# Toward More Teacher-Friendly E-mail: Perspectives on the Downsides of Using E-mail for Work-based Communication in Schools

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## Abstract

E-mail is a prime tool of communication for most organizations and has, increasingly, become integrated into the organizational life of education, specifically during the recent move to online teaching due to the Covid-19 pandemic. Managing e-mail communication and usage brings challenges due to the associated downsides but these have only been investigated to a limited extent, if at all, within the school's workplace settings; necessitating a better understanding and a holistic view into this matter from teachers' perspectives as a specific group of e-mail users. This qualitative study, therefore, explores teachers' (N = 9) concerns and the difficulties they encounter in using work-based e-mail for regular communication in a private school in the United Arab Emirates and sheds light on the regulations exercised to manage these. Overall, thematic data analysis yielded two themes representing the downsides experienced and problems encountered, and how they are managed. Eight associated categories identified the following key downsides: *E-mail overload; the obligation to check e-mails constantly; distraction; wasting and extending working time; e-mail misuse, as in the case of broadcasting violations; misunderstanding; the threatening impact of e-mail when used as evidence; and issues related to confidentiality*. Practical implications and consequent future research concerning proactive e-mail practices in schools are discussed as part of the domain of educational technology and distance education, all of which will be of interest to a wider audience across other working sectors to impart a better understanding of what is still lacking and what improvements can be made, resulting in introducing new and more effective horizons for work-based communications.

**Keywords:** workplace e-mail, online communication, computer-mediated interactions, e-mail practices, school management.

## Introduction

Generally, communication entails sharing and exchanging information, as well as being a way of socializing (Ferri, 2017). Fortunately, growing technological advancements have supported various communicative interactions with the use of electronic media (*computer-mediated formats such as e-mail, chat rooms, online forums, and social networking services*). In particular, knowledge sharing via e-mail has recently been attracting increasing interest in the field of Human–Computer Interaction (HCI) and Knowledge Management (KM) (Hwang, 2011). It

is by far the most popular form of computer-mediated communication (Dabbish et al., 2005) and has been widely adopted for communication in organizational contexts worldwide. The literature highlights various useful attributes contributing to the great success of e-mail as a means of communication (Renaud et al., 2006; Szóstek, 2011). Generally, these benefits include the efficient flow and exchange of information within organizations where it is used, as well as facilitating several vital activities such as task and project management, scheduling, and social communication. For these reasons, communication in corporate organizations and professional workplace sectors is regulated primarily through e-mail (Mark et al., 2016; Sumecki et al., 2011), making it an indispensable tool for employees (Alrashed et al., 2018; Bullinger et al., 2002; Chui et al., 2012).

However, despite the attractive advantages and the pivotal role it plays, arguments over the negative impact of using e-mail still exist, challenging the traditional bright image. Lantz (2003) conducted a longitudinal study based on data collected in 1994, 1995, and 1998 to examine how the use of e-mail has changed over time in terms of problems experienced with e-mail and suggested that problems with handling e-mail are expected to increase in response to the corresponding increase in e-mail usage. Likewise, Derks and Bakker (2010) argued that although e-mail was originally thought to enable rapid communication and enhance productivity, there is increasing concern that under some conditions, the management of e-mail may get out of control, especially for organizations that rely heavily on e-mail as part of their functional infrastructure.

In this respect, educational institutions are no exception when it comes to the importance of considering the experiences and concerns of e-mail users in the workplace (Rudy, 1996). In essence, the integration of information and communication technologies (ICT) into the field of education has greatly supported the online sharing of knowledge and enhanced electronic connectivity between departments and staff (Augusto, 2009). This is particularly true in the current pandemic of Covid-19 that dramatically transformed the way we live and work, hence the

increased use of ICT for educational purposes. Although new communication media such as Microsoft Teams and instant messaging are increasingly used at work, undoubtedly e-mail remains a principal means of information transfer and organizational communication, which is very different from face-to-face communication. Indeed, it has become part of the new dynamic that characterizes distance work in educational systems in response to the Covid-19 crisis, which has affected the education sector in its entirety.

Given this professional context, members of the school (e.g., principals, administrators, teachers, working staff, and other stakeholders) regularly perform various communicative activities via e-mail for a variety of purposes (e.g., academic, functional, and social). These may include, but are not limited to: announcement of important and urgent news such as that related to external inspection visits; sharing updates and common concerns; the acknowledgment of ongoing events, communicating warnings and penalties; scheduling meetings; confirming decisions; sending reminders such as for deadlines; reporting results; and following up on the school's daily operations, all besides communication for other social purposes (e.g., greetings, appreciations, compliments, consolations). Therefore, it is becoming increasingly clear that employees working at the school may be required to have constant contact by e-mail due to the intensive use of ICT for educational purposes, consuming significant time and attention, which subsequently may potentially expose them to the associated downsides.

Since the mid-1980s, research on e-mail has varied greatly and was concerned about factors that mediate, enhance or impede the overall process of communication (e.g., Adams et al., 2000; Berghel, 1997; Bulkley & Van Alstyne, 2007; Derks & Bakker, 2010; Kushlev & Dunn, 2015; Mark et al., 2012; McCarthy et al., 2019; Rainey, 2000; Sappelli et al., 2016). Although the pros and cons of e-mail in the workplace have been reported extensively in the literature from where many issues related to the downsides of using e-mail can be extrapolated (Jackson et al., 2003), only a tiny fraction of studies have targeted academic sectors such as universities and schools,

with a specific focus on the downsides experienced from the employees' perspectives (Kushlev & Dunn, 2015), therefore, it is clear that a holistic view from the teachers' perspective is absent and this lacuna needs to be addressed. According to these considerations, in the current study, we build on this previous work by extending the issue further while addressing views on the downsides of e-mail when used as a primary electronic facilitator for regular communication within the school setting, with more focus on teachers as e-mail users. We argue that the voices and experiences of teachers in this regard have not been given sufficient attention although they are continually expressing a multiplicity of perspectives surrounding the need for more purposeful and productive online work-based communication.

To address this, we attempt to capture the teachers' perspectives by providing an exhaustive list of the downsides associated with the use of school-based e-mail in terms of problems, difficulties, challenges, and concerns. Furthermore, the study intends to examine whether the school administrative system is adapting any policy, guidelines, or regulations to help manage e-mail usage. Two main questions guided the current research:

1.      What are the teachers' perspectives on the downsides of using school-based e-mail for regular communication?
2.      What are the teachers' perspectives on the regulations that are employed to manage e-mail usage at school?


