



## STUDENTS' PERCEPTIONS OF BENEFITS AND DRAWBACKS OF FACEBOOK-CONNECTIONS WITH TEACHERS

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### ABSTRACT

Aim/Purpose	The purpose of the current study is to explore positive and negative aspects of student-teacher communication via Facebook, as perceived by students in secondary education.
Background	Student-teacher relationship is key to students' cognitive, social and emotional development. In recent years, as social networking sites (e.g., Facebook) became popular, these connections have extended to such platforms. However, most studies of the use of social networking sites in the school context are pedagogically-driven, and research on the ways student-teacher relationship is facilitated by these platforms is meager.
Methodology	We utilized a qualitative approach, analyzing middle- and high-school students' responses to open-ended questions about this topic (N=667). We used both top-down and bottom-up analyses.
Contribution	This study contributes to the growing literature about the overall impact of using social networking sites on the educational milieu. Specifically, it contributes by shedding light on students' perspectives of that phenomenon. Insights from this study are important for educators and education policy makers.
Findings	We found that student-teacher communication is mostly practical, although students who are not connected de facto but wish to connect romanticize it as more appealing. Furthermore, we found that students' perceptions of negative aspects of such communication is complex, reflecting a deep understanding of the social media. Students were mostly concerned with privacy issues, and much less with other peda-

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	gical, technological and social concerns. Altogether, it seems that the students acknowledge the benefits of connecting with their teachers online and implement this communication rather responsibly.
Recommendation for Practitioners	We recommend that educators who wish to do so wisely use social networking sites and instant messaging services as part of their professional conduct, taking advantage of the benefits of using these platforms, and being aware of (and cautious about) potential drawbacks. We encourage educators to learn more about the potential uses of social networking sites and instant messaging services, and then to examine whether these uses may fit their educational agenda. We recommend education policymakers make evidence-based decisions regarding the use of social networking sites by teachers and encourage school communities to discuss these issues together.
Recommendation for Researchers	As technology develops rapidly, we recommend researchers examine the topics raised in the current research with regards to other platforms, in order to better understand the technological aspects that may affect students' perceptions of the use of social networking sites and instant messaging services to communicate with their students. We also recommend studying what types of resources are available to education policymakers when making decisions on relevant policies.
Impact on Society	Understanding teens' perspectives of their relationship with their teachers in today's digital, networked world gives us a better understanding of this generation, hence may assist in planning and realizing a better educational system.
Future Research	Future studies should focus on other social networking sites and instant messaging services, as well as on other countries and cultures.
Keywords	student-teacher relationship, student-teacher communication, social networking sites, Facebook, SNS-mediated communication

## INTRODUCTION

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Student-teacher relationships, which are vital to successful learning (Birch & Ladd, 1998; Davis, 2003; Hamre & Pianta, 2001; Sabol & Pianta, 2012), include major social components as well as academic ones. Naturally, student-teacher relationships go beyond school time, and it was shown that this relationship is more interpersonal for students who engage with their teachers beyond the classroom than for students who do not (Dobransky & Frymier, 2004). As social networking sites (SNS)—like Facebook, Twitter, Instagram, etc.—have been widely adopted among Internet users of all ages, they serve as a natural arena for social interactions for both students and teachers. Mostly, people's use of the communication and interaction enabled by SNS is driven by their social actions (Cheung, Chiu, & Lee, 2011; Nadkarni & Hofmann, 2011; Yang & Lin, 2014). Following that, student-teacher relationships are also being facilitated via those platforms.

Some intriguing questions have been raised regarding student-teacher connections on SNS and their effects on student-teacher relationships in “real-life” and vice versa. Even the very term used in many SNS to describe connected users; that is, “friends” may challenge traditional student-teacher hierarchy, as traditionally teachers are allowed some power over their students even when close relationships between the two parties are developed (Ang, 2005; Vie, 2008). Closeness and friendship may be different in SNS compared to the real world, as noted by Subrahmanyam, Reich, Waechter, and Espinoza (2008), which may affect communication and interaction.

SNS may affect mutual perceptions and beliefs (Mazer, Murphy, & Simonds, 2007, 2009), thereby changing student-teacher relationships, followed by an even greater change in traditional hierarchical structures in schools. For this reason, school authorities and policymakers have been pondering about their position regarding student-teacher SNS-based communication. Education policymakers worldwide have adopted different educational approaches, often prohibiting teacher-student communication via SNS altogether (Forkosh-Baruch & Hershkovitz, 2014). Public discussion on teacher-student communication via SNS reflects the complex nature of this issue, and demonstrates the difficulty in adapting innovation in large-scale systems and organizations. However, most policies are not based on empirical evidence, but rather on notions and public opinion. This study aims at utilizing empirical evidence based on students' perceptions. We focus on the secondary school population, as many SNS (in particular Facebook) require their users to be at least 13 years old. In addition, secondary school students are less dependent on their teachers and are more mature than elementary school children. Overall, non-pedagogical aspects of SNS in grade-schools are still under-researched.

## BACKGROUND

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While school borders define the boundaries of education, including issues such as pedagogy, teacher-student communication and participants' roles, current schooling is characterized by blurring of these boundaries, allowing more frequent and free out of class communication. This, in turn, allows paradigmatic change in teacher-student connections, which may have impact on schooling altogether (Wentzel, 2010). It has been argued that students who have good interactions with their teachers have close, warm relationships with them, and are often motivated and more interested in learning (Fredriksen & Rhodes, 2004; Mazer, 2012). However, examination of communication behaviors of teacher and the ways it may influence students' well-being, engagement and interest in school and what it has to offer, is meagre (Mazer, 2013).

Indeed, the importance of positive teacher-student connections and relationships is undisputed, being interdependent (Frymier & Houser, 2000). There is also agreement that out-of-class communication (OCC) is important for students, as students who engage in OCC with a teacher may view their relationship with this teacher differently than students who do not engage in OCC (Fusani, 1994). Furthermore, OCC, due to its intimate nature, is also related to mutual trust between students and teachers (Jaasma & Koper, 1999).

In today's digital era, OCC is manifested through various digital platforms. Digital media opens new opportunities for OCC, thereby allowing greater scope in terms of width, depth, and range of topics within online communication. In recent years, the popularity of instant messaging services, such as WhatsApp, Snapchat, and Facebook Messenger, and social networking sites, such as Facebook, YouTube, and Instagram, for interpersonal communication has grown dramatically (Bozkurt, Karadeniz, & Kocdar, 2017; Eginli & Tas, 2018). This phenomenon is prominent among teens, and, according to a recent survey, U.S. teens heavily use YouTube (85%), Instagram (72%), Snapchat (69%) and Facebook (51%) (Pew Research Center, 2018). Due to their popularity, these means of communication also serve children and teens for out-of-class communication with teachers at the expense of more formal means of communication, such as email.

In these platforms, communication is naturally highly social and is often characterized by self-disclosure. In such cases, any communication between teachers and students is naturally interpersonal; hence, both the teacher and the student communicate with each other as individuals, but still taking into account their school roles (i.e., teacher role or student role) and their group affiliation. This complicates the more frequent teacher-student communication, which is based on their traditional roles (Dobrinsky & Frymier, 2004). Furthermore, this new type of OCC may affect the traditional learning spaces (Mazer et al., 2009).

Therefore, student-teacher SNS-based communication has been debated. In Israel, where the study reported in this article was conducted, the Ministry of Education first adopted a banning policy;

however, about a year and a half later, the regulation was refined, allowing restricted SNS-related communication (Israeli Ministry of Education, 2011, 2013). Banning teacher-student SNS-mediated communication has been an issue of debate in many countries; teacher-student communication via social media was barred in several regions in the US and in Australia (Queensland Department of Education, Training and Employment, 2016; Schroeder, 2013), while other regulators have chosen to warn rather than ban, as in the case of Ireland, where it is formally stated that “Teachers should [...] ensure that any communication with pupils/students [...] is appropriate, including communication via electronic media, such as e-mail, texting and social networking sites” (The Teaching Council, 2016, p. 7), or as was the case in other regions in the US (Cook, 2016; Naughton, 2016). Public discussion on teacher-student communication via SNS reflects the complex nature of this issue and overall demonstrates the difficulty in adapting novelties in large-scale systems and organizations (Christensen, Baumann, Ruggles, & Sadtler, 2006; Rogers, 2010). However, most policies are not based on empirical evidence (Warnick, Bitters, Falk & Kim, 2016).

A recent literature review of the use of instant messaging in education has found only three studies conducted in secondary school level and no studies whatsoever in primary schools (Tang & Hew, 2017); moreover, two of these three studies are explicitly limited to pedagogical aspects. This highlights the need to study non-pedagogical use of SNS and instant messaging software in the context of grade-school. Similarly, the use of social networking sites for teacher-student communication has been mostly studied in formal, pedagogical contexts. When examining OCC via these platforms, various advantages are being recognized, encompassing both functional and social aspects; these serve a wide range of purposes, such as information exchange, facilitating a positive social atmosphere, creating a dialogue among students, and supporting learning (Asterhan & Rosenberg, 2015; Bouhnik & Deshen, 2014; Schouwstra, 2016).

To summarize, we observe a gap between our knowledge of the extensive use of social networking sites worldwide, in particular, the younger population, and our knowledge regarding the manifestation of student-teacher relationships via these platforms. In order to bridge this gap, we formulated the following research questions:

1. What are the positive aspects of student-teacher communication via Facebook?
  - a. From the perspective of those students who are “friends” with a teacher of theirs?
  - b. From the perspective of those students who are interested in a “friendship” with a teacher of theirs?
2. What are the negative aspects of student-teacher communication via Facebook?

In light of the insights gained from reviewing the most relevant, updated literature on social aspects of using social networking sites by students and teachers, we want to find out whether OCC via these platforms will be facilitated in a similar manner to traditional OCC, that is, it will be present, however with a degree of separation between “school” and “home”.

## METHODOLOGY

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### *DATA COLLECTION AND INSTRUMENTS*

The data analyzed in this paper was collected as part of a broader research of student-teacher relationship and Facebook-mediated communication (Forkosh-Baruch & Hershkovitz, 2018; Hershkovitz & Forkosh-Baruch, 2017). Data was collected anonymously during December 2013–April 2014, during which a vast majority of Israeli teens were using Facebook (over 90% of 13–18 years old had an active Facebook account, based on a survey of a representative sample, Israel Internet Association, 2014). We used an online questionnaire that was distributed via schools’ communication platforms (with the assistance of educators and schools), social networking sites (mostly Facebook and Twitter), and various relevant professional and personal mailing lists. Our target population was students in lower and higher secondary schools. Informed consent was attained through the

online questionnaire. Participation was voluntary, and participants were not remunerated for taking part in the study.

As part of the full questionnaire, students were asked about their current use of Facebook and their connections with teachers via Facebook. According to their response, they were grouped into four categories:

1. Connected students, who have an active Facebook account and are connected to a current teacher of theirs;
2. Wannabe Connected students, who have an active Facebook account, are not connected to a current teacher, but are interested in such a connection;
3. Not Wannabe Connected, who have an active Facebook account, are not connected to any current teacher, and are not interested in such a connection;
4. Not on Facebook students, who do not have an active Facebook account.

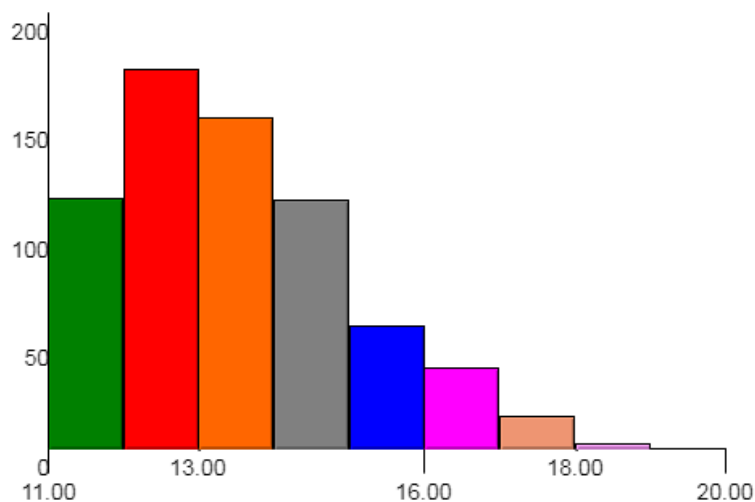
In this article, we focus on two open-ended questions that were part of the online questionnaire. First, “How [does/will] the connection [with your current teacher] on Facebook contribute to you?”; this question was presented only to the Connected and the Wannabe Connected participants. Second, “What, in your opinion, are the negative aspects of teacher-student relationship via Facebook?”; this question was presented to all participants.

