Professional or Faux Pas?
Effects of Multicommunicating on the Analyst-User Relationship

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Abstract

An important factor that can influence the user-analyst relationship during information systems development is how analysts communicate with users. The present study examines the extent to which analyst multicommunicating behaviors during meetings with users influence perceptions of the analyst and willingness to help the analyst with subsequent tasks. A research model was developed by integrating two streams of research, namely research on user-analyst relationships and multicommunicating. Using a 2X2 factorial experimental design and video vignettes depicting a series of meetings between an analyst and a user, data was collected from 80 participants. The results indicate that when the analyst engaged in multicommunicating, the study participants perceived significantly higher levels of analyst incivility, even when the analyst’s multicommunicating did not interfere with or hamper his/her conversation with the user. In addition, perceived analyst incivility negatively influenced the participants’ willingness to help the analyst in a future task. The paper then discusses the theoretical and practical implications of the study findings.

1. Introduction

While often difficult to foster, a healthy working relationship between information systems (IS) analysts who develop an organization’s information systems and the users of these systems is an essential ingredient for system success [3, 22, 15]. Further, a key factor that can influence this relationship is how analysts communicate with users [17, 20, 35]. Yet, how analysts communicate and work is being changed by the increasing prevalence of communication technologies such as mobile email- and text-enabled devices which are giving rise to emerging workplace communication practices. One such practice is multicommunicating (MC), or being engaged in multiple overlapping conversations at the same time [32], such as text messaging while in a face-to-face meeting, emailing while on the telephone, or engaging in multiple instant messaging conversations. These emerging practices are often undertaken to increase productivity or availability [12, 32], but they can also have unintended negative consequences [33, 37], such as increased perceptions of rudeness [12]. Thus, while an analyst may pull out a mobile device and respond to email and text messages during a meeting with a user in order to enhance their own productivity and be more available to those needing to get in touch with them, this behavior may negatively impact the user-analyst relationship.

Given the above, the present study examines the extent to which analyst MC behaviors during meetings with users influence users’ perceptions of the analyst and their willingness to help the analyst with subsequent tasks. To do so, we developed a research model integrating two streams of research, namely research on user-analyst relationships and multicommunicating, and tested it via an experimental procedure in which video vignettes were used.

The present study makes several contributions. First, the integration of research on MC and user-analyst relationship provides a better understanding of such relationships. Past research on the latter topic has mostly focused on the effect of various tools and techniques for gathering information from the user [19, 26, 30, 29], transferring knowledge to the user [22], and what approaches to use when communicating with the user [7, 9]. The present study adds to this research by examining the specific manner in which the analyst communicates with the user and its influence on their relationship with users. More specifically, we found that perceptions of analyst incivility – the feeling that someone is being rude, discourteous, and displaying a lack of regard for others [2] – increased when the analyst multicommunicated during face-to-face
meetings with the user, even when the analyst’s MC did not interfere with or hamper his/her conversation with the user. That is, even when the analyst appeared to handle both conversations well and was not overly distracted, the fact that he/she was multicommitting in the user’s presence still significantly increased perceptions of the analyst’s incivility, which in turn reduced the participants’ willingness to help the analyst in a future task.

Integrating the above two streams of research also adds to MC research. First, it extends the literature by comparing MC and non-MC situations [12, 41]. Second, while past research has examined incivility as an outcome of MC [12], the present study replicates this effect through a more rigorous methodology that is less subject to mono-method bias. Moreover, the present study examines the impact of MC and incivility on helpfulness, thereby improving our understanding of an additional step in the incivility spiral [2]. Finally, the present research provides a methodological contribution as it introduces and demonstrates the usefulness of video-based vignettes which can provide greater realism than text-based vignettes, mitigating one of their important weaknesses [13].