The inspiration for this study was the caution raised by Renaud et al. (2006) that users underestimate the disruptive effects of e-mail and that they must be alert to the true cost of e-mail. This drives the need for increasing awareness among researchers and practitioners concerning the problematic aspects associated with communication via school-based e-mail and its implications for their productivity and well-being, especially at the current time when the use of technology is enforced, in a broad sense, as a routine practice. We believe that school leaders and teachers share responsibility as e-mail users

for acquiring such understanding and acting accordingly. This work is, therefore, dedicated to alleviating the problems relating to the downsides of e-mail usage, and it contributes to the literature by extending the existing research on the topic to a new research population by targeting a different subset of employees—teachers in schools. Moreover, findings drawn from the current study can be further used to develop a measure to assess whether the reported downsides are generalizable to other teachers and school settings. The development of the noted instrument would be a novel contribution to the IS and KM fields. Lastly, we hope the current work may stimulate researchers, policymakers, KM systems managers and designers to develop and assess the feasibility of what a so-called "school e-mail code of conduct" might consist of. This initiative, it is believed, would help regularize and govern the associated downsides and practices, and subsequently, enhance the teachers' e-mail experiences and facilitate professional interaction through this medium in the most efficient way.

## Literature Review

Apart from the individual use of technology, the continued growth in research on Human-—Computer Interaction (HCI) has broadened its scope to highlight the transmission of knowledge across multiple users and electronic dynamics (Bullinger et al., 2002). As a consequence, attention has been paid to the examination of human experiences with the new ICT paradigm (Stephanidis et al., 2019). Of particular relevance is the case of using Computer-Mediated tools for Communication (CMC). Specifically, findings on e-mail have shown that despite the advantages, e-mail also suffers from several annoying, and in some cases, harmful downsides (Derks & Bakker, 2010), and might contribute to anxiety, troubles, difficulties, irritation, and attendant inconvenience. Building upon Hochheiser and Lazar's (2007) assertion that the needs and concerns of human users are fundamental to HCI work, it is important to consider all those troublesome issues. Next, and based on an in-depth synthesis of the previous relevant literature, we discuss e-mail downsides in

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the workplace and the factors contributing to them.

## Factors Contributing to the Downsides of E-mail

Rainey (2000) suggested that visual and acoustic elements create the greatest interpersonal impact and that the lack of these two essential components of communication results in a "defect" with e-mail. These non-verbal cues are necessary to help enhance communication, improve understanding and ensure that the intended message is conveyed correctly (Ferri, 2017) and generate trust and empathy (Roghanizad & Bohns, 2017). This problematic condition imposes a critical liability on e-mail users in that they must be fully aware of the quality of their writing while crafting the text message (Renaud et al., 2006) since such physical expressions as the tone of voice, body language, intonation, and facial expression are not supported. Therefore, e-mail may increase the risk of misinterpreting the message itself or the intentions behind it. Furthermore, it is worth noting that although the use of emoticons or smileys may improve the situation by representing the sentiments of the sender to some extent, they are never sufficient to convey the full meaning (Alberts, 2013). This dilemma leads to the emergence of a new scholarly work on the examination of the language and content expressed in text-based formats of CMC, as per *Computer-Mediated Discourse Analysis* (Herring, 2004) and *Social Network Analysis* (Freeman, 2004), besides other active lines of research that aim to understand and optimize the interactions taking place over e-mail. For instance, Sappelli et al. (2016) analyzed corporate e-mail messages and proposed a taxonomy of the tasks they serve, while Bulkley and Van Alstyne (2007) attempt to find correlations between the specific features of e-mail and the performance of its users. Moreover, indications of hierarchy in social relationships and organizations are also lacking in online mediated communication and consequently, attendant power, authority, and prestige may not be communicated appropriately, somehow resulting in equal status for everyone on the internet (Kiesler et al., 1984). Other factors also include the anonymity, invisibility, and asynchronous nature of communication, leading to less concern for group social norms, individual self-presentation and the judgment of others. Together, these contribute to communication that tends to be more depersonalized, direct, more task-oriented, and less friendly (Ghanem et al., 2013).

## Downsides of Work-Based E-mail

E-mail users encounter several widespread problems which have been noted repeatedly in scholarly work. Going back, Lantz (2003) also documented that users in 1994, 1995, and 1998 have experienced severe problems with e-mail. Although these decreased during the 5-year study period, which was attributed to the developed coping strategies and experience acquired over time in this regard, the difficulty of handing incoming e-mails and organizing mail folders (e.g., sorting, saving, and finding messages again) remains the main challenge (Whittaker & Sidner, 1996; Jones, Bock, & Brassard, 1990). More recently, literature on the topic highlights notions such as *communication slavery* (Berghel, 1997), *e-mail flaming* (Turnage, 2007), *the tyranny of e-mail* (Eichhorn, 2003), *e-mail overload* (Reinke & Chamorro-Premuzic, 2014); *e-mail stress* (Jerejian et al., 2013) and *e-mail addiction* (Marulanda-Carter & Jackson, 2012).

Given the huge volume of e-mails, Hiltz and Turoff (1985) noted that recipients may show passive reactions (responding to e-mails less accurately or incorrectly or simply ignoring them). This claim has shown to be true especially when users become overwhelmed either by the large volume of incoming and sent messages (Dabbish & Kraut, 2006) or by the amount of time spent on managing them (Sumecki et al., 2011). Many practices may also contribute to e-mail overload, the most common being sending unnecessary "CC messages" (Alberts, 2013). In this respect, several mixed-methods studies have offered rich insights into the effect of e-mail overload on the health, well-being, and productivity of users (Hogan & Fisher, 2006; Merten & Gloor, 2010; McMurtry, 2014; Reinke & Chamorro-Premuzic, 2014). Of most relevance, Hole (2008) examined the perceptions of faculty members at an American university concerning e-mail overload and found that half of the participants perceived themselves to be experiencing extreme e-mail overload. The study identified the following as key contributing

factors: e-mail volume, unknown (unread or misplaced) e-mail, decision-making in response to reading e-mail, and the correspondents' response expectations.