The timing of the questionnaire distribution is important for this study, as a few months prior to this period, the Israeli Ministry of Education had modified its policy regarding SNS, allowing limited Facebook-based connections between students and teachers via groups and only for learning purposes. Previously, any teacher-student SNS-based communication was prohibited.

### ***PARTICIPANTS***

Altogether, 667 middle- and high-school students participated in the full study. Participants' age ranged between 12-19 years old ( $M=14$ ,  $SD=1.6$ ), of whom 403 were female (60%) and 264 were males (40%). Participants' age distribution is shown in Figure 1.

Participants were from all over Israel, as a result of the ubiquitous accessibility to the online form. Participants' self-reported locations (places of residence) are illustrated in Figure 2, on the map of Israel. Of the participants, 72 participants did not respond to the open-ended questions referred to in this article and therefore were omitted from the current analysis.



**Figure 1. Participants' age distribution**



**Figure 2. Participants' locations on Israel map**

## ANALYSIS

The analysis of responses to both questions leaned on Ang's (2005) framework of student-teacher relationship, which includes three axes: satisfaction, instrumental-help, and conflict. Regarding the first question, which is focused on contributions of student-teacher Facebook-mediated communication, the two first axes were clearly identified with minor diversity within each axis. In contrast, the second question, which discusses negative aspects of such communication (relevant to the conflict axis in Ang's framework), presented a variety of topics and sub-categories. Therefore, the responses to the first question were coded using the directed content analysis method, while responses to the second question were coded using the conventional (bottom-up) method, which involved open coding, and then selective coding (Corbin & Strauss, 2008; Hsieh & Shannon, 2005). In both cases, a single response could have been coded as belonging to more than one category. The coding process was done manually, color-coding statements in MS Word, with no dedicated software.

## FINDINGS

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We will now present the analyses of the responses to the two questions, first regarding the contribution aspect of student-teacher Facebook-mediated communication to students, then regarding perceptions of negative aspects of such communication.

### *CONTRIBUTIONS OF STUDENT-TEACHER COMMUNICATION*

The question regarding actual or potential contributions of Facebook-mediated communication between students and teachers was answered by only two sub-groups of the participants – the Connected and the Wannabe Connected students. Of the 67 who were categorized as Connected, 57 students (85%) responded to that question, of whom only 37 responses were coded. Of the 124 who were categorized as Wannabe Connected, 115 students (93%) responded to that question, of whom only 109 responses were coded. Responses that were irrelevant were not coded.

#### **Connected students**

Of the 37 responses, 10 (27%) were coded as Satisfaction-related, and 31 (84%) were coded as Instrumental Help-related. Recall that a single response may have been coded in both categories.

Satisfaction-related mostly mentioned feelings of closeness and trust, ranging from “It’s just nice to have” (S32, M:12 (S is the student ID number, M means Male, and 12 is the age)) to “[It contributes to a] more close and intimate connection” (S235, M:13). Some responses explicitly mentioned either the students’ or the teachers’ point of view, e.g., “I can share with her what happened to me today” (S266, F:13), “Closeness to the teacher and a feeling of caring by the teacher” (S483, F:15). Some students referred to a feeling of intimacy deriving from seeing the teacher as a human being, e.g., “[This connection] shows that the teacher is not just a teacher, but also a person with a family and a life beyond the education system” (S135, M:13); “You can see that the teacher is a person like us, and you can see more positive sides in the teacher that you couldn’t see on a daily basis” (S251, F:13).

Instrumental Help-related responses referred to issues of accessibility, convenience and immediacy that characterize communication via SNS, e.g., “[It is] direct and more convenient communication” (S241, M:13); “It’s much easier to transfer information, projects and tasks, and to ask question about studies and teacher attendance and events we’re both involved in” (S307, M:14); “For me and other students there’s better access to files and information that’s relevant to our studies. It’s easier to transfer forms and important and urgent messages” (S427, M:15). There was also a reference to the clarity of communication, “It helps the communication to be more understood” (S192, F:13). Finally, the extension of class boundaries was also mentioned, “It allows consultation and discussions that are not connected to school and usually there’s no time for them in school” (S135, M:13).

#### **Wannabe connected students**

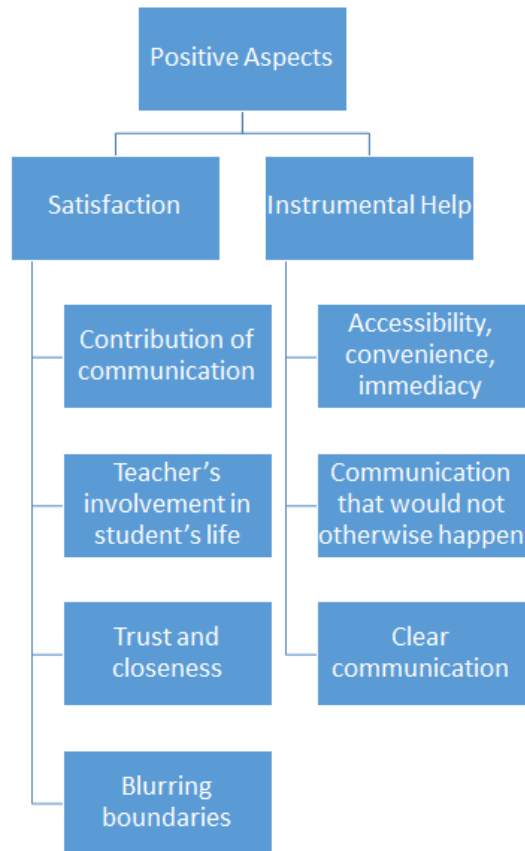
Of the 109 responses, 44 (40%) were coded as Satisfaction-related, and 76 (70%) were coded as Instrumental Help-related. As these respondents were not de facto connected to a teacher of theirs, these statements should be referred to as “wishful thinking”. Again, recall that a single response may have been coded in both categories.

Satisfaction-related responses referred to the potential contribution of Facebook-mediated communication to both parties, e.g., “[The teacher] could ask me how I am, that’s kinda nice” (S344, F:14); “[The teacher] is just an interesting and quite a cool guy, it’s just interesting for me what he’s doing when he’s not teaching” (S280, M:14). Moreover, some students mentioned possible involvement of teachers in the lives of their students, e.g., “Teachers can participate in the lives of their students” (S560, F:16). Additional benefits include trust and closeness, e.g., “It can strengthen the relationship between the teacher and the students and to cause the student to count on his teacher” (S592, F:17); “Every teacher maybe can create a better relationship with every student, if they want to” (S345,

F:14). There was even a reference to the blurring of role boundaries and to the student seeing the teacher as a friend, “Maybe that there’ll be a better connection and to be like friends, not like a teacher” (S76, F:12).

Again, most Instrumental Help-related responses referred to issues of accessibility, convenience, and immediacy, e.g., “[The teacher] could update me easily and quickly about things that happened when I didn’t come [to school]” (S344, F:14); “[The teacher] could help me in the afternoon with school stuff if I needed help” (S87, M:12); “That way, we could talk with the teacher and ask questions – it’d be much more comfortable than giving him a call” (S307, M:14); “The teacher can help me in personal issues or in my studying” (S193, F:13); “It could assist me if I was absent from school, I can ask what the homework were” (S214, F:13). Furthermore, in some cases, the online platform allowed communication that might not otherwise take place, e.g., “Things that you want to say to the teacher personally and you’re too shy – it’s possible using Facebook” (S586, M:17).

A summary of the positive aspects in both groups is illustrated in Figure 3. Distribution of Satisfaction- and Instrumental Help-related categories in both groups of students is summarized in Table 1. We checked for differences between the two groups. Since a single statement could have been coded to multiple categories, we utilized a multiple response set procedure. Pearson Chi-Square test resulted in a marginally significant difference,  $\chi^2(2)=4.90$ , at  $p=0.086$ .



**Figure 3. A summary of the positive aspects of student-teacher Facebook-mediated communication**

**Table 1. Distribution of Satisfaction- and Instrumental Help-related categories in the Connected and Wannabe Connected groups**

	SATISFACTION	INSTRUMENTAL HELP
Connected	10	31
Wannabe Connected	44	76

### ***NEGATIVE ASPECTS OF STUDENT-TEACHER COMMUNICATION***

The question regarding negative aspects of Facebook-mediated communication between students and teachers was presented to all participants. Of the 667 students, 585 (88%) responded to that question, of whom 507 responses were coded. Responses that were not coded were irrelevant. Coding was done in a bottom-up manner, resulting in the definition of seven categories, one of which was coded as “No negative aspects” (57, 11% of coded responses). The resulting categories are a product of a spiral process of analyzing the data; both the definition of the categories and the coding of the responses to the categories were done by both authors until full agreement was achieved. Following is a description of each of the categories (omitting the “No negative aspects” category).

#### **Exposure to information and privacy**

This category includes statements referring to potential consequences of excessive exposure to information by either students or teachers, thereby leading to a negative outcome in terms of invasion of privacy. Interestingly, many students explicitly mentioned photos as a source of information that social network users are exposed to, therefore as a source for privacy invasion. Overall, 227 responses were coded in this category. Statements under this category may be examined along different dimensions.

**Unidirectional vs. bidirectional view of privacy invasion.** Many students mentioned only either students’ or teachers’ privacy as being invaded. For example, “The teachers can penetrate to the students’ personal lives, to their daily life, family life, etc. Sometimes the student doesn’t want the teacher [...] to be involved in his personal life” (S585, F:17); “There are some things or posts that I share that I don’t want my teachers to know about” (S501, F:15); “The teachers [shouldn’t] see all my social life” (S478, F:15); “The students can see everything that [the teacher] posts, which makes it non-private” (S256, M:13).

However, some saw the risk of invasion of privacy as two-sided: “That teachers and students can see beyond basic information of a teacher and a student on their private lives” (S630, F:18); “There can be personal photos, personal details that we don’t want our teachers to see, or the other way around” (S357, F:14); “The most important thing is that things that students wanna share only between friends, or photos that teachers wanna show only to their families, can be seen by the teachers or vice versa by students” (S216, M:13); “Sometimes it can shatter the privacy of the student or of the teacher” (S562, F:16).

**Scope and depth of exposure.** Students referred to both scope and depth of shared information. Scope refers to the amount of information that is posted on Facebook and may be accessible to the poster’s friends. For example, “That one is exposed too much to the private world of the other” (S524, F:15); “That they know too much about the kid” (S309, M:14); “The teachers can stock us and everything we post on Facebook they can see” (S125, F: 13).

The depth of the exposure mostly refers to the type of information being shared and to the fact that often this information may include intimate details. For example, “Kids who learn in a religious school but are not religious don’t need [their] teachers [...] to see the things they post and their photos with [...] improper dressing” (S165, F:13); “Teachers can see photos of students smoking or

drinking [alcohol] or provocative photos” (S537, F:16); “The teacher can know very private details about the teacher, and the other way around” (S286, F:14)

### **Paradigm shift of student-teacher relationship**

This category refers to the undermining of traditional student-teacher relationship as part of an educational paradigm shift in which relationships tend to undergo radical changes. Teacher-student hierarchy is challenged in general, more so when both parties are engaged in professional and social interactions via social networking sites. Overall, 91 responses were coded in this category. The paradigm shift referred to under this category might be evident in different aspects of student-teacher relationship.