2. Theory

2.1. The user-analyst relationship

IS development (ISD) is an inherently social process [27]. Users and analysts interact and communicate frequently over the course of IS projects [27, 17]. However, their relationship is not always an easy one due to many factors such as their different attitudes toward the system [21], lack of trust [7], interpersonal conflict [3], and communication obstacles [11]. As such, it is important to maintain a high quality user-analyst relationship throughout the ISD process – whether during requirements determination [9, 11, 14, 26], knowledge transfer between the user and analyst at the end of an implementation [22], or once ongoing operations and support have resumed [7, 28]. In order to improve user-analyst interactions past research has suggested the use of various tools, techniques, and approaches such as interviewing techniques [26], formats for user-analyst meetings [9], and structured approaches for requirements elicitation [19]. While such suggestions have been useful, the structures and guidelines they have provided remain essentially at a high, or macro-level. That is, they provide little information regarding the nature and impact of activities that more precisely describe the specific demeanors and communicative behaviors analysts can undertake, including verbal and nonverbal acts which are often critical in relationship development [10].

2.2. Multicommitting

A more fine-grained or more micro-level understanding of analyst communicative behaviors would be particularly important for emerging or increasingly frequent workplace communication practices. One such practice, multicommitting (MC), occurs when a focal individual engages in distinct communication episodes with multiple communication partners at the same time [32] and can occur using a variety of combinations of media; text messaging while in a face-to-face meeting, emailing while on the telephone, or engaging in multiple instant messaging conversations at the same time, to name just a few. Multicommitting, such as an analyst attending a project status meeting while also checking and answering emails on his or her BlackBerry, may be a common occurrence with analysts because IS personnel tend to like and use new technologies, are often among the first to embrace new IT devices, their work requires them to communicate with many different people on many different tasks, and they tend to have to be available and reachable (because of system crashes, user support, etc.).

Multicommitting may have positive effects such as improved productivity (e.g., the focal individual is able to accomplish multiple tasks simultaneously), reduced organization bottlenecks (e.g., partners or collaborators do not need to wait for the focal individual’s response in order to continue their work), conversational leveraging (e.g., information needed in one conversation can be accessed via the other conversation), increased accessibility and availability to others, and enhanced perceptions of the focal individual’s stature [12, 32, 33]. However, MC can also have negative impacts on (1) task performance, such as increased errors or reduced quality of the work performed while engaged in MC (e.g., due to lack of attention or increased confusion), and on (2) relational outcomes, such as increased perceptions of the focal individual’s incivility [12]. Past research on the effects of MC has not focused on specific industries, jobs, or tasks [12, 38, 32], and as such does not offer context-specific guidelines or a context-specific understanding of MC and its outcomes, including the particularities of the user-analyst relationship contexts and how or when analysts should engage in MC.
2.3. Integrating the two streams of research

Integrating the research on MC with research on the user-analyst relationship allows us to address the gaps of each. First, studying the effect of MC on the user-analyst relationship can provide currently lacking micro-level guidelines concerning the appropriateness of various analyst communicative behaviors. Second, anchoring an examination of MC within a well-defined and clearly delineated relationship allows us to better isolate and study different facets of this behavior. In general, integrating these two streams is likely to enable a greater understanding of the effect of emerging analyst behaviors on the user-analyst relationship.

For example, past research has shown that MC can influence perceptions of incivility [12]. When in a conversation, both verbal and nonverbal cues contain relational messages that indicate how the communicators regard each other [10] and how the communicators try to make sense of, and interpret these cues [18, 6]. When trying to interpret the actions and cues of others, the multicommunicating individual’s allocation of time is interpreted as a signal of their interest in the relationship [36]. Thus, an analyst who reaches for a cell phone or an email-enabled digital device during a conversation may be seen by users as being disinterested in the conversation or the relationship. This behavior may also signal to users that they are not worth the analyst’s full attention or that the analyst does not value the relationship [24]. Moreover, this effect may be particularly strong in user-analyst meetings given the considerable potential of such contexts for the emergence of conflicts [3].

Thus, we propose,

Hypothesis 1: IS analysts who MC while in a face-to-face meeting with a user will be perceived by the user as being less civil than analysts who do not engage in MC.