Besides the overwhelmingly large volume of e-mails, is so-called "e-mail stress" (Jerejian et al., 2013; Lee et al., 2009) which is generally perceived as the degree of control over the work environment (Renaud et al., 2006). In contrast to Demiridjian (2005) who indicated that e-mail is not considered a source of stress, recent studies noted that e-mail is among the top contributors to workplace stress (Akbar et al., 2019). Findings from Mark et al.'s (2016) study showed that the longer the time spent daily on e-mails, the higher the level of measured stress. Surprisingly, the expectation of an immediate response to e-mails was perceived as one source of occupational stress in universities (Gillespie et al., 2001). This is especially true in the case of an e-mail that is sent by someone with higher authority over the recipient, placing the burden of having to give a prompt response, as well as requiring the recipient to prioritize the request without delay (Renaud et al., 2006). In accord with these results, Dabbish and Kraut (2006) explained that dealing with e-mail may cause stress as it requires users to perform many additional actions, such as the need to check their inbox frequently to avoid missing important information (Alberts, 2013). On this matter, Jerejian et al.'s (2013) study on e-mail stress among a sample of Australian academics recommended further investigations into the mitigation of e-mail stress among teachers. At this point, it is important to note that regardless of the intermediating impact of individual factors on the degree of stress experienced (Bullinger et al., 2002; Seppala, 2001) such as age, level of education, and ICT skills, these findings are consistent with the previous research on the effect of stress on human performance in terms of anxiety, anger, depression, and demotivated performance (Lee et al., 2009).

Moreover, switching between tasks because of distractions caused by e-mail has been linked to an increase in stress (Mark et al., 2012) which, in turn, may reduce productivity due to the interruptive nature of e-mail (McMurtry, 2014). For instance, the incoming e-mails may ask for a new task, demand for action, or requests for information that are dependent on input or decisions from other people who may not be immediately available (Thomas et al., 2006). Interestingly, a critical finding shows that employees who stop working on their tasks to check e-mails require an average of 68 seconds to recover from the interruption and restart the original task, resulting in "task fragmentation" (Marulanda-Carter & Jackson, 2012). Similarly, Jackson, Dawson, and Wilson (2003) reported a period of an average of 64 seconds for employees to return to their work. In contrast, Mark et al. (2012) found that employees who worked without e-mail for five days were more focused on their tasks and multitasked less, and consequently, have experienced less fragmented workflows. Recently, Blank et al. (2020) found that continual e-mail interruptions and multitasking (batching) over long periods give rise to sadness, fear, anger, and stress, and when these negative emotional responses accumulate daily, they may be unhealthy.

In addition to the above, sending an e-mail to the wrong recipient can be troublesome, especially when the content is confidential (Austin, 2006). E-mail flaming also has been noted in the literature (Turnage, 2007); this entails sending hostile or insulting messages. Moreover, misunderstanding the received message and constructing faulty meanings also could be an issue, as explained earlier. For instance, if the recipient does not respond or comment within a relatively short time, this could be understood as a sign of disagreement or resentment (Severinson Eklundh, 1994). This means, then, that both the "written words" and "silence" are liable to misinterpretation. Finally, issues related to privacy, security, and ethics have been stressed globally concerning the use of technology in general (Stephanidis et al., 2019).

Taken as a whole, it should be noted that the above-reported downsides of e-mail are certainly not the only ones and are largely dependent on the situational and dispositional factors that characterize the workplace. We argue that new advancements, demands, and practices will give rise to new, unfamiliar concerns. However, e-mail downsides that we are currently experiencing draw attention to the point that using e-mail for

communication purposes must be accompanied by an extremely high level of awareness, professionalism, and caution. To this end, it becomes clear that the topic of e-mail downsides at work requires further exploration due to their significant impact on employees' well-being and productivity. This study addresses a gap in the literature by extending the topic to a specific group of e-mail users, namely, teachers working in schools.

## Methodology

### *Research Design*

Methodologically, the present study is qualitative and underpinned by a phenomenological approach. The approach adopted is found to be appropriate because it gives voice to participants and allows the researchers to uncover the meanings behind their experiences (Creswell, 2017), and thereby helps in the understanding of teachers' experiences in greater depth compared to other data collection methods (Cohen et al., 2011). Furthermore, the methodological approach presented here is underpinned by a constructionist epistemology in which the meanings of realities are individually constructed by participants and thus, are local and specific to them in nature (Cohen et al., 2011).

The study took place in a private school in a major city of the United Arab Emirates during the school year 2019–2020. The selected school relies heavily on e-mail for communication both during and outside of the normal working hours. All employees at the school across the different work categories have access to the school's e-mail system (school domain account on Gmail), and each has an individual school-based e-mail account created by the Information Technology (IT) personnel. E-mail addresses for all school members are added to the established contact list, so they can be located easily. Some of the working staff access e-mails solely through their personal computers (laptops) while others use their mobile phones as well. E-mail is often used in the school for multiple purposes among different working staff including the school principal, administrative staff, teachers, and supervisors. Such purposes include asking questions, replying to requests,

requesting or exchanging work-related documents, and scheduling or planning (e.g., meetings, events, informal occasions). Messages containing important information are usually stored by the teachers for later retrieval.

Given that we seek to understand a phenomenon in detail by obtaining in-depth information from a few people who are believed to be key informants to the topic of the study, purposive sampling was utilized to allow the selection of participants who were able to offer rich information about the phenomenon being investigated (Creswell, 2017). Our target sample size was between three and ten participants based on the recommendations by Creswell (2013), thus, the sample included nine teachers who were purposefully selected from the same school so the effect of the school management system and culture of e-mail usage would be predetermined. This number was feasible for contacting them and has resulted in collecting dense and varied data. All selected participants were regular users of the school e-mail, hence they were already naturally experiencing the phenomena being investigated. They dealt with e-mails daily to stay up to date with ongoing administrative issues (i.e., memos, clarifications, notifications, announcements, and task allocation). In addition, they use e-mail for reciprocal communication and coordination between the school principal, administration, other teachers and working staff. The demographics of the participants varied to ensure diversity so multiple views are adequately represented. The sample varied in terms of gender (two males and seven females), age (between 26 and 42 years), years of teaching experience (between 7 and 26 years), the subject taught (sciences, mathematics, English, and IT). Of these, six teachers had attained a Bachelor's degree level of education and three teachers had a master's degree. Most participants were teachers of lower grades, three of middle grades, and two of upper grades.

### *Data Collection Procedure*

Semi-structured interviews were conducted to gather data on the topic and other related issues that may arise during the conversation with

participants, and thus, allowed the participants to articulate the essence of their experiences (Creswell, 2013), as well as generating greater depth than other data collection methods (Cohen et al., 2011). The semi-structured format was chosen because it enriches the interaction by affording opportunities to elicit additional information if initial answers are incomplete, vague, not relevant, or not specific enough (Mackey & Gass, 2016). Using the guidelines for interviewing provided by Gay et al. (2011), a semi-structured interview guide was developed with a set of open-ended questions (Appendix A). Two education professors from the faculty performed a critical review and examination of the initial draft protocol. The interview protocol was also piloted with three teachers who were representative of participants in the study to test its clarity and improve the interview guide. Minor adjustments were applied to the questions following the piloting.