**Respect.** Students explicitly mentioned that when they become Facebook-friends with their teachers, authority-related issues may arise. Specifically, many of the participants mentioned issues related to honor and respect. For example, “A personal relationship that may damage the honor between a teacher and a student” (S539); “The distance between the teacher and the student is broken, and it’s kinda damages the respect you should have for a teacher just by the fact that he’s a teacher” (S525); “Less respect for the teachers and thinking that teachers are less important than expected” (S276). Specifically, some students referred to the discrepancy between a relationship on Facebook, which may become close and intimate, and an in-class relationship, which is based on a more traditional, hierarchical paradigm. For example: “Lack of distance between the teacher and the student as it should be in class” (S442); “A kind of illusion is created between the teacher and the student, and it’s always better in real conversation” (S170); “That the teacher loses some of his authority as a teacher the moment he communicates with his students on Facebook” (S614); “Teachers on Facebook can sometimes act in an unprofessional and non-educational way, which can have a bad influence on the students and even contradict [the teachers’] behavior in school” (S563). On the other hand, some students expressed concerns regarding the possibility of teacher-student relationship become more remote: “‘Coldness’ of the teacher, I mean, there’s no warm and more personal attitude, compared to that of face-to-face connection which is better” (S431).

**Friendship.** Students referred to the perception of teachers as friends on an equal basis, rather than differentiating between students’ and teachers’ roles. For example: “When teachers and students connect on Facebook, the students treat the teachers as friends” (S443); “Not separating between formality and friendship – in most cases students don’t know to make the difference” (S620); “The kid can talk to [the teacher] like just any other friend” (S60); “That you turn your teacher to your friend and you tell him personal stuff” (S531); “[The students] can treat [the teachers] as friends and not as teachers, and I think it shouldn’t be like that. There’s teachers and there’s friends!!!” (S219).

**Communication and Language.** Some students mentioned issues related to the very language being used on Facebook, which might be different from the language used in classroom communication; the former is “Less polite language” (S422). On the one hand, students are worried “That the teachers can see our language on Facebook and think bad things about us” (S472). On the other hand, they are concerned that “The interaction between the teacher and the student becomes much less meaningful and personal” (S623).

### **Improper behavior and identity issues**

This category refers to behavior that was considered by the students to be unfit in the context of communication between students and teachers. This includes cases in which identity might be manipulated. Altogether, 89 responses were coded under this category, in which several aspects can be identified.

**Inappropriate Behavior.** Many students mentioned different degrees of inappropriate behavior. On one end of this continuum, students expressed their concerns about mutual use of bad language and exploiting Facebook to bother each other. For example, “Students may use Facebook not for learning purposes but for negative purposes, such as hurting, cursing, and so on” (S382); “Bad language be-

tween the teacher and the students” (S150); “If a teacher bothers [a student] – or the other way around – it causes situations or an argument between the teacher and the student” (S128); “It can lead to humiliation and serious problems between them” (S449); “Students can exploit Facebook to smirch a teacher” (S548). In some cases, students were concerned that negative aspects of their relationship with their teachers may broaden and continue via Facebook, as in this example: “The teacher will insult you also on Facebook, not enough that he’s humiliating me in front of all the class?!” (S487).

On the other end of the continuum, many students expressed concerns about extreme behavior that might result in dangerous, even illegal actions. For example: “Personal contact between a teacher and a student on Facebook may become a problem of sexual harassment and such” (S479); “It could lead to a relationship between [male] teachers and [female] students” (S626); “Of course, there’s first of all this issue that always comes up: ‘A [male] teacher harassed a kid using Facebook!’” (S220); “There were some incidents abroad that teachers initiated a ‘study meeting’ and would rape [the student]” (“[A hack into a teacher/student account] can end in a lawsuit, or even worse, a murder, that the teacher and the student’s parents will kill each other” (S140).

**Covert Communication.** A few students mentioned the dangers of communicating in a closed environment such as Facebook. On the one hand, they are worried that inappropriate communication might take place without anybody knowing about it besides the teacher and student involved. For example, “[Facebook] can cause confrontations between teachers and students in the chat, without anyone knowing about it” (S50); “There could be ‘forbidden connections’ between teachers and students without anyone knowing about it” (S179). On the other hand, students feel that ‘what happens on Facebook stays on Facebook’ and are afraid that “Things can leak accidentally” (S279).

**Identity Issues.** Students also raised identity-related concerns. Generally, they mentioned that “There are imposters” (S38), hence “You can’t know who you’re talking to” (S74). This might have some serious consequences, for example: “Someone can hack into [my] Facebook account and curse teachers and hurt them, and they’ll think it’s me” (S389); “Maybe you think you’re talking to the teacher on Facebook and telling them personal things, and in the end it’s not the teacher but someone you don’t know” (S5). Content manipulation is also related to this aspect, in which either teachers’ or students’ identity might be compromised, for example: “A teacher that posts a [personal] photo to Facebook [...] should know that the students can spread out fake photos, or the other way around” (S484).

### **Boundaries**

This category refers to students’ concerns regarding the blurring of boundaries when student-teacher communication is mediated via SNS. Mostly, students set clear boundaries between school time and after-school time. Altogether, 81 responses were coded under this category; we identified the following aspects that reflect different points of regarding boundaries in student-teacher relationship.

**Media.** Students differentiated between various communication means, assigning different communication channels to different purposes. For school-related issues, they prefer the more traditional or formal media to be used after school hours, for example, “Facebook is for communicating with friends and family, and (after school) communication between the teacher and the student should be done by phone or e-mail” (S1); “There’s time for [teachers and students to talk] during school hours or via the ‘Mashov’ system” (S570) (“Mashov” is a formal administrative school system that is used, among other uses, by teachers, students and parents for communication with each other); “Students and teachers should communicate only in class or using messages” (S76). A more extreme approach sees out-of-school digital communication between teachers and students as unfit. As such, one of the students explicitly stated that “When the teachers talk to the students outside school, and even on the Internet, it’s not professional and it doesn’t respect the education system” (S436).

**Teacher's role boundaries.** Students also referred to different aspects of the teachers' role regarding in-school and after-school interactions. From the students' point of view, the availability of SNS to teachers creates an undesirable situation in which the teachers' private time is being used for professional purposes; while the teachers often choose to do so, communicating with their students via SNS might "drag" the students unwillingly to this situation. Consequently, students mentioned that "Teachers' time can be used beyond conventions" (S166); "The distinction between school time and the teacher's private time is hardly evident" (S622); and "The teachers [...] can think they're responsible for [the student] also after school time" (S316). Moreover, one of the students stated that "A teacher should know a student's personal life only to a certain extent (S249). Furthermore, the students are concerned about the lack of boundaries that may be evident in the diffusion of communication from Facebook to the classroom or vice versa. This was reflected in the following two statements: "If there's concern about a student [regarding something he or she posted on Facebook], maybe it's possible to raise it as a general conversation during a class meeting or in a general conversation with the student and try to connect it to the post" (S593); "There shouldn't be a connection [on Facebook] between a student and a teacher if it's not about studies" (S392). This diffusion may have consequences in real-life situations, for example: "When I'm writing something—mocking or writing not nice stuff but I'm just kidding—the teachers can see it and I can get punished" (S147).

**Students' personal boundaries.** The students explicitly mentioned that Facebook is a place where they "hang out" during their free time and do not want to be bothered by their teachers during that time: "I don't want my teacher to know what I do in my free time" (S465); "The students don't always want their teachers to know what they're doing after school" (S330); "The teachers don't give the students space" (S311); "There's no freedom and independence to the kid after school" (S418); "You have to separate between morning hours, which are school, and afternoon, which is students' lives after school" (S603); one of the students expressed this notion bluntly, using an extreme metaphor: "That teachers go on and on about homework and stuff we study in a site that is supposed to be like a refuge for us from our studies" (S650). In this seemingly closed area, students are very clear about being in control regarding how and what to communicate: "Teachers shouldn't get into the students' personal life more than the students choose to share" (S391); "The student won't be able to feel free and will have to think all the time about what the teacher will tell him and what to do" (S141); "If the teacher is watching the student's profile, he won't express himself" (S523).

### **Inequity issues**

Under this category, statements refer to situations of discrimination based on uneven conditions which are a result of Facebook-based communication. Overall, 34 statements were coded in this category, consisting of two sub-categories.

**Accessibility to information.** Students were worried that they or their peers who do not have a Facebook account, or who do not frequently connect to Facebook, will not have equal opportunities to those of the connected students. The non-connected students can find themselves therefore lacking important academic or administrative information: "If the teachers sends homework and assignments using Facebook, some of the students won't receive it, because not everyone has a [Facebook] account" (S168); "Not everybody has access [to Facebook] all the time. The teacher can post an important message there and you could miss it" (S589). Moreover, the reliance on Facebook for school-related information might hinder those students who choose to be inaccessible and to disconnect from Facebook, for example: "There is too much dependence on Facebook in the learning aspect, which does not allow to totally disconnect from it" (S549).

**Effects on relationship.** Not only information accessibility might discriminate between students, but also the potential consequences of Facebook communication on teacher-student relationship. Participants were concerned about teachers preferring students with whom they communicate on Facebook: "That they are too closed and this can cause the teacher to prefer one student over another" (S565); "A less strong relationship between the teachers and the students who don't have Face-

book” (S163). Furthermore, among students who are Facebook-friends with their teachers, there may be additional preferences: “They are our friends on Facebook and they [only] talk to some of the students” (S306); “When a teacher ‘likes’ [a posting of] one kid from the class and not of another one, it shows like he loves the first one more” (S47). Students also expressed their concern regarding a distorted image of the teacher due to postings on Facebook, resulting in a distorted relationship: “Students can get preferred treatment because they’re ‘friends’ of teachers on Facebook, or to love teachers only because of photos or statuses” (S473).

### **Technological and Socio-Technological Aspects**

This category refers to technology-related issues in using Facebook that are perceived as having a negative influence on student-teacher relationship. Altogether, 23 statements referred to this category.

**The ease of negative online behaviors.** Students identified situations in which the media itself and its characteristics enabled teachers and students with a greater ease to engage in negative behaviors. One type of such behaviors is avoidance, i.e., to ignore each other’s postings and online presence in general. For example, “There’s the possibility that the teachers, out of choice, will decide to ignore requests or questions of the student due to a convenient possibility of avoidance” (S600); “There could be a situation in which [...] students prefer to avoid [materials or messages]” (S623). Another type is loss of focus and time wasting behavior: “The computer causes the kids to focus on other stuff and to be less concentrated in the learning that occurs on Facebook” (S535); “The teacher and the students can stay on [Facebook] after their chat and waste precious time” (S148); “It makes me use Facebook more” (S332).

**Distorted relationship.** Students perceived SNS-mediated communication as distorting relationship between them and their teachers, due to the limitations of digital media. Mainly, they mentioned the shortcomings of text-based communication that does not include elements such as expressions, gestures or body language. For example, “You can’t see feelings on Facebook, and that’s why things don’t always come out as they should. [...] Interaction between the teacher and the students becomes much less meaningful and personal” (S623); “A teacher can never know what is standing behind the words of a kid on Facebook, because what [the kid] is saying in most cases is false and you can find out about it only through body language” (S267). As a result, relationship that is built upon this kind of communication is perceived as distorted: “[It’s] not a face-to-face connection and can be false” (S406); “It’s not the same as in real-life [...] connections on Facebook are not so efficient” (S99). Students report an advantage over their teachers regarding technological literacy in a way that could harm the relationship between them: “The students can hurt teachers because they know more about how to use Facebook” (S119). This advantage of students may also result in lack of control of teachers over students: “Teachers don’t know how to control students in an online environment. Curses and spam are unavoidable in these groups, especially because of the feeling of lack of power of the teacher over students on the Internet” (S555).

A visual representation of the negative aspects and their respective sub-categories is brought in Figure 4. Distribution of the seven categories referring to negative aspects in the four groups of students (by their connection type) is summarized in Table 2. Here again, we checked for differences between the groups using multiple response set procedure. Overall, Pearson Chi-Square test resulted in a marginally significant difference,  $\chi^2(21)=30.55$ , at  $p=0.081$ . We tested for differences between each pair of groups and found that in only one case—between the Not Wannabe Connected and the Not on Facebook groups—the result was significant,  $\chi^2(7)=20.58$ , at  $p<0.01$ . When excluding the Not on Facebook group, there was no significant difference between the groups, with  $\chi^2(14)=14.59$ , at  $p=0.407$ .