Further, the effect of MC on incivility may also depend on the focal individual’s communication performance [12]. Some communication partners do not mind a focal individual who multicommunicates as long as he/she still performs well in the conversation. However, when the focal individual makes errors, asks for repetition, or responds slowly during the conversation, the partner can develop negative perceptions regarding the focal individual since such behaviors tend to suggest to the partner that the focal individual is distracted by the second conversation he or she has engaged in. Thus, an analyst’s level of distraction – as evidenced by pauses in speech, requests for repetition, and errors – is likely to increase perceptions of the analyst’s incivility. This is also supported by research which found that decreased user decoding competence, defined as a person’s “ability to listen, be attentive and respond quickly” [22: 66], increased the arduousness of the user-analyst relationship [22]. Moreover, the link between distraction and incivility may be particularly salient to user-analyst communication contexts given the IS personnel’s reputation of seldom “listening” to users and their needs [7]. Thus, we propose,

Hypothesis 2: IS analysts who appear distracted while in a face-to-face meeting with a user will be perceived by the user as being less civil than analysts who do not appear distracted.

It is important to note that several factors may also need to be taken into consideration for H1 and H2 to hold. For example, if the analyst’s MC is closely related to the task that the user is discussing with the analyst, it is likely that the analyst will not be perceived as lacking in civility. Examples of other potential moderators might include the organizational culture regarding MC (i.e., how acceptable and common such behavior is within the organization), the existing relationship between the user and analyst, and the user’s perception of the urgency or importance of the MC for the analyst.

While the primary effects of analyst MC on user perceptions of incivility are important, there may also be indirect effects of such behaviors. As such, it would also be useful to understand the effect of analyst MC on future user-analyst interactions and tasks. Over the course of a project, user inputs are generally sought and user-analyst meetings are often held multiple times [17, 27]. However, during many ISD projects users continue to be responsible for all of their regular functional duties and to meet with analysts requires that users find time to help the project while still juggling their regular tasks. As a result, analysts might ask the users for “favors” in the form of additional information, help with reviewing their requirements or processes, or additional time for meetings. A user’s willingness to help with such extra tasks is likely to be highly relevant to a successful project, and as such, it would be important to study any indirect effects of analyst MC on users’ willingness to help with subsequent tasks.
The spiral model of incivility [2] suggests that when an individual acts rudely to another, the other may respond negatively following a “tit-for-tat” approach. Social exchange theory [8] and the norm of reciprocity [16] also suggest that “responding in kind” is one way to restore the balance in a relationship: humans respond to kindness with kindness and to affronts with either indifference or retaliation. Supporting these theories, negative relationships have been observed between rudeness and helpfulness. For example, university students were found to be less likely to help an experimenter pick up dropped items when the experimenter had previously been rude to them [31], and in the organizational context, employee perceptions of how they have been treated by coworkers were found to be positively related to workplace behaviors that directly help those coworkers [23]. Thus, we propose,

Hypothesis 3: User perceptions of analyst incivility will negatively impact their willingness to help the analyst in future tasks.

Similar to H1 and H2, other factors may also need to be taken into consideration for H3 to hold. For example, if users feel that the future tasks are important for them personally or for their organization they may be willing to help even if they felt that the analyst was rude. Examples of other potential moderators might include the user’s propensity for altruistic behavior, the time and effort required to help the analyst with the future tasks and the user’s availability.

The full research model is depicted in Figure 1. In addition to the three hypotheses, one control variable was added to our research model. The user’s general attitude and orientation toward MC may influence whether or not they perceive analyst MC as uncivil. That is, those who believe that MC is an effective way to work and an acceptable behavior will not likely think that an analyst who is engaging in multiple conversations at the same time is behaving rudely.

3. Methodology

To capture the influence of analyst MC behaviors on user perceptions of incivility and willingness to help on subsequent tasks, an experiment using video vignettes was conducted. Vignettes are thought to be appropriate for gauging judgements and capturing perceptual outcomes [40], and randomly administering different versions of a vignette can be a rigorous way to manipulate constructs of interest and measure their effects [1, 4]. A video- rather than a text-based vignette was created in order to increase the realism of the experience for the respondents, as well as the external validity of the results [39].