Interviews consisted of five core questions. The first three questions (Q1–3) asked teachers to describe the extent to which they believed they were experiencing e-mail overload at work, and to what extent they considered school e-mail a source of stress:

*1.       To what extent do you believe that you are experiencing e-mail overload at your work?*
*2.       When do you access school e-mails? for what purposes?*
*3.       To what extent do you believe that the work e-mails are a source of stress for you?*

For Q4, the respondents were asked to reflect on their experiences and share incidents that illustrate the downsides they encounter while using school e-mail for regular communication. The final question (Q5) concerned the policies, rules, guidelines, or any training sessions offered by the school to manage the use of e-mail.

As an ethical consideration, participants were informed of their rights concerning the study to ensure their full understanding of the study's nature and its requirements, and written consent

was obtained before they participated in the study (Appendix B). Online interviews were arranged ahead at a time that was convenient for the participants and most of them were outside of the school hours due to teachers' overloaded schedules. The interviews lasted 25–35 minutes and were conducted in English as it is the language used for teaching at the school, and therefore, was appropriate for all participants. This was advantageous as it allowed the exact words from their accounts to be directly reported to minimize any bias that might occur during translation. Besides the handwritten notes, interviews were audiotaped as per interviewees' permission so that they could be accurately transcribed at a later stage. The confidentiality of the data obtained was assured and the participants were anonymized.

### *Data Analysis*

After the recordings had been transcribed, transcripts were then analyzed thematically to draw out patterns of experiences (Braun & Clarke, 2006). During the analysis stage, emerging themes, similarities, and differences in the data were manually identified for each question, and then were discussed and related to previous studies. The coding process was carried out as follows: First, the transcriptions were read to obtain an overall understanding of the interviewees' responsesand to make sense of the data. Second, key words/phrases in the text that seemed to capture the participant's perspective were identified and labeled for responses corresponding to each question. These were used to categorize all of the downsides and other relevant information that the participants mentioned in the interview. At this stage, the researchers tried to be unbiased to adequately and objectively present divergent opinions. They gave equal attention to each segment in the transcripts while putting aside any personal judgments regarding the value of each opinion or input to ensure that no information was overlooked, devalued, or omitted (Creswell, 2013). However, some codes were found to be irrelevant and were, therefore, eliminated. These included statements that were not representative of the phenomenon examined or were not aligned with the research questions. At the same time, new, important ideas

that came out of the interviewees' answers were considered alongside the other relevant codes. The remaining codes were then sorted and grouped into themes and sub-categories according to their importance (in terms of the frequency with which they were reported by the participants) and were presented in the discussion section accordingly. Finally, insightful connections between the results were established. Moreover, the individual accounts were compared to identify commonalities, as well as to adequately and objectively present divergent opinions. Informative quotes and examples were cited for each category to demonstrate the integrity of the findings. Concerning the credibility and trustworthiness of the findings, first, the interview protocol was structured with open-ended questions that were not intended to lead respondents in one direction or another. An expert researcher, other than the one who conducted the interviews, who has considerable experience in conducting interviews and reviewing transcripts reviewed the transcripts and the independently generated themes, categories, and initial interpretation. Also, member checking was done with the teachers on completion of the interview so the interpretations and reported accounts were confirmed. Also, to avoid influencing the participants, the interviewer did not share personal perspectives, experiences, or beliefs regarding the study topic with participants before or during interviews, and was fully conscious of the need to use only open-ended questions that are not misleading (Gay et al., 2011).

## Results

The thematic analysis resulted in two key themes: *the downsides of e-mail experienced and the problems encountered, and the management of those e-mail downsides.* These and the sub-categories under each are presented and further discussed below.

### *Theme 1: The Downsides of E-mail Experienced and the Problems Encountered*

The findings generated several categories representing the problematic issues encountered by participants when dealing with school e-mail: *E-mail overload; the obligation toward consistent checking of e-mails; distraction; wasting and extending working time; e-mail misuse as in the case of broadcasting violations; misunderstanding; the threatening impact of e-mail when used as evidence; and issues related to confidentially.*

Table (1) below presents the emerging categories and relevant codes on the downsides of e-mail experienced.

Table (1). Interview categories and relevant codes on the downsides of e-mail experienced.

| Categories | Codes from Teachers' Accounts |
|---|---|
| E-mail overload | - *the large number of e-mails.* <br><br> - *e-mails coming from different people (Internal/external sources).* <br><br> - *e-mails serving different purposes.* <br><br> - *commitment to constant e-mail checking.* |
| Obligation toward e-mail checking | - *expectations regarding checking and responding to incoming e-mail daily.* <br><br> - *the mandatory use of school e-mail.* <br><br> - *being behind, not updated, or blamed if e-mails are not checked.* |

| Source of distraction | - *e-mail causes distraction.*<br><br>- *messages demanding an urgent response or immediate action.* |
|---|---|
| Wasting and extending the working time | - *e-mails are unpredictable and may arrive at any time.*<br><br>- *checking e-mails during weekdays and weekends.*<br><br>- *checking e-mails during or after working hours.*<br><br>- *sharing plans and other teaching materials for the coming week.*<br><br>- *waiting for a long time to receive a response.*<br><br>- *long e-mails that include detailed instructions.*<br><br>- *the importance of "e-mail title."* |
| Misuse | - *e-mail broadcasting.*<br><br>- *the acknowledgment of serious violations and the associated penalties.*<br><br>- *the acknowledgment of mistakes.*<br><br>- *the "demanding" language used in e-mail.*<br><br>- *messages for blaming purposes.*<br><br>- *cases where school-relevant content is mistakenly or illegally forwarded to or shared with people outside the school community.* |
| Misunderstanding | - *misunderstanding the e-mail text.*<br><br>- *mistaken interpretations of e-mail text as a complaint, criticism, or offense.* |
| Evidence | - *e-mail as evidence of having the communication.*<br><br>- *evidence that the requested work has been submitted.*<br><br>- *copying e-mails to a third party who has higher authority.*<br><br>- *copying e-mails to acknowledge late submissions, parents' complaints, or performance errors to the admin.* |
| Confidentiality | - *the school e-mail account is not personal.*<br><br>- *activities on e-mail accounts can be monitored.* |

*E-mail overload*

There was a spectrum of views about the extent to which teachers believed they were experiencing e-mail overload at work. Participants indicated that they usually receive a large number of e-mails coming from different people (e.g., *the school principal, vice-principal, head of department, HR department, IT technician, activity coordinator, and social workers*). This is besides those other e-mails coming from external sources (e.g., *forwarded e-mails from the Ministry of Education)*. Typically, the e-mail inbox fills up

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quickly during the first month of the academic year with information and instructions communicated by the school to both the old and new staff. These e-mails serve different purposes, such as sending teaching schedules, announcements of meetings and professional development activities. This was specifically problematic for teachers who are involved in different school activities or are assigned many responsibilities because they inevitably receive more e-mails. Some teachers reflected a great deal of commitment to responding to the demand for constant e-mail checking compared to others while other participants believed that the number of e-mails they received seemed reasonable and manageable.

### *The obligation toward consistent checking of e-mails*

Interestingly, participants offered similar explanations for the shared experience of e-mail overload, that they were expected to check and respond to the received e-mail daily. In this regard, one participant stated:

*"I must read the incoming e-mails; they provide me with important information that I should know, like about the assigned duties for the school activities and events, schedules of invigilation, as well as updates on on-going changes."* She further expressed *"reading school e-mails is a must, we even need to connect e-mails to our mobiles; there is no excuse for not reading them."* Another teacher echoed the same expression concerning the mandatory use of school e-mail: "*We have to check our e-mails because the school has a tracking system to check whether or not we are opening the received messages."* When we probed for more details on the rationale behind that, the same teacher explained:

*I believe that the school must do it because some teachers do not take it seriously and do not bother to go over their e-mails carefully; because of that, they might enter their classes and teach without having any idea about what's going on in the school. For example, just today, one teacher was supervising students in the wrong location during the break because she hadn't checked the updated schedule for break duty; she was still following the*

*allocation of the old schedule. Many complications also occur when they don't read the instructions set by the admin for occasions like the international open day or invigilation during the exams. All needed details are fully explained in the e-mail, and it is usually sent a few days before the event time, so it's our responsibility to read and understand the planned program and the assigned roles.*

Participants, though, reflected the concern of being behind or blamed if e-mails are not checked.

### *E-mail as a source of distraction*

Many participants noted that e-mail causes distractions. The consensus was especially on messages demanding an urgent response or immediate action, such as those headed *"urgent*," and e-mails with delegated tasks coming from the administration, which cannot be ignored. For instance, participants mentioned the e-mails received from the Human Resources Department which may ask for certain documents, or to fill in forms and send them back as soon as possible, and usually, they end up with statements like "*I need ... today no later than noon."* In this regard, one participant commented: "*e-mails are another work for me*." Participants expressed the issue of being torn between the need to reply and multitasking with other work tasks within the limited time they have during their break periods. They believed that such e-mails must be sent earlier to allow time to follow up and complete.

### *Wasting and extending the working time*

Time consumption was another concern for almost all of the participants. In this regard, the analysis showed that work-based e-mails are unpredictable and may arrive at any time, including weekdays and weekends, during or after working hours. Therefore, e-mails are checked while at school, or after then, at least once a day. This has been exemplified by the following statement: "*I'm constantly on-call."* Another teacher stated, *"even at home, I receive work from my HOD."* At this point, interesting discussions arose regarding sharing plans and other teaching materials for the

coming week via e-mail during Fridays and Saturdays (the weekend). Although it seemed a common practice, some teachers were not in favor of it. They believed that preparations need to be submitted earlier before the end of the week for two reasons: to provide other teachers enough time to view them during the week, and most importantly, they considered it a sort of respect for others' personal lives: "*I don't like to bother people on their weekends; they deserve to have a break; this is impolite and selfish behavior.*" Additionally, the informant noted that it is sometimes difficult to wait for long for a response, especially when the information or confirmation is needed urgently. Direct contact with the other person was preferred in such cases. Also, they recommended avoiding sending long e-mails that include detailed instructions and stressed the importance of the *"e-mail title"* since this can help predict the e-mail content, and therefore, permit teachers to prioritize which to deal with at the moment, which to put aside for a while, and which to at least partially ignore.

*Misuse*

Unexpectedly, one participant commented: "*some teachers play around over e-mails*" and expressed this in a wearied tone. A reported example was when an e-mail is sent for the whole school/department to praise teachers who performed as expected (with the names mentioned in the e-mail) but to signal others who did not. Responses also highlighted the issue of e-mail broadcasting, such as broadcasting an e-mail for all school members although it concerns one particular teacher or department. Likewise, the case of warnings broadcast to all in response to an individual incident. For example, the acknowledgment of a serious violation and the associated penalties in the quest for attracting the attention of all school staff so that such incidents are avoided in the future. Although the name of the person is not overtly mentioned in these e-mails, teachers were found not to welcome such reactions. They believed that acknowledging mistakes, violations, or inappropriate attitudes publicizes private information which should not be shared openly, thereby causing anxiety.

The "demanding" language used in e-mails was another reported issue leading to conflict or miscommunication: "*some messages come in the form of unnegotiable orders, for example, messages like—I assigned you to cover Mr. Osama's Class …, You will accompany students on a think-science competition, or, I am expecting to receive students' mark sheets by today…*" Interestingly, one participant claimed that the manner a person follows in real practical life while communicating with others is reflected in their e-mail writing style. Another participant noted, "although *some school members are in leading positions, they lack the skill of writing motivating messages, or at least, how to ask kindly, you know, words can inspire.*" Moreover, messages for blaming purposes such as '*I was disappointed that you ….*' were perceived as a trigger of frustration. Finally, cases in which school-relevant content is mistakenly, or illegally forwarded to or shared with people outside the school community were noted.

*Misunderstanding*

Teachers have also expressed concern that an e-mail text could be misunderstood and recalled previous occasions when some of their written messages were mistakenly interpreted as a "complaint, criticism, or even as an offense." In this regard, one participant seemed somehow skeptical about whether such misrepresentations are made intentionally suggesting that even when the point made in the written message is straightforward, it could be distorted on purpose.

*E-mail as threatening evidence*

Besides being a tool of communication, e-mail messages may also act as evidence of having the communication, in other words, as proof that a message has been conveyed or that the requested work has been submitted. It is common to copy e-mails to a third party who has higher authority (*e.g., the head of the department*). Alternatively, department heads copy to the school vice-principal (VP) or school principal to show that the

work is followed up with their staff. Furthermore, copied e-mails are also used to acknowledge teachers' late submissions, parents' complaints, or performance errors to the administration. In these scenarios, e-mail puts teachers under threat and causes harassment.

*Confidentiality*

Issues related to confidentiality were also expressed. Generally, teachers were found to be aware that the school account is not personal and that it is an official means of communication for school-related work, and thus, their activities on e-mail accounts can be monitored. One participant expressed her fear commenting "*we don't freely express our opinions in school e-mails.*" In this regard, the lack of privacy and issues of safety are globally considered one of the biggest risks associated with e-mail as e-mails can be easily forwarded to others. Even when e-mails are deleted, a backup copy is always stored on a server and can be retrieved by an interested party. No further investigation on this issue was conducted regarding the school's access to teachers' e-mail accounts, as this was literal to our current focus.

***Theme 2: The Management of E-mail Downsides***

The second research question set about exploring whether any special policies, rules, guidelines, or training sessions were offered by the school to manage e-mail downsides. The interviewees gave an account of actions they had taken or regulations they had witnessed in force in this regard. Participants indicated that there was no special policy with clearly defined formal instructions to manage the use of school e-mail. However, participants reported several relevant rules. One was related to e-mail broadcasting as this was a forbidden act and restricted to particular individuals such as the principal and VP. Moreover, participants indicated that they had not received relevant training on the use of e-mail. Such training was perceived as not important since teachers indicated their familiarity with how to use e-mail.

A pleasing finding was that teachers shared strategies they had developed to manage their use of school e-mail, such as allocating specific blocks of time to view and respond to e-mails each day. Some had devoted the last zero-hour period to handle all new e-mails (zero-hour is an obligatory extended hour added after the last period for professional development sessions and meetings). Additionally, teachers wished to have more face-to-face interaction in the staffroom or during school meetings. They proposed alternative ways in which the school might inform them about duties of substitution as such information, it was believed, should be conveyed in person to ensure that the message is received instead of sending it via e-mail, especially since they are sometimes sent the day before in the evening, or early morning on the day in question. Displaying duties of substitution of the day on a board in the reception area beside the attendance fingerprint was also noted as it is an area that all teachers are expected to pass through on arrival at the school. Likewise, participants mentioned that e-mail is not the proper way to submit requests for urgent meetings (e.g., with parents) as it was often difficult to attend these because teachers are mostly only able to check e-mails during free periods.

**Discussion**

From the data presented earlier, it appears that teachers use their school e-mail accounts most frequently for sharing preparation, besides other work-related purposes. It is expected that e-mail is commonly used in highly diverse ways, and for a variety of functions across different contexts, as well as among different members within the same setting (Dabbish et al., 2005). The demand placed on e-mail usage differed in degree based on the job position, workload and involvements. A similar result was reported by Sarrafzadeh et al. (2019) who also found that e-mail users' behaviors, such as the decision to defer e-mails, depend on the user's workload. Relating both findings to our context, school working staff in management or leading positions indicated receiving more e-mails, some of which request approvals for taking immediate action, or messages that need a quick reply. Hence, the role fulfilled by an employee in

the school has to be taken into consideration when examining employees' use of work-based e-mail.

However, other teachers have given the issue much less attention as they appeared to devalue the necessity of communication via school e-mail and seemed to lack awareness concerning their role in the process. This finding reflects the effect of teachers' personal beliefs in how they perceive and engage with e-mail which, in turn, showcases the importance of seeking to explore the individual differences of the e-mail users and the extent to which these may shape their behaviors concerning e-mail receptivity and usage (Alrashed et al., 2018). This concurs with Palak and Walls' (2009) finding stressing the need to take teachers' beliefs and characteristics regarding e-mail usage into account. Consistent with that, Fishbein and Ajzen's (1975) theory of reasoned action affirms that the perceived usefulness is influenced by the individual beliefs, directing one's attitude, and thereby, behaviors. Also, the analysis showed that the distinct ways in which teachers may interact with e-mails were also attributed to factors relating to the value of the incoming messages, for instance, the importance of the embedded content (e.g., sharing vital instructions, acknowledging urgent information, or requesting necessary documents). Also, the importance of the coming e-mail may be linked to the importance of the sender as Sarrafzadeh et al. (2019) explained.

Moreover, and drawing on the social influence theory which explains the influence of social factors on individual behavior (Becker, Randall, & Riegel, 1995), the current findings may suggest that the apparent compliance of the teachers in terms of checking and responding to the incoming e-mails is primarily a result of the pressure imposed by the school. This practice was mandatory and controlled, rather than voluntary, and the teacher's commitment in this regard was monitored and tracked by the school. There may be many explanations for such regulations, one that the school relies basically on the e-mail medium for communicating important ongoing issues, and therefore, held the teachers accountable for being informed about these from the incoming e-mails sent to their accounts. This obligation, however, seemed to impose an extra burden on the teachers. Furthermore, it could be

related to the teachers' belief structure, that the value and the importance of such communicative practice on the overall performance of the school regulations, as a whole, as well as for their productivity is not well appreciated or understood by all the members of staff at the school. For instance, teachers may lack awareness regarding the undesirable disruptions, delays, potential consequences and other serious implications that may exist when the e-mails received are not given the proper care. Indeed, the proactive commitment of users toward communicating and sharing knowledge via e-mail is a crucial factor for KM success (Dyer & McDonough, 2001; Hwang, 2011). Critically, such attitudes and commitment toward work e-mail then needs to stem from one's intrinsic motivation and should be mainly self-managed rather than imposed by an external formal authority. Fostering such awareness and motivation to drive teachers' proactive engagement and involvement in this respect is a very important research issue for the IS community (Bock et al., 2005). Therefore, we argue that drawing teachers' attention to the "rationale" behind the practice itself shall be the starting point toward stimulating their commitment. Nonetheless, teachers should not be expected to value the practice of collaborative interaction via school-based e-mail unless e-mails are utilized for real value. The main drawback here, however, is when e-mails are used for no worthwhile reasons, calling for a conscious reconsideration of every single e-mail before pressing the "send" button.

Additionally, the findings were generally consistent with previous research that e-mail contributes to workplace stress and interruptions (Akbar et al., 2019). This was mainly due to the expectation that teachers should check and respond to e-mail regularly, apart from the fear of 'messing up' important information. This signaled the point that the large volume of received e-mails was not the main concern, but instead, it was the need to give a prompt response to the received e-mail. This finding is supportive of the work of Gillespie et al. (2001) who concluded that expectations of immediate responses to the e-mail were perceived as one source of occupational stress in universities. Perhaps this is because people feel obliged to answer a message as soon

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as they receive it (Bannon, 1986), even though it is realistically expected that the sender is not supposed to send an instant response (Renaud, Ramsay, & Hair, 2006). Such a widely-shared impression among e-mail senders that people can be reached quickly and easily is attributed to the "asynchronous" feature of electronic mails (Manger, Wicklund, & Eikeland, 2003) which, in turn, produces a similar response expectation of an immediate answer in the minds of the users.

Expectedly, the current findings reflected shared belief among the participant teachers that it is neither reasonable nor possible to constantly check their e-mail at school, or indeed at home. In harmony with that, receiving e-mails openly throughout the day was also found to be a source of inconvenience. Interestingly, Demiridjian (2005) called that the "pandemic" associated with e-mail, such as the case when students increasingly expect professors to be available on a 24-hour basis. Linking mobile phones to e-mail accounts and the use of alerts to notify e-mail arrival all made the situation even worse. Kushlev and Dunn (2015) similarly spoke of this concern explaining that every incoming e-mail demands attention as it may require minutes to read, minutes to compose a reply, and probably even more minutes to meet the request. From a well-being perspective, such overwhelming intrusions of e-mail into our lives extended the daily working hours, and most importantly, reduced employees' well-being (Renaud et al., 2006). The "unbounded" access to e-mail in terms of time and location, as Barley et al. (2011) mentioned, blurs the line between work and home life, resulting in an increased burden on modern workers (McCurry, 2014), which is quite challenging and problematic.

Of particular interest in the current results is the issue of e-mail misuse as many of the participants expressed feelings of discomfort toward acknowledging violations or incidents via broadcast e-mail, as well as the use of CC as evidence in a negative way, all of which contribute to their dissatisfaction. Parmaxi et al. (2017) stressed the point that issues related to privacy and the user's rights are considered more crucial when they concern sensitive e-mail user groups, such as the context of school communities. This

consideration aligned perfectly with Stephanidis et al.'s (2019) insightful argument that the usage of any technological tool must be in support of humans' health, well-being, control, safety, and ethics. Of the most recent, McCarthy et al. (2019) have also made a fruitful contribution to this matter by addressing the issue of how e-mail is used and misused by employees. Together, these findings emphasize that messages need to be sent carefully to the targeted recipients, and caution needs to be exercised, particularly in the case of broadcast e-mails, to adhere to privacy rules and user rights accompanying the e-mail canon.

It was also interesting that teachers indicated that they coped, to some extent, with the problematic issues encountered resulting from the use of school e-mail by devoting a specific time to checking e-mails and prioritizing them according to their importance. Although the reported techniques may appear simple as they were separate from the ability to deal with the more challenging technical issues *(*e.g., how to customize the e-mail user interface to meet individual needs and demands), they demonstrate a sort of smart management in terms of e-mail batching. According to Bälter (1998), the development of such adaptive behavior over time by the users regarding strategies for organizing e-mail usage is axiomatic. Furthermore, substituting direct interaction (e.g., in the staffroom or during school meetings) for e-mail was more favorable for participants, especially in the case of conveying urgent information needing an immediate response. This preference is somehow justifiable given that exchanging opinions via face-to-face interaction has proven to be instructive at various levels as the communication through e-mail does not always provide similar opportunities to freely express, understand and negotiate the points discussed and to resolve any conflict or misunderstanding (Reinke & Chamorro-Premuzic, 2014). This is especially true when consensus is needed over some controversial matter. It is advisable, therefore, for schools to consider more opportunities for direct contact, especially in the case of negotiable work-related issues.

Finally, a critical finding that emerged from the analysis indicated that the participants did not

perceive the need for relevant training in the area of e-mail usage as important, hence, it is not an area of focus as part of the school's professional development plan. While employees generally may lack the awareness that there is much to learn about e-mail beyond the basic skills of opening and sending messages or uploading attachments, e-mail is indeed a difficult tool to use efficiently (Jackson et al., 2003), and effective inbox management is still one of the main challenges facing workers who constantly interact via e-mail (Sarrafzadeh et al., 2019). Due to that, successful communication via e-mail requires a technological knowledge base of professional and technical skills, such as "effective e-mail writing, customizing accounts, inbox organization, using the available smart features, and understanding issues related to privacy and online professional ethics." Above these is the awareness of the associated downsides and potential problems or risks, alongside the expertise to reduce and manage these. Delivering customized seminars targeting these provisions surrounding e-mail and their impact on the effectiveness of e-mail is paramount in a corporate community to raise employees' awareness (Davis & Tabor-Hartley, 2003; Marulanda-Carter & Jackson, 2012; Kushlev & Dunn, 2015).

### Implication for Practice

Taking the overall findings into account, and in line with the growing body of literature on CMC as becoming a dominant means of professional interaction (e.g., Bock et al., 2005; Wasko & Faraj, 2005), this work has implications for how e-mail users in the workplace are likely to view the associated problematic issues within the school context, as well as factors that may have caused them. As the online medium becomes more universally integrated into educational institutions, the above challenges need to be considered, as well as their impact on the productivity and well-being of the staff. Thus, leaders need to consider these to improve existing e-mail behaviors while adopting healthier practices in the workplace. This is important, given that the reported downsides appeared to relate to the practices employed, rather than to the e-mail device itself. At first, there is a need to

improve the perceived value and usefulness of e-mail, which subsequently influence teachers' attitudes and their level of engagement with work-based e-mail.

Second, and given that the focus of HCI has traditionally been about how to serve users' needs in the best possible way (Stephanidis et al., 2019), the current findings may serve as a foundation for the establishment of a relevant policy or guidelines, or a "school e-mail code of conduct," which addresses the commonly shared concerns and sets formal rules to better manage the potential downsides experienced by the teachers to best meet their needs within this particular setting, and ultimately, to better support the tasks e-mail serves in the school. Such guidelines need to set clear instructions on how, when, and for what specific purposes e-mail should be used for school-based communication. Without such intervention, the disadvantages may outweigh the benefits, turning e-mail into a source of annoyance. This step is believed to propose new, worthwhile, innovative directions as it may stimulate researchers, policymakers, KM systems managers and designers to develop and assess the provisions of e-mail best practices in schools, leading to a more "teacher-friendly e-mail," and better online communication in a professional environment improving productivity and securing employees' well-being.

Lastly, and as part of the school's continuous professional development plan, specialized training sessions are encouraged to communicate these guidelines and rules, and to equip teachers with the needed support (whether on relevant technical or professional provisions). According to Mahmud and Ismail (2010), although many teachers had a moderate level of basic ICT knowledge and skills, they were less familiar with the internet and e-mail applications. Customizing the training to best fit with the specific context of the school and the technological capabilities of the teacher groups is necessary (Bullinger et al., 2002). By doing so, teachers will become more professional and confident in adapting the appropriate ways and communicative approaches to interact with work colleagues and subordinates. To this end, having the competency of using e-mail effectively in the workplace is undoubtedly

an important and key competency for a computer literate person as part of digital and ICT literacy—something becoming increasingly unavoidable in today's information societies (Wilson et al., 2015).

## Conclusion

The data reported in this paper represent an initial exploration of the downsides associated with the use of school-based e-mail for regular communication from teachers' perspectives, in addition to the regulations exercised by the school to manage or prevent these downsides. Generally, the findings indicated that participants use their school e-mail accounts for communication and other work-related activities regularly. This practice was imposed and controlled by the school, rather than voluntary. Also, findings revealed that participants have experienced e-mail overload to varying degrees, due to the expectation of a prompt reply, and the fear of missing important information. Furthermore, findings provided evidence that work-based e-mail within the school setting is associated with multiple problematic issues, including e-mail overload; the obligation toward constant checking of e-mails; distraction; wasting and extending working time; e-mail misuse as in the case of broadcasting violations; misunderstanding; the threatening impact of e-mail when used as evidence; and issues related to confidentiality. Moreover, there were no clearly defined formal guidelines for e-mail use at the school, except for some rules in response to previous incidents. Having relevant training in this regard was not believed important, indicating the critical importance of raising teachers' awareness of effective communication via e-mail as a professional practice. The development of e-mail-related understanding and competencies is a crucial step toward enhancing an e-mail communication mindset and culture in the school which, in turn, sustain the powerful advantages of e-mail as a communicative tool and help reduce and manage the associated potential troublesome aspects to the greatest possible extent.

## Limitations and Future Research

Some limitations of the present study should be noted. First, the focus here was concerned particularly with e-mail communications among the working staff in the school (issues relating to personal e-mails or those used to communicate with the students or parents were not considered). Second, although individual factors (e.g., personality traits and ICT skills) play an important role in individual communication behavior and practices (Hwang, 2011), examining such mediating variables was beyond the scope of our study. Third, the reported work is a small-scale qualitative study based on data gathered from a single school that relies heavily on e-mail as an essential channel of professional communication. The sample was limited to the teaching staff and did not include administrative staff or heads of departments. Hence, the current findings are highly contextualized and cannot be generalized beyond the specific conditions of the school and participants in this context. For the current purpose, however, we believe the selected participants were a valuable source of information due to their rich experience of using e-mail for school-related work. Nevertheless, future work is needed to enhance the validity of the results by examining the reported findings for a wide variety of school settings, while collecting data from multiple sources across a larger sample size. Furthermore, developing a measure that can assess the generalizability of the reported findings and quantify the degree of their existence is one ambitious further attempt that may provide valuable information for school leaders to assess the extent to which the concerns and downsides that emerged are encountered. Lastly, another natural extension to the current work might concern assessing the impact of e-mail downsides on teachers' attitudes toward the use of school e-mail and their job performance. Together, these attempts are necessary for the development of guidelines for a school e-mail code of conduct to better support e-mail practices in schools while keeping in mind that the world is changing with the integration of online technologies. This makes communication an inevitable demand for the workplace, whether via e-mail or through the other online media and social networking technologies, not only in the Arab context but also in other

professional work contexts worldwide. To the best of our knowledge, no available research endeavors currently serve this purpose within the school setting.

## Declaration of Interests

The authors declare that they have no known competing financial interests or personal relationships that could have acted to influence the work reported in this paper.

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## Appendix A

## Interview Protocol

## Demographics

Interviewer:

_____

Interview                                    Duration:

_____

Date:

_____

Participant N# _____

Gender _____

Age _____

Educational Level _____

Teaching Experience _____

Subject(s) _____

Assigned Grade(s) _____

## Interview Questions

1- To what extent do you believe that you are experiencing e-mail overload at your work?

**Probe:** How often do you receive e-mails?
    From where usually do you receive these e-mails?
How long do you spend on reading/responding to these?

2- Do you believe that school e-mails are a cause of stress for you?

**Probe:** why or why not? (reasons, influences)

3–When do you need to access school e-mails? Can you explain the reasons why you may do so?

4- What downsides, problems, difficulties, concerns, or critical issues do you usually experience while handling school e-mails for regular and ongoing communication with the other school staff?

**Probe:** why do you think these exist?
what aspects of your work have been impacted as a result of these?
how can these barriers be overcome?

5- What does your school do to manage e-mail usability (*e.g., policies, rules, guidelines, training*)?

**Probe:** is it working? Why or why not?

are there any particular strategies that you follow to manage the use of school e-mails?

what could be done to improve the situation in this regard?

## Appendix B

## Informed Consent Document

Introduction

You are invited to participate in a research study about the downsides and challenges of using e-mail for work-based communications in schools. You are eligible to participate because you are currently using e-mail as part of regular work communications. The following information is provided to make you aware of all aspects of the study, its purpose, the procedures to be used, and any risks or benefits. This information is necessary to help you make an informed decision on whether or not to participate. If you do, you will be asked to sign this form.

Purpose

The purpose of this study is to examine teachers' perceptions and experiences regarding using e-mail for work-based communications in schools in

an attempt to shed light on current practices and associated challenges. This study is established by a team of PhD students from the College of Education in UAEU. The study will include a number of teachers from one public school.

Procedures

As part of the data collection process, you will be asked to participate in an anonymous online interview at your convenience. It will take approximately 30 minutes. The interview questions are constructed in such a way as to enable you reflect, elaborate on, and share your views and experiences on related issues, such as sharing your ideas regarding the difficulties or concerns related to handling school e-e-mails, and your recommendation to improve the situation in this regard. The online interview will be arranged with you by the researcher upon your agreement to participate.

Risks and Inconveniences

The research does not expose participants to any potential risk whether physical or psychological.

Benefits

This study is believed to provide valuable insights regarding the current and most commonly encountered challenges and difficulties relating to the use of work-based e-mail within the school setting, from where important recommendations can be proposed for more efficient and productive e-mail communication between the school working staff. Moreover, findings from the current study are believed to increase school leaders' awareness with respect, with the hope that their consideration of the reported difficulties would help to overcome these obstacles.

Voluntary Participation

Your participation in this research is entirely voluntary. You are free to decide not to participate in this study, refuse to answer any questions, or to withdraw from it at any time without adversely affecting your relationships with the researcher or being penalized.

Confidentiality

All information obtained from you will be confidential. Your privacy will be protected at all times. You will not be identified individually in any way (participants' names and personal information are kept securely) as a result of your participation in this research. The research data will be used for research purposes only.

Please feel free to ask any questions on any aspect of this study that is unclear to you. If you have further concerns, you may contact me at the e-mail address or telephone number listed below.

Researcher Name: Ms.Lutfieh Rabbani

E-mail: 980227160@uaeu.ac.ae

**Participant Signature and E-mail Address:**

I confirm that the researcher has explained to me the purpose of this research, the study procedures, and the possible risks and benefits that I may experience. I have read this consent form, and I understand it. Therefore, I agree to be engaged as a participant in this research project. The researcher is allowed to use my e-mail address to contact me for the current purpose.

Name:

_____

Date: _____

E-mail/            Phone            Number

_____

_____