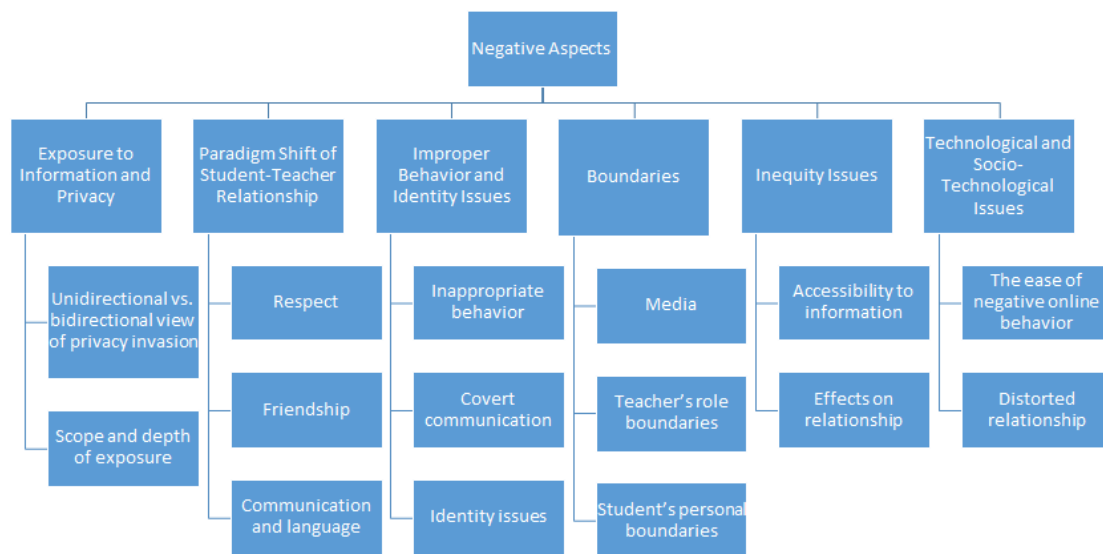


Figure 4. The negative aspects of student-teacher Facebook-mediated communication

Table 2. Distribution of the categories referring to negative aspects in the student groups

GROUP	CATEGORY						
	Exposure to Information and Privacy	Paradigm Shift of Student-Teacher Relationship	Improper Behavior and Identity Issues	Boundaries	Inequity Issues	Technological and Socio-Technological Aspects	No negative aspects
Connected	25	13	10	8	3	4	3
Wannabe Connected	36	15	19	11	6	4	14
Not Wannabe Connected	150	49	48	58	21	10	36
Not on Facebook	16	14	12	4	4	5	4

## DISCUSSION

Student-teacher interactions are an integral part of student-teacher relationship, which are key to a successful academic, social and emotional growth of students (Birch & Ladd, 1998; Davis, 2003; Hamre & Pianta, 2001; Sabol & Pianta, 2012). As social networking sites (SNS) are very popular, interactions are often extended to the virtual media, continuing schooling beyond time and space boundaries. While many studies about SNS and learning have focused on academic aspects (Manca & Ranieri, 2016), in our study we explored benefits and pitfalls of teacher-student connections on Facebook, as perceived by middle- and high-school students. Overall, we found that many students

identified advantages of befriending their teachers. Mostly, they refer to a practical point of view, as observed by the relatively high number of statements mentioning teacher's support and assistance, compared to statements exhibiting closeness. Despite of the potentially rich opportunities that SNS offer, students still use these platforms in an on-demand manner (Teclehaimanot & Hickman, 2011). Furthermore, teachers and students who communicate via social media mostly benefit from social and functional opportunities (Schouwstra, 2016) and even wish to keep this communication task-oriented (Foote, 2011). Nevertheless, even if this kind of communication is examined through the (limited) lenses of out-of-class (OCC) communication it might have an important role, as OCC was shown to be associated with both affective and cognitive learning (Goldman, Goodboy, & Bolkan, 2016).

Yet some students wish to extend the connection with their teacher to a more informal, personal mode, possibly in an attempt to strengthen the relationship with a significant adult (Galbo, 1989). These students find SNS very suitable for that purpose, as these platforms are social in nature, equity-based, and do not preserve traditional hierarchies. As SNS are considered by the young generation as an extension of the physical world, it is only natural to extend relationships into this online arena (De Souza & Dick, 2008; Palfrey & Gasser, 2008; Patterson, 2012). In turn, this may lead to a closer relationship (Ledbetter et al., 2011). In our study, the Wannabe Connected group illustrates students' unfulfilled wish to extend relationship with their teachers, while the Connected group demonstrates how this connection is facilitated in practice; as we found, the prominence of the Instrumental Help axis on the Satisfaction axis is milder in the former compared to the latter. That is, the Wannabe Connected students tend to perceive Facebook-connection with teachers as fostering closeness and warm relationship more than those students who have experienced this connectedness. Similar results were obtained when students were directly self-reporting on their perceptions of their relationship with their teachers (Forkosh-Baruch, Hershkovitz, & Ang, 2015). Such high expectations might be explained by students' beliefs that broadening the usually limited opportunities available for interactions with their teachers may serve as a bridge to closer relationship (McHugh, Horner, Colditz, & Wallace, 2013). When asked whether Facebook can be used for learning, a similar difference was observed between these groups of students: The Wannabe Connected group exhibited a higher rate of positive responses than the Connected group (Hershkovitz & Forkosh-Baruch, 2017).

As findings suggest, participants' overall viewpoint on the negative aspects of Facebook-connections with teachers is complex. This reflects a deep understanding of the social media and its implications on student-teacher relationship at large. This complexity is reflected in our data by at least two points. First, the richness of negative aspects of Facebook-mediated communication recognized by the students; some of these challenges were also recognized by elementary-school children (Schouwstra, 2016). Second, some of these aspects were considered by students as positive. Specifically, three themes were mentioned both as concerns (while asked about negative aspects) as well as benefits (when asked about positive aspects): exposure to information, paradigm shift of student-teacher relationship, and boundaries. This is in line with a growing body of knowledge that highlights the ability of teenagers to effectively, skillfully, and wisely use social media in the pursue of their well-being, despite being exposed to risky behaviors (boyd, 2014; Buzzetto-More, Johnason, & Elobaid, 2015; Flanagan & Metzger, 2008; Gabriel, 2014).

The most prominent concern raised by the participating students was regarding information exposure and privacy. Indeed, privacy is perceived as a major risk for media users (Kumar, Saravanakumar, & Deepa, 2016). Recent studies on young Internet users' perceptions of privacy and self-disclosure in SNS show that young users implement various strategies for managing their privacy and risk-taking in SNS, as in the physical world (Ahituv, Bach, Birnhack, Soffer, & Luoto, 2014; de Andrade & Monteleone, 2013; Lapenta & Jørgensen, 2014). Nonetheless, self-disclosure of personal information is not necessarily associated with experience or perception of susceptibility and might be associated with trust (Metzger & Suh, 2017; Tsay-Vogel, Shanahan, & Signorielli, 2018).

Interestingly, according to our findings, there are no differences between the students' groups in the distribution of the categories related to negative aspects of student-teacher Facebook connection. Recall that there is a difference between the notion of the Wannabe Connected students regarding connecting with their teachers, and the way this connection is utilized in practice. Contrary to that, there is no difference between the groups of students regarding the pitfalls of such a connection. This might be a result of the overemphasis on negative aspects of online communication in the mass media (Bishop, 2014; Stern & Odland, 2017; Young, Subramanian, Miles, Hinnant, & Andsager, 2017). In spite of efforts of education systems, these negative aspects diffuse into schools and homes, highlighting harmful incidents over potential benefits. Our findings indicate that students recognize benefits of connecting with their teachers online even prior to the actual connection. These expectations should be preserved and actualized. Furthermore, such a connection may assist in coping with difficulties the students encounter as both online consumers and adolescents. Of course, teachers should be equipped with means for dealing with such issues.

Overall, our findings are in line with a more recent analysis of students' perceptions of student-teacher communication via WhatsApp (currently, a very popular instant messaging app), which also took a perspective similar to the one we took, also in the context of secondary schools (Rosenberg & Asterhan, 2018). Findings from that study indicate advantages of such communication, mostly accessibility and the existence of multiple communication channels, as well as on a host of challenges, like information overload and socio-technological issues. In a broader context, this complex mix of benefits and limitations portrays a delicate situation in which teachers and students should navigate; they could benefit from its potential while being cautious due to its risks (Manca, 2018).

This study is, of course, not without limitations. First, it was situated in a single country, characterized by a specific culture of education, technology, and implementing technology in schools. Our findings should be validated by similar studies in other countries. Second, it was referring to a single social networking site. As not all the SNS are to be considered the same, the study should also be replicated with regards to other SNS; this will allow the examination of the specific features that make a given platform more appropriate than the others for student-teacher communication. Additionally, even when considering this narrowed-down point of view, the sampled population is not to be considered as representing the whole student population in the country discussed here. Despite these limitations, we feel that the contribution of the current study is of importance for promoting a better student-teaching communication via SNS and a better learning in the digital age at large.

## CONCLUSIONS

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In this paper, we analyzed students' perceptions of benefits and drawbacks of using Facebook to communicate with teachers. Overall, the participating teens portray a complex picture of positive and negative aspects of this communication, which indicate a deep understanding of the role of social networking sites in their life. This insight is important for educators, who are—contrary to their traditional role in the hierarchical, slow-to-change school milieu—equal partners with their students in the complex, ever-changing social networking sites arena. Therefore, teachers and students should take collaborative efforts in order to understand how to effectively utilize these platforms to promote their relationship, as well as learning and teaching at large. As our findings suggest, the most crucial issues to discuss are privacy issues and blurring of boundaries. We recommend further studying of these issues in the context of other online social platforms (including instant messaging services, which become very popular for student-teacher communication) and in other countries (e.g., other cultures). Continuing this line of study will assist education policymakers in taking evidence-based decisions.

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## BIOGRAPHIES

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## FACULTY AND STUDENT PERCEPTIONS OF THE IMPORTANCE OF MANAGEMENT SKILLS IN THE HOSPITALITY INDUSTRY

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### ABSTRACT

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Aim/Purpose	The purpose of this study was to gain an understanding of faculty and student perceptions of the importance of resource, interpersonal, information, systems, and technology management competencies in the hospitality industry
Background	The increasing complexity and technological dependency of the diverse hospitality and tourism sector raises the skill requirements needed, and expected, of new hires making education and competency development a strategic priority. Identifying the skills needed for hospitality graduates to succeed in a sector that is continuously being impacted by digitalization and globalization must be a continual process predicated on the desire to meet ever-changing industry needs. This study seeks to update and further explore an investigation started a decade ago that examined the skills and competencies valued by hiring managers in the hospitality industry.
Methodology	The Secretary's Commission on Achieving Necessary Skills (SCANS), comprised of representatives from business, labor, education, and government, developed the framework, of workplace competencies and foundation skills used in this study. This research used a survey methodology for data collection and descriptive and inferential statistical methods during the analyses. The data for this study were collected from faculty, staff, hospitality industry stakeholders, and students of a Department of Hospitality & Tourism Management located at a small eastern Historically Black University (HBU). An electronic survey was sent to 169 respondents and a total of 100 completed surveys were received for an overall return rate of 59%.

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Contribution	This study provides research on a population (first-generation minority college students) that is expanding in numbers in higher education and that the literature, reports as being under-prepared for academic success. This paper is timely and relevant and can be used to inform hospitality educators so that they can best meet the needs of their students and the companies looking to hire skilled graduates.
Findings	The findings of this study indicate there is inconsistent agreement among academicians and students regarding the importance of SCANS-specific competencies in hospitality graduates. At the same time, there is no argument that industry skills will be critical in the future of hospitality graduates. Overwhelmingly, participating students and faculty found all of the SCANS competencies important with the highest ranked competencies being interpersonal skills, which, given the importance of teamwork, customer service skills, leadership, and working with cultural diversity in the hospitality industry, was expected. Additionally, participating students indicated their strong agreement that internships are effective at building professional skills. Finally, the hospitality students included in this study who were enrolled in a skill-based curriculum were confident that their program is preparing them with the necessary skills and competencies that they will need for their future careers.
Recommendations for Practitioners	Higher education hospitality programs should be exploring the skills valued by industry, teaching faculty, and the students to see if they are being satisfied.
Recommendation for Researchers	This research should be expanded to additional institutions across the United States as well as abroad. This particular research protocol is easily replicated and can be duplicated at both minority and majority serving institutions enabling greater comparisons across groups.
Impact on Society	Several reports identify gaps in the 21st century skills required for the workplace and the effectiveness of higher education in preparing graduates for the workforce. This study helps to propel this discussion forward with relevant findings and a research methodology that is easily replicable.
Future Research	A follow-up study of employers is currently being conducted.
Keywords	SCANS, career readiness, workplace readiness, 21 <sup>st</sup> century skills, hospitality education, first generation college students, technology readiness, HBCU, minority learners, UMES, University of Maryland Eastern Shore, e-skills, lifelong learning

## INTRODUCTION

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Global competition in a changing market, and concerns about workforce preparedness, has generated several initiatives, commissions, coalitions, and national reports. Academia, private industry, and the U.S. government have been actively involved in developing programs and strategies to address the workforce skills gap and better prepare students for the economy of the future (Accrediting Council for Independent Colleges and Schools, 2014; Business Roundtable, 2017; Buzzetto-More, 2012; Council of Economic Advisers, 2018; Carnevale, Smith & Strohl, 2010; U.S. Department of Education, 2012).

Several factors in the United States economy bode well for employment opportunities. The U.S. economy has added more than 19 million jobs since 2010 contributing to the low unemployment rate of 3.7% in September 2018 (Bureau of Labor Statistics, 2018). The U.S. Bureau of Labor Statistics projects an increase in new jobs of 11.5 million jobs from 2016 to 2026, increasing the total number

of jobs to 167.6 million (Bureau of Labor Statistics, 2017a). According to a Pew Research Study, *The State of American Jobs*, “the number of workers in occupations requiring average to above-average education, training and experience increased from 49 million in 1980 to 83 million in 2015, or by 68%” (Pew Research Center, 2016, p. 1). The literature and research reports that the 21st century global marketplace has created a need for a workforce with requisite skills to ensure continued economic growth. Higher education and private industry must play a key role in producing the skilled workers the U.S. needs to maintain a competitive economic position (Business Roundtable, 2017; Buzzetto-More, 2012; Carnevale et al., 2010; Council of Economic Advisors 2018; U.S. Department of Education, 2012; The Learning House, 2018; World Economic Forum, 2016).

In May 2017, the U.S. Bureau of Labor Statistics reported that the leisure and hospitality industry had the highest job openings rate with 4.9%, followed by professional and business services at 4.8% (Bureau of Labor Statistics, 2017b). Deloitte’s *Travel and Industry Outlook* reports that the U.S. market is forecasted to earn 370 billion by the end of 2018 (Langford & Weissenberg, 2018). By 2020, the hospitality and leisure industry is expected to add more than 5 million jobs (Carnevale et al., 2010). By the end of 2024, the Bureau of Labor Statistics projects the leisure and hospitality industry will total over 16.5 million jobs (Bureau of Labor Statistics, 2015).

## ***BACKGROUND***

Founded in 1886, the University of Maryland Eastern Shore (UMES) is a Historically Black, 1890 land grant institution. It is a member of the University system of the State of Maryland and primarily serves first-generation, low-income, and minority learners. The student population is approximately 4400, as of the fall of 2015, with a student body that is approximately 78% African-American, 9.6% white, 1.4% Hispanic, and 11% international, primarily coming from the continent of Africa and/or from the Caribbean region. The gender distribution of the University is 64% female and 36% male. The freshmen-to-sophomore retention rate is 71%, and the graduation rate is 41%. The student to faculty ratio is 15 to 1 and 85% of students receive financial aid. Situated in the historic town of Princess Anne, UMES enjoys an 1100-acre rural campus and is located on the far south eastern corner the State. Uniquely situated, it is the only research and doctoral degree granting institution of the University System of Maryland on the Eastern Shore of Maryland and its programs in Construction Management Technology, Aviation Sciences, and Hospitality and Tourism Management are unique to both the state and the region (Buzzetto-Hollywood, Wang, Elobeid, & Elobeid, 2018). UMES was ranked in the top 25 among Historically Black Colleges or Universities (HBCU) in 2014 and the acceptance rate for applying students was 62.4% with the majority of students coming from the Mid-Atlantic region, more specifically the Baltimore and Washington D.C. urban centers (Buzzetto-More, 2014).

The University of Maryland Eastern Shore is committed to providing undergraduate and graduate programs that will equip its students with the knowledge and skills necessary for the challenges of a global society. To this purpose, and in order to assure the University, its students, and other stakeholders that learning is effectively promoted, program learning outcomes have been established, and recently reformed, that and are assessed for each program offered in the Department of Hospitality and Tourism via an aggressive assurance of learning program. Furthermore, the purpose of Assurance of Learning is to assess how effectively the programs are in facilitating the acquisition of knowledge, skills, capabilities, and attitudes required of management professionals as well as to explore and develop enhanced curriculum and learning resources (Buzzetto-Hollywood, 2017; Quinn, 2016). In a cycle of continuous program improvement, curricula and learning experiences are re-fined, reviewed, and revised as needed.

As a result of the commitment of the Assurance of Learning Committee, and the larger HTM, changes, both subtle and profound, are occurring throughout the curriculum and include such innovations as: better communication of learning outcomes and course relationship to program mission, the development of rubrics, more project based learning, perception surveys, diagnostic testing, skill-

based performance assessment, simulation usage, e-portfolio usage, and adoption of assessment and remediation systems. These changes have led to a richer and more robust curriculum and greater student understanding of their academic progression and the relationship of course concepts to learning outcomes.

Much of the curriculum was completely redesigned in 2016-2017 to be more skill based. In addition to traditional hospitality and tourism content, the curriculum includes courses focused on the building of communication skills, ethical understanding and reasoning abilities, analytic abilities, management skills, e-skills and use of information technology, information management, understanding systems, resource allocation, and multicultural and diversity understanding.

### ***LITERATURE REVIEW***

Several reports identify gaps in the 21st century skills required for the workplace and the effectiveness of higher education in preparing graduates for the workforce. The Gallup-Lumina report found only 43% of Americans believe college graduates are prepared for success in the workforce and 34% of business leaders do not believe that educational institutions are graduating students with the skills and competencies their businesses need (Sidhu & Calderon, 2014; Gallup, Inc. 2014). For years hospitality educators themselves have questioned whether “hotel management programs are preparing hospitality students adequately” (Wilhelm, 2002, p. 54).

A 2017 report from the Business Roundtable referred to the lack of skilled workers as a “national crisis threatening our economic future” and stated the skills gap could result in unfilled jobs if nothing is done to prevent this phenomena from occurring (Business Roundtable, 2017, p. 1). A spring 2018 survey of 600 human resource managers, found that 52% of employers identified a skills gap in workers and 47% of these managers held higher education responsible. Twenty-nine percent of employers stated that the colleges and universities do not have a pipeline of talent with the right skills to fill current and future jobs. Seventy percent of these resource managers stated that up to 500 jobs at their company were not filled over the past year (The Learning House, 2018).

The Council of Economic Advisers (2018), in its report, “Addressing America’s Reskilling Challenge”, identified “an information gap between employers, workers, and educational institutions” and noted this information gap “makes it difficult to prepare the workforce employers seek” and that coordination will be necessary to meet the reskilling challenge (p.1). Thus, the challenge to academic leadership is the identification of the skills, the assessment of these skills, and the integration of the 21st century skills into curricula. Teaching methods and instructional strategies must ensure students acquire skills deemed crucial to the marketplace (Buzzetto-More, 2012; Chung-Herrera, Enz, & Lankau, 2003; Cobanoglu et al., 2004; Geissler & Martin, 1998, as cited in Kay & Russette, 2000; Gursoy & Swanger, 2004; Nelson & Dopson, 2001). Partnerships among business, education, and the workforce are required to address workforce needs (Business Roundtable, 2017; Council of Economic Advisors, 2018; The Learning House, 2018; World Economic Forum, 2016).

The hospitality and tourism industry plays a significant role in economic development and job creation worldwide. According to the World Travel & Tourism Council, (2018), travel and tourism directly contributes over 2.5 trillion dollars to the global economy which is 10.4% of global GDP. Travel and tourism provides 1 in 10 jobs worldwide or 9.9% of the global workforce and supports 313 million jobs worldwide. In 2016, the United States travel and tourism industry contributed \$1.5 trillion dollars to the economy and 7.6 million U.S. jobs. Revenues from international visitors in the United States were \$244.7 billion in 2016, representing an \$83.9 billion trade surplus for the year. In 2016, U.S. travel and tourism output represented 2.7 percent of gross domestic product. International travel to the United States is expected to increase 2.7% annually through 2022 (U.S. Department of Commerce, 2016).

Without a doubt, a skilled and productive labor force will be vital for continued economic growth in the hospitality industry. There are, however, some concerning trends. According to Carnevale et al.,

(2010), “by 2018, the postsecondary system will have produced 3 million fewer college graduates than demanded by the labor market”. The demographic and job growth projections indicate the United States will face a workforce shortage in the near future. Fewer people are entering the workforce, and more are entering retirement caused by slow population growth and retiring baby boomers. These trends have been discussed in numerous studies and there is a widespread concern that this could impact economic growth (Carnevale et al., 2010; Carnevale, Smith, & Strohl, 2013; Karoly & Panis, 2004).

The increasing complexity of the diverse hospitality and tourism sector raises the skill requirements and makes education and skill development a strategic priority for this industry. Educators should be developing closer ties and increasing dialogue with all segments of the hospitality industry, so value can be added to the industry. Identifying the skills and competencies needed for hospitality graduates to succeed in the increasingly digital, global hospitality marketplace must be a continual process to meet current industry needs (Chung-Herrera,ENZ, & Lankau, 2003; Cobanoglu, et al., 2004; Geissler & Martin, 1998, as cited in Kay & Russette, 2000; Nelson & Dopson, 2001).

Several hospitality educators have developed competency-based curriculum, identifying broad skill categories such as communication, leadership, team work, technology, problem solving, and decision making (Brownell & Chung, 2001; Chung-Herrera et al., 2003; Maher, 2004; Sisson & Adams, 2013; Smith & Cooper, 2000; Wang & Tsai, 2014). Chung-Herrera et al., (2003) demonstrated that “a competency model is useful for building an integrated framework for developing a company’s human-resources system’ (p. 19).

Lowry and Flohr (2005) developed a competency-based framework to facilitate learning in a capstone tourism course and conducted a longitudinal study (a five-year period from 2000 to 2005) to evaluate its effectiveness “for mastering a core body of discipline-specific knowledge and fostering competency skills for successful managers, lifelong learners, and responsible citizens (p. 29). As a result of his work he presented the following skills as crucial to hospitality education:

- Critical thinking: logical and quantitative reasoning; awareness of the interconnections of business and society; creative problem solving (both individually and in a group setting); and self-reflection
- Communication: written; formal presentations; and interpersonal.
- Technological: information literacy; applied use of technology; research methods and evaluation tools.
- Leadership: self-direction; responsible decision-making and behavior; and the ability to work with and learn from people with diverse backgrounds to achieve group goals.

Based on the premise current industry skill requirements must drive curricula in order to graduate competent and skilled managers, Dopson and Nelson (2003) identified the content area hotel executives, hotel human resource specialists, and Collins School alumni found most important in Part Two of their 2001 study. The six most important subject areas selected identified were: accounting, human resource management, computers/MIS, marketing, sales, and public relations, and business management.

In another study by Tesone and Ricci (2005), central Florida hospitality and tourism management practitioners found the most successful competencies for entry level managers to be teamwork, communication skills, and customer service. The authors reported that lodging managers believed, these competencies are often developed through hands-on work experiences. The researchers assert these factors can be used as a profile “for educators to apply learning outcomes to prepare new workers for industry positions” and “may also be used by human resource practitioners as part of the employment selection process” (p.61).

Mayo and Thomas-Haysbert (2005) surveyed hospitality educators and industry professionals and found revenue management to be a key competency for both educators and practitioners. The posi-

tion of revenue manager is newly created in many hotels which would support the importance of this competency Mayo and Thomas-Haysbert went on to suggest that “these findings suggest competency based curricula can be developed to reflect a program that is relevant for the 21st Century” (p. 14). Further, Sisson & Adams (2013) examined essential competencies to determine if there were differences between managers in lodging, food and beverage, and meeting and event management. Their findings showed there were no differences in importance for 76% of the competencies between the functional work areas.

Wang & Tsai (2014) identified key job competencies, including leadership, professional management skills, technical skills and knowledge, work attitude, and personal characteristics, and asked mid-level managers in 15 international Taiwanese hotels to rank the importance of each competency. Additionally, students from a 4-year hospitality program, each of whom participated in an off-campus internship program were asked to rank the same competencies. There were discrepancies between the students and business managers in the ranking of importance of competencies in the leadership, professional management skills, and technical skills areas.

Green and Stahura (2014) introduced a business-education partnership (BEP) framework as a way for the casino industry to attract a prepared and sustainable workforce and improve recruitment and retention. This study reported that experiential learning opportunities, workplace visits, mentoring, job shadowing, and curriculum support are important strategies that can be employed to improve workforce skills.

In a SCANS competency study, Quinn (2013) reported the majority of industry respondents (lodging, food and beverage, tourism) placed the greatest importance on the following competencies: serving clients and customers, participating as a team member, exercises leadership, allocates time, teaches others, allocates human resources, and works with cultural diversity. Five of the highest ranked competencies in the study were from the interpersonal domain and two from the resources domain.

Commissioned by the Department of Labor in 1990, the Secretary’s Commission on Achieving Necessary Skills (SCANS), comprised of representatives from business, labor, education, and government examined the demands of the workplace (U.S. Department of Labor, 1991, 1992). The primary objective of SCANS is to improve the information flow. The Commission advocates a partnership built around employment skills between two major groups, the world of work and educators (U.S. Department of Labor, 1992). The Commission also promoted a two-way flow of information between employers and educators through recruiting and employee development activities. Numerous studies used the SCANS framework in the late 1990s and early 2000s to assessment the workplace basics competencies in various industries. The Commission identified five workplace competency areas: the ability to manage resources, to work amicably and productively with others, to acquire and use information, to understand and master complex systems, and to work comfortably with a variety of technologies as workplace know-how (U.S. Department of Labor, 1991, 1992). The SCANS framework was used as the basis for the design for the skills section of the survey used in this study.

## THE STUDY

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### *METHODOLOGY*

The purpose of this study was to gain an understanding of faculty and student perceptions of the importance of critical resource, interpersonal, technology, systems, and information management competencies in the hospitality industry This study surveyed students and faculty from a Department of Hospitality & Tourism Management located at a small eastern Historically Black University to determine perceptions regarding the importance of specific SCANS competencies in the hospitality industry, as well as perceptions of the an academic programs level of success in developing professional skills and readiness.

This survey-based study used quantitative methodologies, incorporating a descriptive and inferential research design to determine the importance of the five SCANS workplace competency domains (resources, interpersonal, information, systems, and technology) and several questions regarding professional development, readiness, and skill building. A three-part questionnaire was adapted from the instrument developed, validated, and utilized as part of an earlier study by Quinn (2008). The instrument was used to collect demographic data and quantitative data regarding the perceived importance of the SCANS competencies, as well as information about how effective the hospitality major was at developing professional skills and career and professional readiness.

A data set was collected using the Survey Monkey online survey distribution and collection system. The raw data was downloaded from the Survey Monkey system into Microsoft Excel where mean, standard deviation, and confidence interval at 95% were calculated. All SCANS competency ratings were subsequently ranked by mean scores. Additionally, a one-way Analysis of Variance (ANOVA) was used to examine the differences regarding the level of importance ratings based on whether the respondent was a faculty member or student.

A total of 169 surveys were sent electronically to academic faculty, administrators, hospitality industry recruiters, advisory board members, and students using the web-based survey tool, Survey Monkey. Respondents were identified by their position of faculty, staff, administrator, industry internship coordinator, or student. One hundred recipients completed the survey presenting a 59% return rate.

Section I of the questionnaire included demographic questions regarding academic major, status, and age of the respondent. Section II collected data regarding the perceived importance of each of the SCANS competencies as measured with a five-point Likert-scale where 1 equaled very unimportant, 2 equaled unimportant, 3 equaled neutral/undecided, 4 equaled important, and 5 equaled very important. Section III of the questionnaire utilized Likert-scaled questions to collect data on how effective the university was in preparing students for a career in hospitality, whether the skills taught in HTM programs matched the skills valued by employers, and how confident students were in their career and professional readiness. Participating students were also asked additional questions relevant to measuring their perceived workplace readiness as well as what they feel are the priorities for hospitality programs. Finally, students had an opportunity to provide qualitative feedback through an open ended question.

SCANS has five main workplace domain areas which deal with of 1) use of resources, 2) utilization of information, 3) interpersonal skills, 4) understanding of systems, and 5) application of technology. Each of the five domains is further explored in terms of measurable competencies. Table 1 presents each of the five domain areas as well as the subsequent 20 competencies with definitions. These domains and sub competencies were used to develop 20 agreement statements utilized in the survey.

**Table 1. Secretary's commission on achieving necessary skills (SCANS):  
Workplace competencies (U. S. Department of Labor, 1991)**

COMPETENCY DOMAIN	DEFINITION
<b>Resources</b>	Identifies, organizes, and allocates resources
Allocates Time	Selects goal-relevant activities, ranks them, allocates time, and prepares and follows schedules.
Allocates Money	Uses or prepares budgets, makes forecasts, keeps records, and makes adjustments to meet objectives.
Allocates Materials and Facility Resources	Acquires, stores, allocates, and uses materials or space efficiently.
Allocates Human Resources	Assesses skills and distributes work accordingly, evaluates performance and provides feedback.

COMPETENCY DOMAIN	DEFINITION
<b>Information</b>	Acquires and uses information
Acquires and Evaluates Information	Identifies need for data, obtains it from existing sources or creates it, and evaluates its relevancy and accuracy.
Organizes and Maintains Information	Organizes, processes, and maintains written or computerized records and other forms of information in a systematic fashion.
Interprets and Communicates Information	Selects and analyzes information and communicates the results to others using oral, written, graphic, pictorial, or multi-media methods.
Uses Computers to Process Information	Employs computers to acquire, organize, analyze, and communicate information.
<b>Interpersonal</b>	Works with others
Participates as a Team Member	Contributes to group effort.
Teaches Others New Skills	Helps others to learn.
Serves Clients/Customers	Works to satisfy customers' expectations.
Exercises Leadership	Communicates ideas to justify position, persuades and convinces others, responsibly challenges existing procedures and policies.
Negotiates to Arrive at a Decision	Works toward agreements involving exchange of resources, resolves divergent interests.
Works with Cultural Diversity	Works well with men and women from diverse backgrounds
<b>Systems</b>	Understands complex inter-relationships
Understands Systems	Knows how social, organizational, and technological systems work and operates effectively with them
Monitors and Corrects Performance	Distinguishes trends, predicts impacts on systems operations, diagnoses deviations in systems' performance and corrects malfunctions
Improves and Designs Systems	Suggests modifications to existing systems and develops new or alternative systems to improve performance
<b>Technology</b>	Works with a variety of technologies
Selects Technology	Chooses methods or equipment including computers and other technologies
Applies Technology to Task	Understands overall intent and proper procedures for setup and operation of equipment
Maintains and Troubleshoots Technology	Prevents, identifies, or solves problems with equipment, including computers and other technologies

During the analyses of the data the following hypotheses were explored.

H<sub>1</sub>- There is strong agreement among faculty and students regarding the importance of SCANS-specific competencies in hospitality graduates.

This hypothesis was examined by considering the responses to the Section II of the survey via the questions related to the SCAN specific competencies. Means were compared and a one-way Analysis of Variance (ANOVA) with a p value set to .05 was used to examine the differences regarding the level of importance ratings based on whether the respondent was faculty or student.

H<sub>2</sub>-Participating students believe that internships are effective at building professional skills

This hypothesis is predicated on the idea that internships help develop management competencies and can be used to determine skills and competencies that need improvement. It was explored by considering student responses to a Likert-scaled question included in Section III of the survey

whereas if a mean of  $>3.0$  was achieved, then the threshold for affirming the hypothesis is viewed as having been met.

H<sub>3</sub>- Hospitality students are confident that their hospitality degree program is providing them with the skills necessary for professional readiness.

This hypothesis was examined by examining student responses to a subset of questions included in Section III of the survey with means of  $>3.0$  established as affirming the hypothesis.

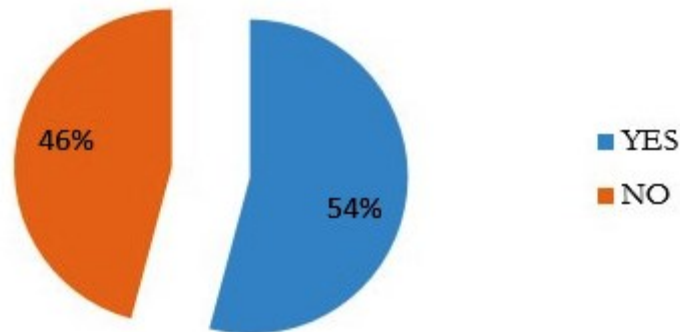
### FINDINGS

Of the 100 responses collected, 75 of the respondents were college students and 25 of the respondents identified as hospitality faculty, staff, or industry internship coordinator. Basic demographic information about these students was collected. Table 2 provides the frequency and percentages of responses related to the students' academic status, major, and age.

**Table 2. Demographic characteristics of student respondents**

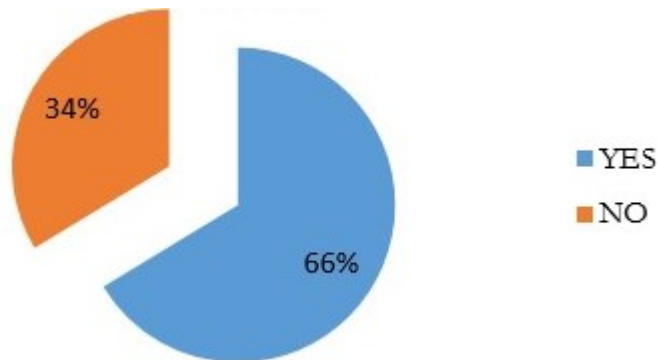
<i>CATEGORY</i>	<i>FREQUENCY</i>	<i>PERCENTAGE</i>
<b>Academic Major</b>		
Hospitality Management	49	65.30
Culinary Arts	2	2.67
Professional Golf Management	19	25.3
Business Management	2	2.67
Other	3	4.00
<b>Academic Status</b>		
Sophomore	7	13.3
Junior	35	46.7
Senior	30	40.0
<b>Age</b>		
18 – 22	42	56.0
23 – 29	26	34.6
30 – 39	2	2.67
40 – 49	2	2.67
Over 50	3	4.00

When students were asked if they had completed a hospitality related internship more than half (54.17%) responded in the affirmative these results are depicted in Figure 1.



**Figure 1: Hospitality Related Internship Completed**

While 54.17% of the student respondents had completed a hospitality related internship, the overwhelming majority of students (87.84%) reported that they have experience in their major area of study. These results are presented in Figure 2.



**Figure 2: Professional Experience in Field of Study.**

One hundred responses were received to the demographic questions in Section I of the questionnaire. Approximately 8 student respondents totally skipped the SCANS and professional readiness questions in Sections II and III and two others stopped responding after several questions. As such, the number of respondents completing each question is reported and variations can be observed.

The responses to 20 statements derived from the five workplace competency domains: resources, information, interpersonal skills, systems, and technology, were explored using a 5-point Likert scale (1 = very unimportant, 2 = not important, 3 = neutral/undecided, 4 = important, 5 = very important). The mean score, standard deviation (SD), and a 95% confidence level interval were calculated for each resource skill. Additionally, the responses were ranked by importance as expressed by the mean. These findings are presented in Table 3 for all competency domains for both student and faculty respondents.

**Table 3. Student & academia competency ratings comparison**

Ranked Importance	SCANS Domain	SCANS Competency	Student Mean	Student SD	n	Faculty Mean	Faculty SD	n
6	Resources	Allocates Time	4.57	0.6116	67	4.48	0.5073	25
5	Resources	Allocates Money	4.62	0.5780	67	4.55	0.9987	25
9	Resources	Allocates Materials and Facility Resources	4.38	0.7003	67	4.45	0.8256	25
7	Resources	Allocates Human Resources	4.45	0.6622	67	4.55	0.8256	25
14	Information	Acquires and Evaluates Information	4.26	0.7761	66	4.35	0.8208	25
10	Information	Organizes and Maintains Information	4.36	0.6985	66	4.40	0.9947	25
12	Information	Interprets and Communicates Information	4.43	0.6366	66	4.30	1.0809	25
13	Information	Uses Computers to Process Information	4.46	0.6366	66	4.26	1.0976	25
1	Interpersonal	Participates as a Member of a Team	4.61	0.6073	66	4.70	0.8208	25

Ranked Im- portance	SCANS Domain	SCANS Compe- tency	Student Mean	Student SD	<i>n</i>	Faculty Mean	Faculty SD	<i>n</i>
8	Interpersonal	Teachers Others New Skills	4.58	0.5560	66	4.41	0.9947	25
2	Interpersonal	Serves Clients /Customers	4.67	0.5361	65	4.61	1.0809	25
4	Interpersonal	Exercises Leader- ship	4.65	0.6366	66	4.55	1.0976	25
11	Interpersonal	Negotiates to Ar- rive at a Decision	4.45	0.6650	65	4.30	1.0976	25
3	Interpersonal	Works with Cultural Diversity	4.62	0.6267	66	4.60	0.9404	25
17	Systems	Understands Sys- tems	4.33	0.7860	65	3.85	0.9881	25
15	Systems	Monitors and Cor- rects Performance	4.31	0.7484	65	4.20	0.8944	25
18	Systems	Improves and De- signs Systems	4.20	0.7167	65	3.90	0.9679	25
19	Technology	Selects Technology	4.26	0.7132	66	3.75	0.9515	25
16	Technology	Applies Technology to Task	4.27	0.7181	65	4.00	0.9177	25
20	Technology	Maintains and Troubleshoots Technology	4.17	0.7958	66	3.50	1.0513	25

### Competency Analysis – Resources

Student scores were in agreement ( $M = 4.50$ ,  $SD = 0.1068$ ,  $n = 67$ ) that the four skills in the resource competency are important or very important. Participating academic and industry respondents ( $M = 4.53$ ,  $SD = 0.0565$ ,  $n = 25$ ) also unanimously agreed or strongly agreed that the allocation of time, monetary, materials and facilities, and human resources are important skills.

### Competency Analysis – Information

Processing, use, organization, interpretation, communication, acquisition, and evaluation of information were ranked as important skill sets by both academic and student respondents. There were no significant differences between the two respondent groups. Student scores ( $M = 4.38$ ,  $SD = 0.0700$ ,  $n = 66$ ) and academia and industry scores ( $M = 4.34$ ,  $SD = 0.0700$ ,  $n = 25$ ) in this competency domain were tightly grouped.

### Competency Analysis – Interpersonal

Participates as a team member, teaches others new skills, exercises leadership, negotiates to arrive at a decision, and well with men and women from diverse backgrounds were ranked as important skill sets by both academic and student respondents. Mean interpersonal scores were closely clustered with overall low variability. Students ranked “serving clients and customers” the most important competency ( $M = 4.67$ ,  $SD = .5361$ ,  $n = 65$ ), “exercises leadership” was rated second ( $M = 4.65$ ,  $SD = .5709$ ,  $n = 66$ ), and “works with cultural diversity” ( $M = 4.62$ ,  $SD = .6267$ ,  $n = 66$ ) third. In contrast, academia/industry ranked “participates as a member of a team” ( $M = 4.70$ ,  $SD = .9234$ ,  $n = 25$ ) “serving clients and customers” as the second ( $M = 4.61$ ,  $SD = .4278$ ,  $n = 25$ ), and “works with cultural diversity” ( $M = 4.60$ ,  $SD = .9403$ ,  $n = 25$ ) first, second, and third respectively.

### Competency Analysis – Systems

Student scores for systems skills were higher than faculty scores and there was much more variability in faculty responses. The mean score, standard deviation (SD), and a 95% confidence level interval were calculated for each systems skill. Interestingly, the students ranked “understands systems” most important ( $M = 4.33$ ,  $SD = .7860$ ,  $n = 65$ ) while faculty respondents ranked it the lowest ( $M = 4.33$ ,  $SD = .7860$ ,  $n = 25$ ). Faculty respondents ranked “monitors and corrects system” most important ( $M = 4.20$ ,  $SD = .8944$ ,  $n = 25$ ). Both groups ranked “improves and designs systems” the lowest.

### Competency Analysis – Technology

The students ranked “applies technology to a task” most important ( $M = 4.27$ ,  $SD = .7181$ ,  $n = 65$ ) while academia respondents ranked it lower and with more variability ( $M = 4.00$ ,  $SD = .9177$ ,  $n = 25$ ). Both groups ranked “maintains and troubleshoot technology” the lowest.

*H<sub>1</sub>- There is strong agreement among faculty and students regarding the importance of SCANS-specific competencies in hospitality graduates.*

These findings are presented in Tables 4 and 5. Using the data sets of both students and academia the mean ratings of each competency area were examined. Table 4 compares mean scores and standard deviation for each of the five competency domains (resource, information, interpersonal, systems, technology) examined in this study. Table 5 used the means across all domains and represents the findings of an ANOVA.

**Table 4. Comparative competency ratings by student and faculty**

SCANS Competency	Respondents	N	Mean	Std. Dev.	Variance
Allocation of Resources	Student	67	4.5038	0.1068	0.0114
	Faculty	25	4.5322	0.0564	0.0564
Information Skills	Student	66	4.3780	0.0884	0.0078
	Faculty	25	4.3407	0.0700	0.0700
Interpersonal Skills	Student	66	4.5977	0.0769	0.0059
	Faculty	25	4.5581	0.1764	0.1764
Systems Skills	Student	65	4.2797	0.0671	0.0045
	Faculty	25	3.9833	0.1892	0.1892
Technology Skills	Student	66	4.2312	0.0559	0.0031
	Faculty	25	3.7666	0.2516	0.2516

**Table 5. ANOVA**

	SS	Df	MS	F	p
Between:	0.474	1	0.474	78.171	0.000
Within	0.534	88	0.006		
Total:	1.008	89			

*H<sub>2</sub>-Participating students believe that internships are effective at building professional skills*

These findings are presented in Table 6 whereas this hypothesis was explored by considering student responses to a Likert-scaled question included in Section III of the survey. According to the findings, 87.1% of respondents ranked internship experiences as extremely important or highly important at building the professional skills of students with a mean of 4.529 and a standard deviation of .775.

**Table 6. Importance of internships**

	% of Students Ranking Extremely Im- portant/Highly Important	<i>n</i>	Mean	Std. Dev
Internship Experiences at Building Professional Skills	87.1%	65	4.529	.775

*H<sub>3</sub>. Hospitality students are confident that their degree program is providing them with the skills necessary for professional readiness.*

Seventy-five students were asked to respond to the statement “To what extent do you believe the skills taught in HRM programs match the skills valued by employers in HRM industries” and asked to choose from 5 = Very Much Matched, 4 = Quite A Bit, 3 = Somewhat / Moderate Extent, 2 = A Bit/Slightly Prepared, and 1 = Not at all. Sixty-five students responded to this particular question with findings are presented in Table 7 where 75.8% of respondents said that their program either matched very much or quite a bit with a mean of 4.292 and a standard deviation of .765.

**Table 7. Effectiveness of teaching at building professional skills**

	% of Students Responding Very Much/Quite A Bit Matched	<i>n</i>	Mean	Std. Dev
Effectiveness of Teaching at Building Professional Skills	75.8%	65	4.292	.765

Students were also asked their confidence with respect to their professional readiness in each of the domains under consideration whereas 5 = very much prepared, 4 = quite a bit prepared, 3 = somewhat/moderate extent, 3 = a bit/slightly prepared, 1 = not at all prepared by my university. These findings are presented in Table 8 where all means are greater than a 4.0.

**Table 8. Effectiveness/importance ratings by student**

Competency	% of Students Confident in Professional Readiness	Mean	Std. Dev
Technology Skills	77%	4.09	.94
System Skills	83%	4.12	.79
Interpersonal Skills	95.31%	4.47	.59
Information Skills	89.24%	4.31	.74
Resource Skills	86.15%	4.22	.75

Finally, students were asked two questions about the importance of alignment between university degree programs and industry expectations on a scale where 5=extremely important, 4=highly important, 3=somewhat important, 2=not important, and 1=extremely unimportant. In response to the first statement “It is important that colleges and universities adjust their programs to reflect changing workforce demands”, 93.85% of participating students said that it was extremely important or highly important with a mean of 4.63 and a standard deviation of .65. Similarly, in response to the second statement “It is important that college faculty have a current understanding of the skills desired by employers” 98.47% of participating students said that it was extremely important or highly important with a mean of 4.72 and a standard deviation of .48. These results are presented in Table 9.

**Table 9. Importance of alignment between university and industry**

	<b>% of Students Reporting Extremely Im- portant/Highly Important</b>	<b><i>n</i></b>	<b>Mean</b>	<b>Std. Dev</b>
It is important that colleges and universities adjust their programs to reflect changing workforce demands	93.85%	65	4.63	0.65
It is important that college faculty have a current understanding of the skills desired by employers	98.47%	65	4.72	0.48

## ***DISCUSSION***

The Secretary's Commission on Achieving Necessary Skills (SCANS), comprised of representatives from business, labor, education, and government, developed the framework, of workplace competencies and foundation skills used in this study. This research study used a survey methodology for data collection and descriptive and inferential statistical methods during the analyses which were reported in the findings section. In this discussion section, the meaningfulness of the findings is interpreted and related back to the larger body of literature related to the topic of e-skills and workplace competencies in the hospitality industry and hospitality education. Each of the SCANS competency areas will be addressed in turn followed by an analysis of the hypotheses examined as part of this study. It is important to note, for each competency domain a mean of >4.0 was considered positive confirmation that the competency was highly valued by respondents.

### **Competency Analysis – Resources**

Students and participating faculty strongly agreed that all four skills in the competency domain were highly valued and very important with a mean of >4.5. These results are consistent with other studies which produced findings that reflect strong agreement among professionals from various industries regarding the importance of resource skills in graduates (Harrison, 1996; Heimler, 2010; McClain, 2002; Quinn, 2013; Wood, 2003; Yang, 1994).

### **Competency Analysis – Information**

Both students and faculty reported that the ability to acquire, organize, interpret and evaluate information are highly valued and very important skills with a tight grouping of scores and an average mean of >4.3. These results are consistent with Harrison (1996) Heimler (2010), McClain (2002), Quinn (2012), and Yang (1994),) but are not supported by studies such as Wood (2003).

### **Competency Analysis – Interpersonal**

According to the findings from this study, four of the five highest ranked competencies by the majority of all respondents were in the interpersonal competency category with a mean of >4.5. These findings were expected as the hospitality industry places high emphasis on effective guest services skills and teamwork. The results are also consistent with the literature such as McClain (2002), Quinn (2013), Wilhelm (2002), and Woods (2003) who each reported the highest ratings of the five competency groups in the interpersonal area in their respective SCANS studies.

### **Competency Analysis – Systems**

The ability to apply and use systems was considered relatively important by all respondents with an overall mean of 4.0. Student scores for systems skills were higher than faculty scores and there was much more variability among the faculty responses. These findings are consistent with what has been reported in the literature (Harrison, 1996; Heimler, 2010; McClain, 2002; Quinn, 2012; Wood, 2003).

## Competency Analysis – Technology

The ability to select technology, apply technology to tasks, and maintain and troubleshoot technology was found to be the least important domain among respondents with mean ranking scores the lowest of all competency groups and with the highest variability among respondents with a mean of 4.2 for students and 3.7 for faculty. Overall however, the mean was still greater than >3.5 clearly indicating that technology holds some perceived importance albeit not nearly as highly valued as the other SCANS domains. These findings are consistent with what has been reported by Buergermeister, (1983), Harrison (1996), Heimler (2010), McClain (2002), Quinn (2012), and Wood (2003).