3.1. Method

To enhance the realism of the video vignettes, an IS analyst with close to 10 years of consulting experience was hired to develop a script that was based on an actual project and which depicted a series of meetings between an analyst and a user during ISD. The initial script was shown to two IS professionals and three non-IS professionals for feedback regarding its clarity and realism, and was subsequently edited based on their feedback. Then, a video of the script was filmed in a professional setting with two professional actors, cameramen, a soundman and a makeup crew who were blind to the study hypotheses. A variety of filming techniques were used, such as filming over the shoulder of the meeting participants, in order to induce in the viewer the feeling of being actively involved in the conversation [10].

The filmed footage was then edited to create four versions of a video of 6-7 minutes in length (the length varied depending on which of the four experimental manipulations the video operationalized) depicting a series of meetings between an analyst and a user. To minimize any potential effects of relationship history, the videos involved a zero-history relationship between the user and the analyst. To highlight that the user-analyst relationship shown in the video was ongoing, the script depicted three meetings taking place between
the user and analyst during the requirements elicitation step in the ISD life cycle. This context was selected as it is often one of the first times users and analysts work together, it is generally a very communication intensive period, and it can strongly impact later parts of the systems development process. At the end of the video, the analyst asks the user to help him with a future task.

Via editing techniques, four versions of the vignette were created to reflect the 2x2 factorial design (presence or absence of analyst MC and presence or absence of analyst distraction). In the videos with the MC condition, Richard – the analyst – uses a text-enabled mobile device (i.e. a smart phone) once during each of the three meetings while David – the user – is speaking. In the videos which incorporated the distraction condition, an additional video segment is included where the analyst (Richard) looks confused and asks the user (David) to repeat what he just said (“Sorry, I missed that … Can you repeat that last detail?”) in their first meeting, and in a subsequent meeting attempts to recap the immediately preceding comments, but makes an error which has to be corrected by the user (“So, we’re talking about 10% of customers”, “No, no, 10% of sales”). All other sections of the video were the same for all conditions.

3.2. Procedure

The four versions of the video were randomly administered to different respondents online. After reviewing the necessary ethical information, respondents clicked on a link that randomly took them to one of the four video vignettes. After watching the video, a post-video survey captured the respondents’ perceptions regarding outcomes, their attitudes, and demographic information.

3.3. Sample

The video and the survey were pretested with graduate business students in a North American university. Given that the focus of the present study was on users’ perceptions (rather than the analysts’), respondents did not need to have an IS background. We also required each respondent to be currently working in an organization in order to make sure that we would capture user reactions to analyst MC behavior that would be as realistic and typical of actual users as possible. For the main study, an email was sent to 150 employed individuals within the researchers’ personal network, and 84 responses were obtained (56%). The participants were 49% female, had 5 years of work experience on average, and their average age was 31 years. Over 80% had an undergraduate degree.

3.4. Measures

The survey scales used in this study are available in Appendix 1. Two multiple-choice questions of what actually happened in the vignette were used to check whether or not respondents had watched the entire video and had clearly understood the basic story of the meetings (i.e. the exact nature of the problem being discussed and how it was resolved). Three questions were added as checks for the MC manipulation (e.g. “During the meetings with David, Richard used a communication device”) and six questions were added as checks for the distraction manipulation (e.g. “Richard asked David to repeat his statements”).

To measure perceived incivility, the five-item communication incivility measure from [12] was modified to fit the study context (e.g. “During the meetings, Richard was rude”).

To measure willingness to help, the end of each video depicted the analyst asking the user for help on a future task:

I’m meeting next week with some people from purchasing. I heard that you used to be the manager of that department. I know you’re really busy and that you’re no longer officially responsible for purchasing, but do you think you could stay after work for a couple of hours to help me understand the purchasing processes?

Respondents were asked: If you were David, would you help Richard with his request?

The respondent’s general attitude and orientation toward MC was assessed as a control variable given that it may influence whether or not they perceive analyst MC as uncivil. It was measured via the polychronic communication orientation (PCO) scale which indicates “the cluster of values, beliefs, and attitudes that predispose a person to engage in polychronic communication and to regard polychronic communication as a good thing” ([42: 7] used in [12]). The last section of the questionnaire was used to obtain demographic information.

4. Results

Multiple checks were performed to assess the reliability and validity of the data and of our manipulations. To the two multiple-choice questions that were used to check that respondents had viewed and understood the vignette, 86% and 92% of the respondents answered each question correctly. Three
respondents who answered both questions incorrectly were eliminated from the sample. Given the highly specific nature of the two questions, and to allow for the possibility that respondents might make alternative interpretations of the information conveyed in the vignette, it was decided to keep in the sample the four respondents who answered only the first question incorrectly and the nine respondents who answered only the second question correctly. All three measures used as manipulation checks for the MC condition were significant, as were five of the six measures used as manipulation checks for the analyst distraction condition (all except DISTRACT_CK5), indicating that the experimental manipulations were successful.

An exploratory factor analysis was performed on the five items measuring incivility and the six items measuring PCO (see Table 1). Two factors emerged with all items loading greater than .70 on their own factor except for PCO2 and PCO5 (which loaded greater than .55), providing evidence of convergent validity. PCO is an existing scale and in order to enhance comparability to previous research it was not modified. All items loaded less than .18 on the other factor, providing evidence of discriminant validity. The Cronbach’s alpha reliabilities of the two constructs were .92 and .81, respectively, indicating adequate reliability. The correlations between constructs are provided in Table 2, and Table 3 provides the construct statistics as well as the construct means by experimental condition.

An ANOVA was performed to test H1 and H2 with the sample of 80 respondents (N=20 per cell, after randomly eliminating one respondent so as to obtain an equal number of observations in each experimental condition). Results indicate that analyst MC had an effect on perceived incivility (F = 14.5, p < .001) but analyst distraction did not (F = 1.8, p = .18), supporting H1 but not H2. PCO was entered as a control variable in the ANOVA and did not have an effect on incivility (F = .64, p = .43). The interaction effect of MC and distraction was also non-significant. Regression results indicate that perceived analyst incivility significantly influenced willingness to help (standardized beta = -.31, p = .006), supporting H3. While MC had no significant direct effect on willingness to help (F = 1.9, p = .18), mediation analysis via a Sobel test [25, 34, 5] found support for a significant indirect effect mediated by perceived analyst incivility (p = .006).

Table 1: Exploratory Factor Analysis

<table>
<thead>
<tr>
<th></th>
<th>INCIVIL1</th>
<th>INCIVIL4</th>
<th>INCIVIL3</th>
<th>INCIVIL5</th>
<th>INCIVIL2</th>
<th>PCO3</th>
<th>PCO4</th>
<th>PCO1</th>
<th>PCO6</th>
<th>PCO2</th>
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Table 2: Correlations

<table>
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<td>Respondent’s PCO</td>
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<td>.19</td>
<td>.81</td>
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* p < .05; ** p < .01; *** p < .001:
Diagonals (Cronbach’s alpha)

Table 3: Construct means by condition

<table>
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<tr>
<th></th>
<th>For all conditions</th>
<th>Mean for MC=0, Distractions=0</th>
<th>Mean for MC=1, Distractions=0</th>
<th>Mean for MC=0, Distractions=1</th>
<th>Mean for MC=1, Distractions=1</th>
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</thead>
<tbody>
<tr>
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<td>Mean</td>
<td>Stand. Dev.</td>
<td>Mean</td>
</tr>
<tr>
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<tr>
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<td>1.2</td>
<td>2.9</td>
<td>1.2</td>
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5. Discussion

Many macro guidelines and approaches have been proposed for improving how analysts gather information from users during the ISD process. An analyst may correctly apply the different techniques suggested in the literature but all may be for naught if they do not pay careful attention to their micro-communication behaviors. Our results suggest that MC is one such behavior that analysts need to consider carefully. As the results of the present study indicate, engaging in other communications while in a face-to-face meeting with a user resulted in increased user perceptions of the analyst’s incivility. Moreover, these increased perceptions of incivility in turn had an effect on the user’s willingness to help the analyst on future tasks. Further, perceptions of incivility arose even if the analyst did not appear to be distracted while MC. That is, just the fact that the analyst engaged in MC in the user’s presence had an effect, even when the analyst could MC well, that is without making errors, becoming confusing, or needing phrases repeated. This contradicts the reasoning “As long as I do it well, nobody will mind”.

In terms of our control variable, the respondents’ individual opinions of MC did not have an effect on their perceptions of the analyst’s incivility. As suggested by [12] it may be that while individual characteristics such as PCO are important, their effects tend to be indirect while characteristics of the MC episode itself have stronger and more direct effects on incivility.

It should be noted that there are many factors which may influence perceptions of incivility and willingness to help that were not accounted for in the present study. For example, workplace culture, relationship history, and a person’s status within the organization could all influence the outcomes of MC during a user-analyst meeting. Thus, while the findings outlined above provide an interesting base from which to begin to understand the impact of analyst MC, one should be careful in generalizing the results without taking into account the many contextual factors that may also play an important role.

These findings offer several theoretical and research contributions. First, the integration of the MC and user-analyst relationship streams of research provides a better understanding of the user-analyst relationship by examining the specific manner in which the analyst communicates with the user and its influence on their relationship. Second, it extends the MC literature by directly comparing MC and non-MC situations. Third, the present study replicates past results of the relationship between MC and incivility through a more rigorous methodology that is less subject to mono-method bias. Fourth, the present study also examines the impact of MC and incivility on helpfulness, thereby improving our understanding of an additional step in the incivility spiral [2]. Finally, the present research also provides a methodological contribution through the use of video-based vignettes in an endeavor to provide greater realism than is available via text-based vignettes.

These findings also have important and broader implications for practice. First, an understanding of the impacts of analyst MC on user perceptions and their willingness to help with subsequent tasks is important given that the user-analyst relationship is often on-going and lasts through various ISD stages of many projects. Our research adds to our understanding of the micro-dynamics of this relationship. Second, the purpose of our study was to examine MC but in fact, since the “user” in the vignette did not know what the analyst was actually doing during his MC, the present study’s findings can apply to any situation where analysts use a mobile device during a meeting. Third, we hope that this work will inspire and be useful in providing useful design guidelines for ICT devices in order to cater for the potentially negative effects of MC. For example, the findings of the present study suggest that designs which improve how well we can multitask and multicommunicate is not likely to reduce the negative relational outcomes of this behavior and thus paying further attention to relationally-sensitive designs is likely to be useful.

Although this study makes several contributions, some limitations should be noted. First, our sample is one of convenience as it relied on the researchers’ personal network. This may not be a significant problem as the only criterion for our desired sample was employed individuals with some level of work experience to represent the “users”. The demographic data suggest that the study sample was adequately representative of the desired target with participants who had 5 years of work experience on average, and an average age of 31 years. Second, our videos depicted a one-on-one meeting between an analyst and a user. Some analyst-user interactions and some MC can actually occur in a group setting rather than in one-on-one meetings, suggesting that there might be limits to the generalizability of our results. This limitation suggests an opportunity for future research. As the present study’s sample of participants were mostly from non-IS backgrounds, thereby providing a relatively accurate representation of the average IT user, it would be interesting to examine whether the
study findings are applicable to a sample of IS analysts.

The present study suggests several other opportunities for future research, including examining the effect of other emerging work patterns and technologies on the user-analyst relationship. For example, new touch-screen devices which are strongly associated and marketed with entertainment tasks in mind are crossing over into the work environment and it is important to understand their use by, and impact on analysts during the ISD process. Future studies could also examine situational factors which moderate the relationship between MC and incivility; whether the MC is related to the discussion between the user and the analyst [12]; the urgency of the MC to the analyst; and whether or not the analyst excuses himself explaining why he has to MC. Outcomes of incivility other than willingness to help can also be examined, such as the arduousness of the relationship between users and analysts [22]. Positive effects of MC during user-analyst meetings such as increased perceptions of the analyst’s productivity and increased perceptions of the analyst’s availability and responsiveness also need to be studied.

