

RateMyProfessors.comTM: The Impact of Negative Online Professor Reviews on Student Judgement

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Abstract

Negatively-valenced emotional expressions (NVEE) are identified by the use of extreme language, emoticons, bold lettering, capitalization, and exclamation marks. When used in online review forums, NVEE are indicative of the severity of negative reviews, which may be perceived as less valid than negative reviews without NVEE. We sought to examine the effects of NVEE on student likelihood to take a professor's class. We presented 51 university students with reviews based on RateMyProfessors.comTM. Students were randomly assigned to one of three conditions: positive reviews, negative reviews with NVEE, or negative reviews without NVEE. We found that students who viewed the positive reviews were significantly more likely to take the course than those who viewed negative reviews. Contrary to our prediction, the negative reviews with NVEE condition did not indicate greater likelihood of taking the course to the negative review condition without NVEE. However, qualitative analysis of student response to reviews showed that students were skeptical of reviews with NVEE, indicating that this research is relevant and useful for understanding what makes online reviews helpful.

Keywords: negative bias, online reviews, student attitudes, negatively valenced emotional expressions

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RateMyProfessors.com™: The Impact of Negative Online Professor Reviews on Student Judgement

The internet has become the most dominant means for consumers looking for products and services, as well as the presiding authority in almost all evaluations for goods and services. There has been robust research into online evaluations and how online patrons respond to reviews (Boswell & Sohr-Preston, 2020; Chen & Xie, 2008; Esmark Jones et al., 2018; Filieri, 2016). Online assessment takes many forms: written product reviews, evaluations of service, word-of-mouth forums, surveys, and more. Specifically for university students worldwide, one of the most popular websites is RateMyProfessors.com™ (RMP; Altice USA News, n.d.). RMP is a public, online forum for students to publish reviews of professors, evaluating them on criteria such as difficulty, teaching style, and workload. Since launching in 1999, RMP introduced students to an accessible place to view how peers felt about their professors and classes.

Research has shown that negative online reviews are influential in informing consumer decisions (Filieri et al., 2019). It is well supported in the field of psychology that negativity is more striking and memorable than positivity (Rozin & Royzman, 2001). Previous research has aimed to define the concept of “negativity” in concrete, measurable terms. Folse et al. (2016) used negatively-valenced emotional expressions (NVEE) to define the severity of negativity of a review. Examples of NVEE can include extreme language, emoticons, bold lettering, capitalization, and exclamation marks. In their study, the authors showed that NVEE may also connote the helpfulness or usefulness of reviews in particular contexts. When used by perceived product or subject experts, NVEE increases perceived helpfulness and usefulness of a review and diminishes attitude towards the object of the review. When used by perceived novices, NVEE reflects negatively on the reviewer themselves, not the object of the review. In the present study, NVEE was used with the purpose of examining what impact the severity of a negative online review written by a perceived peer (not a subject matter expert) has on a student’s attitude towards the professor and their intention to take the class.

Negativity Bias in Online Forums

Rozin and Royzman (2001) proposed a theory of negativity bias, stating that “there is a general bias[...]in animals and humans to give greater weight to negative entities,” (p. 1) thus emphasizing the necessity of examining responses to negative evaluation expressly. As the

internet has become more available and widespread over the past two decades, online ratings have become the most popular way for consumers to demonstrate their satisfaction or dissatisfaction of a product, service, or service providers (professors, in the context of universities). Approximately 95% of internet users perform online research before making a purchase decision (Esmark Jones et al., 2018). Of those, 80% have changed their decision over a purchase based on a negative online review (Cone Communications, 2011). The purpose of the present study was to analyze the feedback to appraisals of professors on RMP to assess how students react to the informative nature of these reviews, and how the negative valence of the review affects a student's decision to take a particular course.

Use of RateMyProfessors.com™

Since its inception, RMP has garnered more than one million professor reviews from over 6,000 schools (Lewandowski et al., 2011). Despite several other websites that offer the evaluation of professors (e.g., Uloop.com, RateMyTeacher.com, etc.), RMP remains the most popular with students worldwide. Students use RMP to aid in the selection of courses; their decision depends on a number of factors comprising both qualitative and quantitative aspects of the reviews (Hayes & Prus, 2014), the gender of the professor (Rosen, 2018), and the emotional valence of the review (Wu, 2013).

Hayes and Prus (2014) showed that students tend to respond more positively to reviews that fall under an “informed consumer model” which places more importance on specific, qualitative information in reviews. In a supporting article by Lewandowski et al. (2011), it was noted that students viewed legitimate information (such as class quality, qualifications) as the most important, while viewing superficial information (such as attractiveness) as the least important.

Impact of Emotional Valence

It has been empirically supported that negative information is given more weight than positive information, forming the theory of “negative bias” (Rozin & Royzman, 2001). However, Wu (2013) demonstrated a reversal of negativity bias in the context of online reviews. His study of participant responses to online reviews demonstrated no positive correlation between negative reviews and helpfulness of reviews. This goes against the common belief that dissatisfied consumers (and students) elevate the negativity of a review, making it more impactful. Often, students strive to amplify their voice in online communications by using

NVEE (exclamation points, emoticons, bolding lettering, extreme language). Instead of elaborating on specific situations or seeking appropriate avenues of constructive discussion, some students use online forums to vent their feelings, diminishing the validity of RMP. However, students may be more capable of discerning valid negative evaluations from nonvalid negative evaluations. Folse et al. (2016) revealed that in online consumer settings, reviews with NVEE reflected poorly on the perceived-novice reviewers, and their reviews were deemed less helpful.

Hypotheses of Study

Based on previous research, we hypothesized that students who viewed only positive reviews would be more likely to sign up for a class than both groups that viewed negative reviews. We further hypothesized that students who viewed negative reviews with NVEE would be less impacted by a negativity bias, and therefore more likely to sign up for a class than students who viewed reviews without NVEE.

Methods

Participants

A total of 62 students were recruited from a medium sized Canadian university through the institution's psychology research pool; most participants fell in the age range of 20 to 25 years old. The participants were either in their first, second, third, or fourth year of studies. Eleven participants' results were excluded from this study, resulting in a total sample size of 51 participants. Participants were excluded based on either failing to complete the survey or failing to answer the screening question correctly (via a question meant to screen out participants that are careless in responding). The Positive Reviews only condition recruited 12 participants (8 female, 4 male), the Negative Reviews with NVEE recruited 21 participants (17 female, 4 male), and the Negative Reviews without NVEE recruited 18 participants (14 female, 4 male). The median year of study across all conditions was third year (60–90 credits) and the median age was 22 years.

Materials

All groups were presented with a course description, "Group Dynamics PSYC 3220," copied from the institution's University Calendar 2018–2019 (Kwantlen Polytechnic University, n.d.; see Appendix A). A fictitious male professor was used in this study, following the same decision made by Scherr et al. (2013). Their research cited findings of Sinclair and

Kunda (2000) that stereotypes affect female professor evaluations more than male professor evaluations. We based the wording, formatting, and numeric elements of the review stimuli on actual RateMyProfessors.com™ reviews (see Appendix B for an example of a review from each condition). Two experimental conditions had negative reviews (four negative and four positive) but differed in the nature of the negative review (marked by the presence or absence of NVEE). Folsie et al. (2016) described NVEE as expressions containing “intense language, all caps, exclamation points, [and] emoticons.” The control condition had no negative reviews and had only eight positive reviews; four of which were identical to the experimental conditions. Students’ likelihood to take the class was measured on a 5-point Likert Scale (1 = *not at all likely* to 5 = *very likely*). An open-ended question was included to gauge the reason behind their rating.

Procedure

All data was collected anonymously and online through the survey system Qualtrics (www.qualtrics.com). After providing electronic consent, participants answered the pre-survey questions and viewed a course description. Participants were randomly assigned to one of the three experimental groups through the randomizer function in Qualtrics. They were presented with a full page of eight reviews relevant to their assigned conditions. They then indicated how likely they were to sign up for this class and answered an open-ended question to elaborate on why. At the end of the study, they were debriefed, and eligible students were granted 0.5 bonus credits.

Results

One of our three pre-survey questions asked participants how often they used RMP. Responses indicated that 61% of participants reported *I use it for every course*, 35% reported *I use it sometimes*, and 4% reported *I have used it once or twice in the past*. We did not have any participants that did not use the site at all. Our second question asked how important the site was to participants’ decisions to enroll in a course. Findings indicated that 22% ranked it as *extremely important*, 37% ranked it *very important*, 27% ranked it *moderately important*, 12% ranked it *slightly important*, and 2% ranked it as *not at all important*. Our final pre-survey question asked whether participants had ever used a professor evaluation site other than RMP. Only one participant said yes but did not state which site they had used in the provided text box.

Next, we conducted a between-groups ANOVA with the three review conditions as the independent variables and their likelihood to take the class as the dependent variable. Table 1 presents the descriptive statistics of each group. With a Welch correction used to account for the violation of the homogeneity of variance assumption, the results of this analysis showed a statistically significant effect, $F(2, 31) = 17.56, p < .001, \eta^2 = .24$. A follow-up Games-Howell post-hoc test indicated that students who viewed the Positive Reviews were more likely to take the course than both of the Negative Reviews groups. There were no differences between the two Negative Reviews groups (with NVEE and no NVEE).

The opened-ended question asking why participants reported their likelihood rating, was answered by 46 participants. An examination of these responses yielded the following observations. In the Positive Reviews group, all participants answered the open-ended question, 25% of whom cited the quantitative aspect (the rating) as influential to their decision, while 75% cited the qualitative aspect (the reviews) and the perceived quality of class and professor.

In both of the Negative Reviews groups, several participants described the reviews as ambiguous: 19% of participants in the Negative Reviews (no NVEE) group who answered the open-ended question indicated the reviews were “mixed”, while only 6% of participants in the Negative Reviews (with NVEE) did so, despite each condition having an equal number of positive and negative reviews. The Negative Reviews (no NVEE) group had varied responses with no apparent unifying features; they cited the ratings, the reviews, a need for more information, self-efficacy, learning style, course availability, easiness, and even perceived course structure.

In the Negative Reviews (with NVEE) group, 56% of participants who answered the open-ended question attributed the bad reviews to the student reviewer, not the professor or the class. One participant notably said that the reviews seem “more-so a reflection of the personalities of the students writing the reviews.” In the Negative Reviews (no NVEE) group only one participant attributed the negative review to the reviewer, reporting “the bad reviews seem to be based on student ability not on the actual professor.” The other 44% of the Negative Reviews (with NVEE) group had varied responses (or lack thereof) that included: not answering the question, low ratings and reviews as a reason not to take the class, or citing the positive reviews as the reason to take the class.

Discussion

The purpose of this study was to examine the effects of negative online reviews on students' likelihood to sign up for a class. The data supported our first hypothesis, namely, that students in the Positive Reviews group would be more likely to take the class than students in either of the Negative Reviews groups. Our second hypothesis, which predicted that students in the Negative Reviews (with NVEE) group would be more likely to take the class than students in the Negative Reviews (no NVEE) group, was not supported. The significant difference between the Positive group and the Negative groups aligns with previous research that demonstrated consumer's attitudes were influenced by negatively-valenced reviews (Cone Communications, 2011). Similarly, Esmark Jones et al.'s (2018) study also showed that negative valence significantly impacts product satisfaction and attitude towards a company (in our case, attitude towards professor and the class). Boswell and Sohr-Preston (2020) noted that students who may be exposed to the perceived failures of a particular professor may become less efficacious for the course, another reason we posit studies of this nature to be so crucial.

Although we did not find a significant effect of the presence of NVEE, several participants were aware of this stimulus, as indicated by 56% of participants in the Negative Reviews (with NVEE) group who specifically cited that the negative reviews seemed irrelevant to their decision to take the class. This result supports the notion that students are not entirely superficial in their assessment of online reviews. In Lewandowski et al.'s (2011) study, the authors noted that students are capable of discerning whether information is relevant or not relevant to their decision. The theme among the Negative Reviews (with NVEE) group was that a large portion of them attributed the negativity of the review to the student reviewer's experience or personality, not to the professor. This observation is in line with findings of Folse et al. (2016), in which participants who perceived reviewers to be novices had a poorer attitude towards the reviewers themselves than towards the object of the review. In our experiment, both reviewers and participants were students and peers, not expert evaluators of teaching quality.

One limitation of this study is the small sample size. There is a possibility that this left our experiment without sufficient power to gauge the effect of NVEE. We would recommend replicating this study with a larger sample size to test for the significance of the NVEE effect more robustly. Additionally, in order to test the participants' awareness of NVEE with more validity, we recommend a manipulation check for future experiments.

We have noted that, overall, the responses in all conditions were at or above the midpoint for the 5-point scale. There is a possibility that our course description sounded interesting enough to those who were planning to take the course, or had taken the course, that the effects of the negative reviews were muted. In future experiments, we would consider using not only a fictional professor, but a fictional course as well to test whether the response changes when students are unfamiliar with the content. Since all of our participants were psychology students from the same institution, their responses could have been positively biased because of the familiar content.

Another recommendation for future work is to study the helpfulness of reviews by including a measure of how helpful the review is to the students' evaluation of a professor or a class. Whereas we studied an attitude influenced by all reviews combined, it would be useful to obtain information about the students' perspective of each individual review.

One of the strengths of our experiment is that we conducted it fully online, allowing students to complete the survey on their own time, which is a realistic simulation of the way students interact with online reviews in their lives. This supports our belief that the students were authentic in their responses and were not manipulated by environmental, laboratory factors.

Every student was familiar with and has used RMP in their decision to sign up for a class. RMP's influence regarding the students' decision-making is supported by research by Davison and Price (2009). The popularity of RMP across studies speaks to the relevance of this research to real-world understanding of student evaluations of professors. A better understanding of the pitfalls and intricacies when evaluating RMP reviews may lead to better evaluations and better performance for educational institutions and students alike. For example, faculty members could read posts on RMP of their courses to get a better picture of potential struggles students may have with their course or their teaching and adjust accordingly (Lewandowski et al., 2011).

RMP shows no signs of becoming less popular in future years and, despite a multitude of studies on the subject, there is still much room for research on what truly affects a student's decision to take a course. We firmly believe that replications of this study and further research into online reviews of professors have profound implications for students to be more conscious, informed decision-makers and more effective evaluators.

Tables

Table 1

Descriptive Statistics of RMP Review Groups

Group	<i>n</i>	<i>M</i>	<i>SD</i>
Positive Reviews	12	4.83	0.39
Negative Reviews (with NVEE)	21	3.71	1.10
Negative Reviews (no NVEE)	18	3.56	0.98

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Appendix A

Course Description Stimulus

Figure A1. *Course Description Stimulus*

PSYC 3220 - 3 credits

Group Dynamics

Students will explore the processes that occur among individuals within groups, as well as the processes involved when groups interact with each other. They will examine the functions and structure of groups, leadership, conformity pressure, group decision making, group performance and productivity. They will also gain knowledge about conflict and cooperation within groups and between groups. Throughout the course, students will learn to analyze group dynamics in their own experiences participating in and observing groups.

Fall 2021 Section A12 - Professor James Kalten, BA (UBC), PhD (SFU)

Note. A course description adapted from “Group Dynamics PSYC 3220” of the University Calendar 2018–2019 (Kwantlen Polytechnic University, n.d.).

Appendix B

Review Stimulus

This appendix demonstrates the formatting, language, and style of a review from each of the experimental conditions; the reviews were adapted from RateMyProfessors.comTM. The Positive Reviews condition included eight positive reviews (Fig. B1). The Negative Reviews (with NVEE) group included four positive reviews and four negative reviews with NVEE (Fig. B2). The Negative Reviews (no NVEE) group included four positive reviews and four negative reviews without NVEE (Fig. B3). All reviews were presented on a blank, white background. The participants interacted with reviews by scrolling down the page.

Figure B1. *A Positive Review*

QUALITY

5.0

For Credit: **Yes** Attendance: **Mandatory** Would Take Again: **Yes** Textbook: **Yes**

Omg he's great! Gives extra credit assignments to help bump your mark. His slides and notes are very detailed and his tests are almost straight-forward. I wish that he taught for all the Psych courses because he is fun!

DIFFICULTY

2.0

Figure B2. *A Negative Review with NVEE*

QUALITY

1.0

For Credit: **Yes** Attendance: **Mandatory** Would Take Again: **No** Textbook: **Yes**

SCREW HIM!!! He is possibly the worst prof at kpu.... and maybe in Canada. One of the hardest markers I've had. Do not take him trust me, take another class, worst decision I've made! TAKE WITH SOMEONE ELSE

DIFFICULTY

4.0

Figure B3. *A Negative Review without NVEE***QUALITY****1.0**For Credit: **Yes** Attendance: **Mandatory** Would Take Again: **No** Textbook: **Yes**

He replies promptly to emails but didn't provide us with any marks except our midterm marks, so we went into the final not knowing what the outcome of our grade would be. Overall, wouldn't recommend.

DIFFICULTY**4.0**