without stating a reason.

Consent

Yes

Appendix B***Text about student housing***

In a small student-city in the Netherlands, more and more young people are coming to start their studies. However, there is a shortage of accommodation for students, leading to a big discussion about whether new student houses should be built in the city. Some argue that this is a necessary step in order to ensure that all students have a place to live, especially for an affordable price. Other people, however, criticise the fact that for such new student houses, parts of a forest would have to be cut down to clear up land. They state that the forest needs to be protected by all means. Furthermore, officials of the city emphasise that building new houses is very costly and it would greatly impact the cities' budget. Especially if the housing should be provided at a low cost, the city council worries that building student houses would be a huge loss of money for the city, and other projects could not be financed.

If you were to decide whether or not new student housing should be built, how would you decide?

Appendix C***Questionnaire after reading the text and before group discussion***

Have you been on the UT Campus in the past week?

- Yes
 No
 Unsure
-

Do you like the new coffee machines on the UT Campus?

- | | | | | |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Not at all | Slightly | Somewhat | Moderately | Extremely |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
-

How emotionally involved do you feel in the topic of student housing?

- | | | | | |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Not at all | Slightly | Somewhat | Moderately | Extremely |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
-

How satisfied are you with the meal options in the cafeterias on Campus?

- | | | | | |
|---------------------------|--------------------------|---------------------------------------|-----------------------|-----------------------|
| Extremely dissatisfied | Somewhat dissatisfied | Neither satisfied nor dissatisfied | Somewhat satisfied | Extremely satisfied |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |