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Smile(y) – and Your Students Will Smile With You? The Effects of Emoticons on Impressions, Evaluations, and Behaviour in Staff-to-Student Communication

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Emoticon usage in computer-mediated communication (CMC) by university staff is potentially a double-edged sword in forming desired impressions in the minds of students, increasing perceived warmth but also decreasing perceived competence of the sender. Existing studies in higher education have provided little understanding of this trade-off. No work has examined effects of, first, emoticon usage on important educational outcomes (student evaluations, task behaviour), and second, potential moderators relevant within education (i.e., job title, institutional prestige, age of sender, assessment level). We contribute to this area of knowledge through three controlled experiments across different educational CMC settings (total n = 848). Generally, we find that emoticon use increases perceived warmth, which outweighs decrease in perceived competence of university staff, in that perceived warmth—but not competence—affects student evaluation and task behaviour positively. These findings hold largely irrespective of the moderators explored. Implications for higher education practitioners are provided.

Keywords: Computer-mediated communication; impression management; emoticons; student evaluations; task behaviour
Introduction

Computer-mediated communication (CMC) is pervasive within higher education, with university staff and students adopting email (Erichsen, Bolliger, and Halupa 2014), e-learning environments (Margalina, De-Pablos-Herederro, and Montes-Botella 2017), and Wikis (Page and Reynolds 2015), amongst others. Emoticons, either text-based [:) ] or graphical [ ☺ ], humanize CMC communicators (Cui, Wang, & Xu, 2010). In higher education, staff adoption of such informal communication is viewed as ‘totally and unconditionally unacceptable’, symbolizing the linguistic fossilization of historic and prestigious language laws (Berman 2006, 1). Despite this, student recipients of such messages are typically millennials (born after 1980) or Generation Z (born after the mid-90s) (Fry 2017), for whom the use of emoticons is normalized (Krohn 2004). This dissonance in perspectives may distance staff and students in their conjoined pursuit of knowledge.

More poignantly, student evaluations of staff play an increasingly central role in attracting and retaining students (Carter and Yeo 2016). While the quality of teaching is important, meta-analyses show that it is the teachers’ characteristics that form the keystone of student ratings (Uttl, White, and Gonzalez 2017). In this regard, student ratings are predominately a function of staff impression management—and impressions of staff are judged increasingly in computer-mediated environments. Emoticons form a critical component of impression formation in online communication (Li, Chan, Kim, & Aggarwal, 2018). Absence of emoticons in higher education staff’s CMC may affect students’ impressions of staff negatively, and therefore influence students’ evaluation of staff and behavioural outcomes.

The limited evidence on emoticon use in education largely supports findings from other professional contexts; specifically, message senders face a dilemma regarding the adoption of emoticons while retaining a professional image. Emoticon usage can make the
sender appear warm and playful (Hsieh & Tseng, 2017), however, emoticons can also make
the sender appear less competent (Li, Chan, Kim, & Aggarwal, 2018). Therefore, emoticon
use by university staff deserves caution, because the likely benefit of being viewed with
greater warmth might be at the expense of desirable attributes such as perceived competence
and task authority.

With a focus on smileys (😊), the most commonly used emoticon, the primary
objective of this paper is to deconstruct the seemingly opposed effects of emoticon use by
university staff on the impressions given to students. This paper provides the first
investigation within an educational setting to understand the effects of emoticon use on
important outcomes in higher education, such as student evaluations and student intentions to
perform tasks. The purpose of this deconstruction is, first, to address whether staff should use
‘smileys’ in CMC with students. Second, a number of conditions are manipulated to
determine the effects of sender type (hierarchical position, age, institution prestige) and
message efficacy (satisfactory/excellent) in three staff-student CMC contexts (general email,
supervisory email, online feedback).

**Background**

Impression management (or self-presentation) is the practice of deliberate manipulation of
verbal and non-verbal cues to foster a desired image in the mind of others (Goffman 1959;
Leary 1995). The underpinning motivations for impression management include social or
economic gains, self-esteem, and identity maintenance (Leary 1995).

Stereotypes exist in cross-status impression formation, specifically in two notable
dimensions: warmth and competence (Li et al. 2018; Holoien and Fiske 2013). High-status
individuals are stereotyped as more competent, yet cold, whereas lower-status individuals are
seen as less competent, yet warm (Russell and Fiske 2008). Research suggests that implicit
knowledge of these stereotypes drives impression management to offset typecasts, so that high-status individuals focus on being portrayed as warm (versus competent) in the presence of lower-status others, and vice versa (Holoien and Fiske 2013).

In higher education, the perceived lack of warmth of senior staff becomes an issue as the sector shifts toward ‘personalized education’ where staff are expected to undertake caring, pastoral roles (Lee and Schallert 2008). Full professors—widely perceived as high-status individuals (Macfarlane 2011)—earn admiration based on their perceived competence but are likely to be viewed as colder than more junior colleagues. Where student evaluation of staff performance rests on teachers’ self-presentation rather than efficacy or quality of their teaching (Uttl, White, and Gonzalez 2017), presenting a desirable image to students is critical.

Further challenges in higher education, such as generational gaps or appropriateness of communication strategies, exacerbate the issue. The majority of tenured university staff are Generation X or Baby Boomers (HESA 2015), while students are predominately members of Generation Z, that is, digital natives of fast-paced CMC (Palfrey and Gasser 2011). The generational gap translates into differences in digital media fluency and how CMC is appropriated by these two groups. The “digital immigrants” of Generation X can often potentially misconstrue or unwillingly demonstrate poor handling of the unwritten rules of digital media, because the digitalised environment and its conventions can appear somewhat foreign to them (Prensky, 2001). On the other hand, the digital natives of Generation Z are at ease with information formats that are prevalent in CMC due to the continuous use of various digital devices and platforms since early age, which allowed them to develop strong command of communication styles in digital media (Prensky, 2001). These different levels of digital fluency can appear particularly salient in higher education because of its specific institutional context. The norm of communication in CMC is ‘social’ and
‘informal’, resulting in a socialized decorum of ‘lightweight’ (D. Zhao and Rosson 2009) or ‘phatic’ communication (Miller 2008). Staff communication with students in higher education is commonly formal and polite, a strategy that signifies interpersonal distance. However, such communication style may be less appropriate for sustained relationships where warmth drives relational efficiency, as it has been recently investigated in other contexts. To this end, politicians and brands (those with traditionally formal presentation styles) have started to acknowledge the benefits of an informal, social tone in their communication with younger generations (Colliander et al. 2017; Colliander and Marder 2018), a strategy that has yet unknown effects in higher education. In a service context, Li et al. (2018) conclude that customers consider service employees using emoticons warmer but of lower competence than their counterparts.

Emoticons complement text-based content in CMC allowing message receivers to more comprehensively gauge the valence and intensity of the expressed emotion (Lo 2008), and reciprocate (Fabri, Moore, and Hobbs 2005). Thus, emoticons reduce ambiguity in written-cues (Ganster, Eimler, and Krämer 2012). Krohn (2004) suggests emoticon use to be generationally sensitive, to restrict their use when interacting with those born before 1964, and use them selectively with those born between 1964 and 1980, ‘but for those born after 1980 a sender should e-mail with generous use of emoticons’ (321). In education, emoticons can promote positive impressions of staff in online teaching fora (Reushle and Mitchell 2009) and in email messages to students (Waldeck, Kearney, and Plax 2001). Indeed, students perceive staff as more extraverted, agreeable and open when emoticons are used in assignment feedback (Grieve, Moffitt, and Padgett 2018). However, this contrasts with other studies in education contexts. Kemp and Clayton (2017) find that undergraduate students perceive abbreviations, that is ‘textese’, as inappropriate when used by staff.
The present research

The present student cohort primarily comprises Generation Z, who epitomise norms of informal CMC. Moreover, student evaluations can be considered a function of staff popularity with students. Despite varied findings on emoticon use, there is a consistent theme, that is, a trade-off between perceptions of warmth and competence of the sender. However, it is advantageous for university staff to be both warm and competent (Kahu, 2013; Hamlin and Patel, 2017), and there is an increased expectation for managing online impressions in higher education contexts. As such, a dilemma between maintaining traditional views of professionalism and using emoticons in CMC persists.

Therefore, the present paper primarily aims to contribute to this yet-to-be-explored avenue of research and practice, deconstructing the seemingly opposed effects of emoticons in educational CMC to provide a theoretical perspective on emoticon use in impression management of university staff and subsequent student evaluations and task behaviour. We provide the first investigation of the effect of emoticons on important outcomes in education, rather than focus only on perceptions of image. To this end, we investigate the effects of emoticons use on students’ staff evaluations and task behaviour, mediated by impressions of both warmth and competence.

In line with existing research, we anticipate:

**H1:** *Students will perceive university staff who use emoticons as warmer than staff who do not use emoticons.*

**H2:** *Students will perceive university staff who use emoticons as less competent than staff who do not use emoticons.*

Only one examination of the effect of emoticon use on behavioural intention exists, set in a customer service context. Li et al. (2018) find that impressions arising from emoticon use can
impact purchasing behaviour. More generally, research based on social influence theory suggests that competence and warmth can increase compliance with requests, as the receiver has greater trust in the sender (e.g., Guadagno and Cialdini 2007). Prior research has also found that both warmer and more competent staff are evaluated more positively by students (e.g., Addison, Best, and Warrington 2006). Emails in university settings can be a means of inviting a student to perform a task, allowing evaluating behavioural intentions. We therefore hypothesise:

**H3a:** Students will show increased behavioural intention to follow a request by university staff who use emoticons, mediated by students’ increased perceptions of warmth, in contrast to a request by equivalent staff who do not use emoticons.

**H3b:** Students will evaluate university staff more favourably if they use emoticons, mediated by students’ increased perceptions of warmth, than staff who do not use emoticons.

**H4a:** Students will show decreased behavioural intention to follow a request by university staff who use emoticons, mediated by students’ decreased perceptions of competence, in contrast to a request by staff who do not use emoticons.

**H4b:** Students will evaluate university staff less favourably if they use emoticons, mediated by students’ decreased perceptions of competence, than staff who do not use emoticons.

Figure 1 summarizes the framework and its hypotheses.

We also explore a number of moderating factors on the effect of emoticons within higher
education, which have been largely neglected in prior research. We examine the effects of sender attributes representing differences in status, that is, (1) job title and (2) institutional prestige. To avoid criticism that hierarchy is confounded with the age of individuals because older people are usually—or are expected to be—further up in the hierarchy, we introduce (3) age of sender as a moderating variable. We further investigate (4) message composition by testing the moderating role of assessment grade (excellent vs. satisfactory) on the effect of emoticons used in online assignment feedback.

Materials and Methods

To investigate the hypotheses, three vignette-based experiments were conducted in different higher education CMC environments (general email, supervisory email, and feedback in a virtual learning environment (VLE)). Studies 1, 2 and 3 test H1-4. The moderators are explored across the different studies, including job title (Study 1), job title and institutional prestige (Study 2), and assessment level and age of sender (Study 3). All vignettes were examined to be satisfactorily realistic (see Appendix B).

Study 1

Design and Participants

A 2 (emoticons: present/absent) × 3 (job title: administrative assistant/assistant professor/full professor) between-subjects experimental design was conducted, testing H1-4. Students were sampled purposively from a paid panel on UK-based site prolific.ac., found to be an improvement to Amazon Mechanical Turk (Palan and Schitter 2017), paying an ethical hourly rate. Pre-screening questions ensured the sample criteria were met. Participants were assigned randomly to one of the six experimental conditions. The experiment was completed by 310 individuals, with 256 students (157 females; 175 undergraduates, 81 postgraduates;
Mage = 25.73 years, SD = 7.52) in the final sample having cleaned responses for failing manipulation checks (n = 18) or completing responses too quickly (n = 36).

Stimuli and Procedure

Vignettes representing potential real-life scenarios were created to stimulate participants (Barter and Renold 1999), using Rungtusanatham, Wallin, and Eckerd’s (2011) three-step methodology to ensure vignettes were ‘clear, realistic and complete’ (9). Each experimental group received a description of a fictitious university and was informed that the institution was highly ranked and well respected worldwide. Participants were asked to put themselves in the mind-set of a final-year undergraduate student at this institution. Students were shown a screenshot of an email, in which a member of staff at the university asked them to complete a student satisfaction survey, giving a URL for completion (see Appendix A). The email contained the experimental group manipulations of the independent variables.

The first independent variable (IV) was dichotomous: emoticons were present in or absent from the email. In the emoticon-present condition, two smileys (☺) were inserted at two points, such that the email text matched the design of the emoticon-absent condition and only differed by these insertions (Appendix A). Two emoticons were used because it has been suggested to be the most frequent, appropriate number used in workplace messages (Skovholt, Grønning, and Kankaanranta 2014).

The second categorical IV was job title. Three different job titles expressed comparably low, medium, and high hierarchical job status (i.e., administrative assistant, assistant professor, and full professor). The emails were all penned by ‘Andrew Watkins’ with the job title of Andrew Watkins altered in the email signature to that of “Administrative assistant”, “Assistant professor of Business” or “Full professor of Business” in the respective experimental conditions. The three job positions were presented as a description to
participants at the beginning of the survey to clarify these terms to participants who may be unaware. To summarize, each participant first provided demographic measures (age, gender, education), then was randomly assigned to one email with or without emoticons and in which the sender had either the job title of an administrative assistant, an assistant professor, or a full professor. Following email presentation, participants completed manipulation and confound checks. Dependent variables and control variables were then measured.

Measures

Manipulation and confound checks. To check that students perceived senders with different job titles to have different levels of hierarchical status, participants rated the sender of the email on a three-item, 7-point semantic differential scale (e.g., ‘undistinguished’/‘distinguished’, $\alpha = .886$). To ensure emails were realistic with regard to communication from staff to students, participants rated the emails based on a one-item, 7-point semantic differential (‘Not at all realistic’ to ‘Extremely realistic’), amended from Chang (2006).

Dependent measures. Warmth and competence were measured with three-item, 7-point semantic differential scales amended from Fiske et al. (2002), indicating the extent to which participants perceived the email sender as warm (‘cold’/’warm’; ‘unpleasant’/’pleasant’; ‘unfriendly’/’friendly’; $\alpha = .917$) and competent (incompetent vs. competent; unqualified vs. qualified; clumsy vs. skilful; $\alpha = .844$). Behavioural intention to complete the student evaluation survey as requested by the sender was measured on a three-item Likert scale (e.g., ‘I would click the link and fill in the survey, as asked in the email, within the next couple of days’; $\alpha = .903$), adapted from Marder et al. (2016).

Control variables. We included participants’ actual emoticon use intensity, measured on a three-item, 7-point Likert scale (e.g., ‘I use emoticons very often when emailing’; $\alpha =$
Organizational citizenship was assessed through a three-item, 7-point Likert-scale (e.g., ‘I attend functions that are not required but help out others at my school/department’; $\alpha = .807$), amended from Niehoff and Moorman (1993). Relational norm orientation was found to impact assessments of CMC partners’ warmth and competence (Li et al. 2018). This was measured through a three-item, 7-point semantic differential scale (e.g., ‘formal and professional’/‘informal and friendly’; $\alpha = .823$) (Li et al. 2018; Aggarwal 2004).

**Analysis and results**

A one-way ANOVA confirmed the hierarchy manipulation. To test H1-2 a MANCOVA examined the effects of the two experimental manipulations (emoticons: present vs. absent and job title: administrative assistant, assistant professor, full professor) on perceptions of warmth and competence. Actual emoticon use, relational norm orientation, age, and gender were entered as covariates. Main effects are shown in Table 1. H1-2 were supported (see Table 2), however, no interaction effects of emoticon use and job title on perceptions of warmth ($p = .951$) or competence ($p = .276$) were found.

Whether and to what extent perceptions of warmth and competence mediated the relationship between emoticon use and students’ behavioural intentions to participate in a survey (H3a, H4a) were analysed. PROCESS, an add-on macro to SPSS (Hayes 2017), was used to examine the mediation, in parallel, of warmth and competence based on Preacher and Hayes’ (2008) bootstrapped mediation model, with 5,000 samples. The same covariates as above were entered, along with job title and organizational citizenship. The analysis supported H3a, as warmth provided a significant indirect only mediation (X. Zhao, Lynch Jr, and Chen 2010). However, we could not support H4a (see Table 3).
Study 2

Design and Participants

Study 2 was designed to support Study 1, varying the CMC setting and exploring the potential moderating role of the institutional prestige. A 2 (emoticons: present/absent) × 2 (job title: assistant professor/full professor) × 2 (institutional prestige: low/high rank) between-subjects design was utilised. Data collection method and sampling replicated that of Study 1. The survey was completed by 335 students, with 291 final responses after cleaning (as per Study 1; 184 females; 197 undergraduates, 94 postgraduates; $M_{age} = 24.23$ years, $SD = 7.59$).

Stimuli and Procedure

Participants were asked to imagine they studied at the business school of a fictitious university. One experimental group received a description of the university as high-ranking, while the other group was informed that the university was low-ranking. An edited image of a university league table supplemented the description, placing the institution in 4th and 126th position for the high/low-ranking conditions. A description of university job titles was included, whereas the administrative assistant condition was removed because it did not apply to the context of this study, dissertation supervision. Participants were presented with a vignette asking them to imagine they were a final year dissertation student with their supervisor, Andrew Watkins.

The supervisor-student relationship usually occurs over time. As such, three emails were designed: (1) the sender welcomed the student and arranged a meeting; (2) the sender confirmed the outcomes of an initial meeting and elaborated on the next steps of the student’s dissertation; and (3) the sender congratulated the student on the submission of their
dissertation and asked for two behavioural responses. Students were either requested to complete a feedback survey on the dissertation process, or contact another member of staff to assist at the next university open day. In the emoticon condition, the emails included two to three emoticons. For increased realism, students provided their first name at the start of the survey (or a pseudonym if they preferred non-disclosure), which was then piped into the email (e.g., ‘Dear Bob’). For the stimulus emails for each condition, see Appendix C.

Measures

Manipulation and confound checks. We included a two-item, 7-point semantic differential to confirm the institutional prestige manipulation, which asked participants to rate their perceptions of the university (‘poorly-ranked’/’highly ranked’; ‘very low prestige’/’very high prestige’; \( r = .845 \)). Participants’ evaluation of the realism of the scenario was also checked.

Dependent and control variables. The same DVs and covariates were measured as per Study 1, with the addition of two DVs. First, participants evaluated their respective supervisor based on the emails alone, responding to three items (‘overall supervision’; ‘ability to guide research’; ‘ability to answer questions’) on a 7-point semantic differential scale (‘poor’/’excellent’; \( \alpha = .883 \)). Second, participants indicated their intention to contact the open day coordinator (details given in the email, see Appendix C), measured using a three-item, 7-point Likert scale (e.g., ‘I would volunteer to participate in the open day to help the business school’; \( \alpha = .939 \)), adapted from Marder et al. (2016).

Analysis and results

An independent sample t-test supported the manipulation of institutional prestige. Results of a MANCOVA, which included participants’ actual emoticon use, relational norm orientation, age, and gender as covariates, and all DVs. Main effects are shown in Table 1. Results for
H1-2 were in line with those found in Study 1 (see Table 2). However, a significant interaction effect was observed between emoticon use and job title on competence. Specifically, students perceived the sender when presented as a full professor as more competent when he did not use emoticons than when he did. By contrast, students perceived an assistant professor as equally competent across the two emoticon conditions. However, no interaction for perceptions of warmth or institutional prestige was found.

Three mediation tests were conducted to analyse H3a-4b with the three DVs intention to do the survey, intention to help at the open day, and student evaluation of the supervisor. Analyses were set up as per Study 1. However, institutional prestige and job title were entered as control variables. Results for H3b and H4b were in line with Study 1. Support for H3a and H4a was also found, with warmth and competence providing a significant mediation between emoticon use and student evaluation of supervisor. Mediation results are shown in Table 3.

**Study 3**

*Design and Participants*

Study 3 was designed to test H1-4 in the context of online assignment feedback for two purposes: (1) to reinforce the findings of Studies 1 and 2, and (2) to contribute knowledge to the practice of completing feedback through VLEs, rather than restrict our findings to email communication. Other potential moderators were also examined, manipulating the effects of sender age, and communicated assessment level in electronic feedback. A 2 (emoticons: present/absent) × 2 (age: younger/older) × 2 (assessment level: lower/higher grade) between-subjects experimental design was employed. Data collection and sampling methods were as per Studies 1 and 2. Initially, 357 students completed the survey, with 301 remaining after cleaning (137 females; 236 undergraduates, 65 postgraduates; $M_{age} = 23.32$ years, $SD = 5.35$).
Stimuli and Procedure

Vignettes in the form of electronic feedback about an essay were designed. Participants were asked to imagine they studied at a fictitious business school, and were presented with electronic feedback through their VLE. Half of the participants received the information that the assistant professor who assessed their work was 29 years old, while the other half were informed that the assistant professor was 60 years old. Both groups were told this assistant professor had 5 years teaching experience. Participants then received feedback in which we varied the assessment grading, randomly assigned to the participants. One group was told that their work was satisfactory (lower grade), and the other group that their work was excellent (higher grade). The variation between these two manipulated feedback presentations was only as necessary as to establish the difference between a satisfactory piece of work and an excellent piece, keeping word count and the style of the message fixed to avoid confounds in the interpretation of the feedback beyond the intended manipulation (see Appendix D). Last, participants were randomly assigned to two emoticon conditions (feedback containing/abstaining emoticons). At the end of the feedback, participants were given an invitation to complete a survey to evaluate the course. Manipulation and confound checks, and measurements of DVs and control variables followed.

Measures

In order to check the manipulation of age, a single-item measure was included to assess the perception of the sender as being relatively young to relatively old, reported on a 7-point scale. The manipulation of assessment level was also measured on a three-item, 7-point Likert scale (e.g., ‘I believe the grade I would receive from this essay would be a very good grade’; α=.933). Realism checks were included as per Studies 1 and 2.
Analysis and results

An ANCOVA provided support for both age and assessment level manipulations. A MANCOVA was conducted, which included participants’ emoticon use, relational norm orientation, age, and gender as covariates, and all DVs to test H1-H4b. Main effects are given in Table 1. H1 was supported. However, H2 was not supported because a significant effect for competence was not observed (see Table 2). Furthermore, no significant moderation effects were found. As in Studies 1 and 2, a mediation analysis was conducted, controlling for the same covariates, but adding sender’s age and feedback assessment level as IVs. The results supported only H3a (warmth on student evaluation). H3b, H4a, and H4b were not supported (see Table 3).

Discussion

Through a series of three online experiments, this research investigated the use of emoticons in a university education setting to address the dilemma staff face when choosing to use emoticons in CMC with students. First, the results show that emoticons in CMC have a mixed effect on student impressions of staff in that they increase perceptions of warmth but decrease perceptions of competence. However, further analysis of effect sizes demonstrated the substantially greater effect emoticons have on perceptions of warmth than on those of competence in Studies 1 and 2 in the context of email CMC ($\eta^2_{s1,2(warmth)} = .238, .148, vs. \eta^2_{s1,2(comp)} = .030, .035, p < .05$), based on a Fisher transformation (Silver and Dunlap 1987).
and use of Eid, Gollwitzer, and Schmitt’s (2010) comparison of correlation tool. Study 3 was set in a different CMC environment (i.e., feedback in a VLE), and we found a significant positive effect of emoticon use on warmth but no effect on competence. The latter may be explained by the potential of a lower boundary of competence that could not be breached, associated with the perception that markers, given their responsibility, are to an extent competent. In other words, students inherently perceive markers as competent, irrespective of emoticon usage.

The present research both supports and challenges the extant theory on the use of emoticons in professional relationships. Li et al. (2018) found effect sizes of emoticon use on perceived competence and warmth of customer services representatives to be more balanced than the findings herein (e.g., $\eta^2_{\text{Warmth}} = .050$ vs. $\eta^2_{\text{Competence}} = .048$). However, where emoticon use in online customer services may be viewed as more transactional, students are often highly emotionally invested in their studies, and approachable staff members play a critical role in student life (Reid and Johnston 1999; Higgins, Hartley, and Skelton 2001). Our study supports the trade-off in positive vs. negative effects on impression formation in education (Reushle & Mitchell, 2009; Waldeck et al., 2001; Grieve et al. 2018). Though this work in education has provided a valuable contribution, it is limited by its focus on perceived outcomes of staff impression management, rather than actual behavioural or student feedback evaluation.

Our primary contribution is disentangling the trade-off within higher education, whereby we suggest the increase in warmth outweighs the decrease in perceived competence, and as such, the use of emoticons may be beneficial. Furthermore, we show that using emoticons will increase intention for students to enact invited behaviours (in the context of email communications) and improve staff evaluations arising from email communication and online feedback. However, we did not find that intention to enact invited behaviours...
increased with warmth stemming from emoticons in the context of online feedback, and we suggest that this could be due to the rather unnatural nature of inviting behaviour (i.e., to take part in a survey) when giving feedback.

Overall, within the context of our studies the increased warmth from emoticons arguably overrides decreased competence, if competence is even decreased (i.e., in online feedback). Thus, in the study of CMC within higher education literature our study finds emoticons to be an important strategic tool for impression management if the goal of communications, is (1) to be seen as warm, (2) encourage a response to an invited behaviour, or (3) increase the scores of student evaluation.

Our secondary contribution is understanding the potential moderators of the above effects that are important within higher education. Overall, we found little to no effect of age, job title, and prestige of organization of the sender. However, worth noting, in the context of a dissertation supervision relationship, a higher-status individual (i.e., full professor) suffered a greater drop in competence when using emoticons than the lower-status supervisor (i.e., assistant professor). However, the drop in competence of full professors was relatively minor, leaving them perceived as no less competent than assistant professors, and indeed both roles were still deemed to be competent, with a mean score > 5 out of 7 (i.e., most competent). Furthermore, the effect of emoticons in online feedback did not differ when the assessment level was satisfactory vs. excellent. However, we urge caution in using smileys in negative feedback as this may be seen as disingenuous. Overall, our exploration of potential moderators shows that, in the context of our studies, the benefits of emoticons are largely felt regardless of attributes of the sender and when giving neutral to positive feedback.

We make a significant practical contribution to emoticon use at universities in developing staff-student communication at a time when communication, transparency, and
objectivity are increasingly demanded by students, staff, government bodies, and ranking tables alike. Adding emoticons to the communication toolbox can help institutions reach a wider audience and drive engagement with those who may typically overlook university education and research as ‘something other people do’. Universities and university staff must not only manage impressions increasingly in CMC environments but also ensure students actually complete evaluations to satisfy external stakeholders’ demands towards public universities. We therefore suggest that staff should consider the appropriate use of emoticons in their communication with students because the positive effects on perceived warmth appear to outweigh the reductions in perceived competence, and the desired behavioural task has a greater chance of being completed.

Such an approach may be pertinent in the context of university education considering the demands of younger generations, we propose emoticons may be particularly advantageous in integrating new graduates in organizations if such informal communication is deemed appropriate. To this end, we have developed a website where we make information from this research readily available to those who wish to integrate emoticons into their communication, including access to an executive summary outlining the main findings and practical implications (see www.websiteanonymized.com).

**Limitations and Directions for Future Research**

Although we adopted an experimental multi-study design that increased internal validity and reliability, there are a number of limitations. While we advocate the use of emoticons with students to satisfy their preferences, we suggest that work is needed to explore how academicians balance professional obligations with service provision, as emoticon usage in situations where competence is key may have detrimental effect on impressions and subsequent outcomes.
In addition, while self-reported behavioural intention measures are not uncommon, they only indicate an intention; future research is needed to validate our findings by measuring actual behaviour. Moreover, we only investigated smileys because they are the most common emoticon (Park et al. 2013). However, a range of different emoticons exists, and future research should investigate the use of other emoticons, in particular those that communicate negative emoticons (e.g., ☹). Furthermore, our samples were from western institutions where culturally hierarchical relationships are softer (see Hofstede and Bond 1988). Future research should expand into different cultural contexts.

The authors confirm that there are no known conflicts of interest associated with this publication. This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.
References


Kemp, Nenagh, and Jennifer Clayton. 2017. “University Students Vary Their Use of Textese in Digital Messages to Suit the Recipient.” *Journal of Research in Reading* 40 (S1). Wiley Online Library.


Table 1. Summary of MANCOVA results of Studies 1, 2, and 3 with reported main effects, interaction effects and effects of covariates.

<table>
<thead>
<tr>
<th>Dependent variables</th>
<th>Study 1</th>
<th>Study 2</th>
<th>Study 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Warmth</td>
<td>Competence</td>
<td>Warmth</td>
</tr>
<tr>
<td>Reported statistics</td>
<td>F</td>
<td>p</td>
<td>b</td>
</tr>
<tr>
<td>Independent variables</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Main effects</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emoticons</td>
<td>97.13</td>
<td>.000</td>
<td>22.21 .000</td>
</tr>
<tr>
<td>Job title</td>
<td>1.66</td>
<td>.192</td>
<td>6.27 .002</td>
</tr>
<tr>
<td>Institutional prestige</td>
<td>0.55</td>
<td>.458</td>
<td>0.02 .897</td>
</tr>
<tr>
<td>Age of sender</td>
<td>0.08</td>
<td>.774</td>
<td>0.00 .958</td>
</tr>
<tr>
<td>Assessment level</td>
<td>339.02</td>
<td>.000</td>
<td>18.42 .000</td>
</tr>
<tr>
<td>Interaction effects</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emoticons*Job title</td>
<td>0.05</td>
<td>.951</td>
<td>1.29 .276</td>
</tr>
<tr>
<td>Emoticons*Institutional prestige</td>
<td>0.03</td>
<td>.860</td>
<td>2.02 .157</td>
</tr>
<tr>
<td>Emoticons<em>Job title</em>Institutional prestige</td>
<td>0.55</td>
<td>.459</td>
<td>0.06 .805</td>
</tr>
<tr>
<td>Emoticons*Age of sender</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emoticons*Assessment level</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emoticons<em>Age of sender</em>Assessment level</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Covariates

| Relational norm | 4.22 | .041 | 0.10 | 0.47 | .495 | 0.03 | 0.18 | .672 | 0.02 | 0.07 | .785 | -0.02 | 0.82 | .366 | -0.04 | 0.14 | .711 | 0.02 |
| Use             | 5.29 | .022 | 0.10 | 8.15 | .005 | 0.13 | 1.03 | .310 | 0.05 | 3.06 | .173 | 0.08 | 0.83 | .363 | 0.04 | 2.30 | .130 | 0.07 |
| Age             | .307 | .508 | -0.01 | 1.37 | .242 | -0.01 | 0.50 | .479 | -0.01 | 1.41 | .236 | -0.01 | 0.15 | .697 | -0.01 | 0.47 | .492 | -0.01 |
| Gender          | 1.19 | .276 | 0.14 | 0.43 | .514 | -0.09 | 0.74 | .392 | 0.11 | 1.03 | .312 | -0.16 | 4.38 | .037 | 0.25 | 0.13 | .719 | 0.05 |

The effects significant at p<.05 are bolded. Please note, mean differences for significant findings are provided in the results sections of each study and parameter estimates for covariates are provided here in the table denoted by beta (b).
Table 2. Summary of means of perceived warmth and competence in Studies 1, 2, and 3.

<table>
<thead>
<tr>
<th>Emoticon</th>
<th>Warmth</th>
<th>Competence</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Present</td>
<td>Absence</td>
</tr>
<tr>
<td>Study 1</td>
<td>5.97 (.85)</td>
<td>4.85 (.75)</td>
</tr>
<tr>
<td>Study 2</td>
<td>6.12 (.08)</td>
<td>5.30 (.08)</td>
</tr>
<tr>
<td>Study 3</td>
<td>5.30 (.08)</td>
<td>4.85 (.08)</td>
</tr>
</tbody>
</table>
Table 3. Summary of indirect effects (mediation).

<table>
<thead>
<tr>
<th>Study 1</th>
<th>DV1</th>
<th>Intent to do survey</th>
<th>F</th>
<th>R-sq</th>
<th>Eff</th>
<th>SE</th>
<th>UCI</th>
<th>LCI</th>
<th>Eff</th>
<th>SE</th>
<th>UCI</th>
<th>LCI</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>17.209</td>
<td>.200</td>
<td>.314</td>
<td>.113</td>
<td>.104</td>
<td>.548</td>
<td>n.s.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Study 2</td>
<td>DV1</td>
<td>Intent to do survey</td>
<td>4.825</td>
<td>.147</td>
<td>.139</td>
<td>.074</td>
<td>.007</td>
<td>.304</td>
<td>.082</td>
<td>.047</td>
<td>.200</td>
<td>.016</td>
</tr>
<tr>
<td></td>
<td>DV2</td>
<td>Intent for open day</td>
<td>10.820</td>
<td>.278</td>
<td>.287</td>
<td>.095</td>
<td>.116</td>
<td>.491</td>
<td>n.s.</td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>DV3</td>
<td>Student evaluation</td>
<td>15.806</td>
<td>.361</td>
<td>.253</td>
<td>.083</td>
<td>.115</td>
<td>.445</td>
<td>.120</td>
<td>.058</td>
<td>.257</td>
<td>.033</td>
</tr>
<tr>
<td>Study 3</td>
<td>DV1</td>
<td>Intent to do survey</td>
<td>n.s.</td>
<td>n.s.</td>
<td>n.s.</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>
List of Figure Captions

Figure 1. Framework and hypotheses.

Word Count, inclusive of tables, references, figure captions, endnotes: 7021 words

Appendix A: Study 1 stimuli

Administrative assistants (Emoticon Absent)

Assistant Professor (Emoticon Absent)
Dear Students,

It has been brought to our attention that there has been a lack of response to our student satisfaction survey. We need your feedback through this survey to help us improve the courses we provide and the student experience associated with those courses. The survey takes approximately 20 minutes, and your feedback will go towards helping the development of our courses.

If you are willing to participate, please click on the URL below: –
https://universityofwessex/studentsurvey2018

Thank you for your support.

Best Wishes,

Andrew

Dr. Andrew Watkins
Lecturer in Business
University of Wessex Business School

Professor (Emoticon Absent)

Administrative assistants (Emoticon Present)
Assistant Professor (Emoticon Present)
Professor (Emoticon Present)

Appendix B: Realism checks table

<table>
<thead>
<tr>
<th>Realism checks</th>
<th>Test value = 4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>t</td>
</tr>
<tr>
<td>Study 1</td>
<td>18.766</td>
</tr>
<tr>
<td>Study 2</td>
<td>25.698</td>
</tr>
<tr>
<td>Study 3</td>
<td>6.922</td>
</tr>
<tr>
<td>Study 4</td>
<td>8.364</td>
</tr>
</tbody>
</table>

Appendix C: Study 2 stimuli

Example: Dissertation email 1 (Professor Present)
Example: Dissertation email 2 (Professor Present)

Dear $(q://QID92/ChoiceTextEntryValue),

Thank you for meeting with me today. I just wanted to summarise our meeting to ensure that you know your next steps in order to progress your dissertation research.

First, you must further research the area in which you are interested in order to more fully comprehend the current state of art in knowledge for your topic.

You must then synthesise this literature in order to identify what it is that you intend to do that has not been identified as an issue previously.

When you have done the above, contact me to arrange your next meeting and we can review your findings and outline your next steps.

Best wishes

Andrew

Professor Andrew Watkins
Professor of Business
University of Wessex Business School

Example: Dissertation email 3 (Professor Present)
Appendix D: Study 3 stimuli

Example: Satisfactory assessment (Present)

This essay was written satisfactorily yet did not fully achieve the module learning outcomes. Your grasp of the essay topic and relevant literature is satisfactory. You acknowledged the key arguments to a satisfactory standard and showed little evidence of wider reading for your essay.

In applying the theoretical model to the case study, you showed a satisfactory, descriptive understanding of the framework, and a limited understanding of the associated limitations of the theory. You needed to identify alternative theories and implement them into your discussion.

The structure of your written argument was slightly clumsy and made for somewhat difficult reading. The presentation and style of the essay was satisfactory, with reasonable use of grammar, spelling and the appropriate referencing system.

Overall this essay was borderline satisfactory.

*** We are looking for your input on the development of this module. If you would be willing to rate some of the ideas we have developed with regard to the appropriateness and difficulty of this essay, please complete the survey at the following URL:  http://university.edu/module07667/development.htm ***

Example: Excellent assessment (Present)
This essay was well written and successfully achieved the module learning outcomes. Your grasp of the essay topic and relevant literature is excellent. You synthesised the key arguments to an excellent standard and showed great evidence of wider reading for your essay.

In applying the theoretical model to the case study, you showed a clear and critical understanding of the framework, as well as evidence of understanding the associated limitations of the theory. You successfully identified alternative theories and implemented them into your discussion well.

The structure of your written argument was easy to follow and made for enjoyable reading. The presentation and style of the essay was excellent, with correct use of grammar, spelling and the appropriate referencing system.

Overall this essay was extremely good/excellent.

*** We are looking for your input on the development of this module. If you would be willing to rate some of the ideas we have developed with regard to the appropriateness and difficulty of this essay, please complete the survey at the following URL:  [http://university.edu/module07667/development.htm](http://university.edu/module07667/development.htm) ***