While we examined zero-history relationships, future work should examine how MC affects the user-analyst relationship over time. For example, it is possible that the effect of analyst MC on user perceptions of incivility could dissipate over time (“That’s just his personality so I know it’s not personal”) or escalate (as would be suggested by the [2] incivility spiral). Finally, while the vignettes of the present study provide initial support for the study hypotheses, these findings need to be replicated in the laboratory using individuals placed in a meeting or in actual organizational settings.

6. Conclusion

Past research that has examined the user-analyst relationship has seldom investigated the impact of micro-level and specific analyst behaviors on this relationship. The relatively recent and widespread adoption of various ICTs which enable individuals to multicommunicate underscores the need to investigate this long neglected area of research. The present paper addresses this gap by integrating two streams of research – MC and the user-analyst relationship – to develop three salient hypotheses which are then tested via an experimental approach which is original in its use of video vignettes. The findings of the study provide support for two of the three study hypotheses, and indicate that multicommunicating is likely to negatively impact the user-analyst relationship during ISD.

The present study and the testing of its three hypotheses provide only an initial step in the exploration of how the specific behavioral patterns of analysts can impact the user-analyst relationship, as well as other ISD outcomes. As discussed in the previous section, this area of research provides a multitude of potentially fruitful avenues that can be investigated. We hope that the present paper can provide a useful step in that direction.

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7. References


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Appendix: Survey scales

<table>
<thead>
<tr>
<th>Construct</th>
<th>Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>MC manipulation check</td>
<td>MC_CK1: During the first meeting with David, Richard used a communication device.</td>
</tr>
<tr>
<td></td>
<td>MC_CK2: During the second meeting with David, Richard used a communication device.</td>
</tr>
<tr>
<td></td>
<td>MC_CK3: During the third meeting with David, Richard used a communication device.</td>
</tr>
<tr>
<td>Distraction manipulation check</td>
<td>DISTRACT_CK1: Richard asked David to repeat his statements.</td>
</tr>
<tr>
<td>(adapted from [12])</td>
<td>DISTRACT_CK2: Richard seemed to miss questions or comments made by David.</td>
</tr>
<tr>
<td></td>
<td>DISTRACT_CK3: Richard seemed confused.</td>
</tr>
<tr>
<td></td>
<td>DISTRACT_CK4: Richard seemed to lose his train of thought.</td>
</tr>
<tr>
<td></td>
<td>DISTRACT_CK5: Richard’s responses were slow.</td>
</tr>
<tr>
<td></td>
<td>DISTRACT_CK6: Richard made some mistakes.</td>
</tr>
<tr>
<td>Perceived incivility</td>
<td>INCIVIL1: During the meetings, Richard was polite.</td>
</tr>
<tr>
<td>(adapted from [12])</td>
<td>INCIVIL2: During the meetings, Richard was rude.</td>
</tr>
<tr>
<td></td>
<td>INCIVIL3: During the meetings, Richard treated David with respect.</td>
</tr>
<tr>
<td></td>
<td>INCIVIL4: During the meetings, Richard treated David in a polite manner.</td>
</tr>
<tr>
<td></td>
<td>INCIVIL5: During the meetings, Richard treated David with dignity.</td>
</tr>
<tr>
<td>Willingness to help</td>
<td>HELP1: If you were David, would you help Richard with his request?</td>
</tr>
<tr>
<td>Polychronic communication orientation</td>
<td>PCO1: I like to manage multiple conversations at the same time.</td>
</tr>
<tr>
<td>[42]</td>
<td>PCO2: I would rather devote my attention to one conversation before going on to the next interaction.</td>
</tr>
<tr>
<td></td>
<td>PCO3: I believe people are most effective when they are managing multiple conversations at once.</td>
</tr>
<tr>
<td></td>
<td>PCO4: People should try to manage multiple conversations at once.</td>
</tr>
<tr>
<td></td>
<td>PCO5: It is okay to manage multiple conversations at once as long as the people you are communicating with do not know.</td>
</tr>
<tr>
<td></td>
<td>PCO6: I believe using multiple communication tools at once is an efficient way to manage conversations.</td>
</tr>
</tbody>
</table>