Given the rapid growth and strategic use of the internet and social media in the hospitality industry, a higher rating in the systems and technology domains by those in academia was expected. In contrast, a study of hospitality management graduates from a Midwestern university working in the lodging, F&B, and event planning areas, 1 to 5 years after graduation, reported that using computers effectively ranked 2nd out of the 20 (Sisson & Adams, 2013). Additionally, the findings of these hospitality students and faculty differ significantly from studies that have considered students studying business management and early career management professionals such as Buzzetto-More (2011) who found that technology use and technology management and security were paramount.

The authors postulate that troubleshooting and maintaining technology is a narrow focus that would probably not apply throughout the broader organization. As such, this responsibility may be more likely to fall under specialists in a specific support or technology department. As such, it may not be perceived with the same significance as the other domains to hospitality students and faculty.

H<sub>1</sub>- There is strong agreement among academia and students regarding the importance of SCANS-specific competencies in hospitality graduates.

This hypothesis was examined by considering the responses to the Section II of the survey via the questions related to the SCAN specific competencies. A comparison chart and an ANOVA were generated. The output of the ANOVA analysis produced a p value of <0.05 indicating that there is a statistically significant difference between the group means. As a result, the authors were unable to positively confirm this hypothesis.

According to the findings, there was a high level of agreement in all competency areas except technology. There were no significant differences between students and faculty regarding the importance of the resource, information, and interpersonal skills needed in the hospitality industry. Surprisingly, the study revealed student and faculty respondent perceptions regarding systems and technology skills differed significantly, with students citing systems and technology skills as having a greater degree of importance than the participating faculty. The faculty reported the lowest scores in two of the five domains: systems (M = 3.98, SD = .1892, n = 25); and technology (M = 3.76, SD = .2517, n = 25). These results may be explained, in part, by the fact that students use technology extensively and, therefore, place greater importance on its application. The rapid advancement of internet, social media, and other technologies have impacted the way students exchange ideas, work, study, and manage their lives. The results of these findings are consistent with other SCAN studies such as Wang & Tsai (2014) but differ from what has been previously reported in a study by Mayo and Thomas-Haysbert (2005).

H<sub>2</sub> Participating students believe that internships are effective at building professional skills

This hypothesis is predicated on the idea that internships help develop management competencies and can be used to determine skills and that require improvement. It was explored by considering student responses to a scaled question “How important are internship experiences at building the professional skills of students?” whereas a mean of >4.0 was achieved thus affirming the hypothesis. Student responses regarding the importance and benefits of a professional internship compare with most of the literature. There is broad agreement that internships help develop management competencies and can be used to determine which skills need improvement. Studies have consistently

shown that learning through internships can increase professional readiness, improve management and leadership skills, provide targeted hospitality industry experience, and improve student learning in the classroom (Roy & Sykes, 2017; Zopiatis & Theocharous, 2013).

H<sub>3</sub>. Hospitality students are confident that their hospitality degree program is providing them with the skills necessary for professional readiness.

Overall, students were confident that their hospitality degree program is providing them with the skills necessary for professional readiness. The results were reflected in Tables 7-9 and with all means >4.0 the findings affirmed the hypothesis. These findings are similar to those of Bauer-Wolf (2018) but differed from Wang & Tsai (2014). Further, when asked their opinion students overwhelmingly agreed that “it is important that colleges and universities adjust their programs to reflect changing workforce demands” and that “it is important that college faculty have a current understanding of the skills desired by employers.”

### ***PRACTICAL IMPLICATIONS***

This study aimed to provide updated and relevant information regarding the importance of specific skills and competencies from the perception of academic and student respondents. The findings of this study may be used to support the efforts to improve curriculum and instructional materials. This study also supports the need for educators to develop closer ties and increased dialogue with all segments of the hospitality industry, as well as work with industry-sponsored education foundations. From an industry perspective, organizations can use the results of this study to develop lifelong learning organizations dedicated to building skills and competencies through training and education.

### ***LIMITATIONS***

The greatest limitation of this study is that is focused exclusively on students attending a single institution. However, at the same time, this study provides research on a population that is expanding in numbers in higher education and that many educators, and much research, reports as being under-prepared for academic success (Allen, 1987; Buzzetto-Hollywood et al., 2018; Morgan & VanLegen, 2005). This paper builds on the findings of studies that have been previously conducted at majority institutions; however, it would be enhanced by replication and expansion to multiple institutions in the United States and abroad.

### ***CONCLUSION***

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The findings of this study indicate that there is inconsistent agreement among faculty and students regarding the importance of SCANS-specific competencies. At the same time, there is no argument that industry skills will be critical in the future of hospitality graduates. Overwhelmingly, participating students and faculty found all of the SCANS competencies important (albeit to varying degrees) with the highest ranked competency being interpersonal skills, which, given the importance of teamwork, customer service skills, leadership, and working with cultural diversity in the hospitality industry, should be expected. Additionally, participating students indicated their strong agreement that internships are effective at building professional skills. Finally, the hospitality students included in this study, who were enrolled in a skill-based curriculum, were confident that their program is preparing them with the necessary skills and competencies that they will need for their future careers.

Career readiness and student perceptions of preparedness are big concerns and should be reviewed and analyzed for regularly. Hospitality programs should work closely with industry advisory board members, internship partners, and campus recruiters to ensure that the skills, competencies, and experiential learning opportunities students are being exposed to are relevant to what the industry desires in new entrants. Strong, consistent internships and work-study programs, both during the school year and outside of it, need to be developed and used as a strategy in career development.

Local hospitality organizations should be identified and work programs developed for students to participate in freshman through senior year. Working while in school can help students understand the specific facets of the industry, make coursework more relevant, and help them develop crucial workplace skills outside the classroom. This ultimately prepares students for the transition from higher education to full-time employment.

The leadership challenge for educators is to determine if curricula are meeting the constantly changing needs of the hospitality industry and formulate a strategy to adapt programs to what the industry needs.

This research highlights the competencies that the respondents believe are important for graduates and provides a framework for academic leaders, to strengthen student learning and better prepare students to compete and succeed in the 21st century. This study can be used to review curriculum and adapt courses to strengthen student learning in specific areas. Further studies should be done tracking graduates, determining how they are performing in the workplace, and identifying skills and learning opportunities that can improve hospitality programs. Additional studies can be undertaken to determine if students with off-campus internships are better prepared for future employment than those without internships and if companies believe internships benefit the employer.

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## BIOGRAPHIES

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## REMAINING CONNECTED WITH OUR GRADUATES: A PILOT STUDY

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### ABSTRACT

Aim/Purpose	This study aims to determine where nursing students from a metropolitan university subsequently work following graduation, identify the factors that influence decisions to pursue careers in particular locations, ascertain educational plans in the immediate future; and explore the factors that might attract students to pursue postgraduate study.
Background	The global nursing shortage and high attrition of nursing students remain a challenge for the nursing profession. A recurrent pattern of maldistribution of nurses in clinical specialities and work locations has also occurred. It is imperative that institutions of learning examine their directions and priorities with the goal of meeting the mounting health needs of the wider community.
Methodology	Qualitative and quantitative data were obtained through an online 21-item questionnaire. The questionnaire gathered data such as year of graduation, employment status, the location of main and secondary jobs, the principal area of nursing activity, and plans for postgraduate study. It sought graduates' reasons for seeking employment in particular workplaces and the factors encouraging them to pursue postgraduate study.
Contribution	This study is meaningful and relevant as it provided a window to see the gaps in higher education and nursing practice, and opportunities in research and collaboration. It conveys many insights that were informative, valuable and illuminating in the context of nurse shortage and nurse education. The partnership with hospitals and health services in providing education and support at the workplace is emphasized.
Findings	Twenty-three students completed the online questionnaire. All respondents were employed, 22 were working in Australia on a permanent basis (96%), 19 in

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	<p>urban areas (83%) with three in regional/rural areas (13%), and one was working internationally (4%). This pilot study revealed that there were varied reasons for workplace decisions, but the most common answer was the opportunity provided to students to undertake their graduate year and subsequent employment offered. Moreover, the prevailing culture of the organization and high-quality clinical experiences afforded to students were significant contributory factors. Data analysis revealed their plans for postgraduate studies in the next five years (61%), with critical care nursing as the most popular specialty option. The majority of the respondents (78%) signified their interest in taking further courses, being familiar with the educational system and expressing high satisfaction with the university's program delivery.</p>
Recommendations for Practitioners	<p>The results of the pilot should be tested in a full study with validated instruments in the future. With a larger dataset, the conclusions about graduate destinations and postgraduate educational pursuits of graduates would be generalizable, valid and reliable.</p>
Recommendations for Researchers	<p>Further research to explore how graduates might be encouraged to work in rural and regional areas, determine courses that meet the demand of the market, and how to better engage with clinical partners are recommended.</p>
Impact on Society	<p>It is expected that the study will be extended in the future to benefit other academics, service managers, recruiters, and stakeholders to alert them of strategies that may be used to entice graduates to seek employment in various areas and plan for addressing the educational needs of postgraduate nursing students. The end goal is to help enhance the nursing workforce by focusing on leadership and retention.</p>
Future Research	<p>Future directions for research will include canvassing a bigger sample of alumni students and continuously monitoring graduate destinations and educational aspirations. How graduates might be encouraged to work in rural and regional areas will be further explored. Further research will also be undertaken involving graduates from other universities and other countries in order to compare the work practice of graduates over the same time frame.</p>
Keywords	<p>nursing, graduate destinations, educational aspirations, clinical experiences</p>

## INTRODUCTION

Maintaining a sustainable health workforce remains a significant challenge for Australia. The challenge stems from a population living longer but with more complex health problems, spiralling costs of treatment, and increasing consumer demands and expectations (Health Workforce Australia [HWA], 2014a). The HWA (2014a) heralds the inevitable shortage of nurses owing to this population pattern, as well as an ageing nurse workforce and increasing attrition rates. Current projections estimate a shortage of as many as 85,000 nurses by 2025, and 123,000 nurses by 2030. These projections provide key stakeholders with the opportunities to develop and implement strategic directions to address the anticipated shortage in the nursing workforce. Other related issues of concern in contemporary nursing include the maldistribution of nurses in various locations and the need to meet educational and lifelong learning needs of graduates.

The shortage of nurses is not unique to Australia. Both the western and eastern countries report the seriousness of this problem. The figures from North America (Sigma Theta Tau, n.d.), the United Kingdom (UK) (Rafferty, 2018), and Asian countries like Singapore (Asia Pacific, 2018) reveal a short supply of nurses. The reasons may vary, with population growth, declining new nurse recruits, comorbidities, an ageing workforce, among them (Reinhard, Redfoot, & Cleary, 2008), but the impact

on care and survival are the same. Consequently, the employment of internationally qualified nurses has spiralled. In America alone, the number of international nurses grew by 93,036 between 2002 and 2006, and now exceeds the number of native-born nurses.

The problem calls for institutional responses at various levels of society, particularly the public and private sectors. Various innovations and initiatives have been implemented with the objective of alleviating the nurse shortage in Australia. The HWA (2014b, pp. 2-3) emphasised the need for “coordinated action for system-wide uptake” approach encompassing major areas such as “leadership, retention and productivity.” It had been identified that work capacity must be built (leadership), early career preparation and workplace support must be provided (retention), and innovation in the workplace encouraged (productivity). Other countries are also preparing for the same pending massive shortage.

An exploratory study is to be undertaken to determine the graduate destinations and postgraduate educational pursuits of graduates of a metropolitan Australian university. However, before that occurs, a pilot study is undertaken first to test the methods and procedures in preparation for the large-scale study. The instrument to be used needs to be validated and refined for use to a larger-sized population. After examining the feasibility of the study, more extensive data will be gathered that will allow generalised conclusions about graduate destinations and educational pursuits of graduates.

Thus, a retrospective study was conducted to access information and experiences of past students concerning their employment destinations and educational aspirations. The objectives of this pilot study were to (1) determine where students subsequently work following graduation, (2) identify the factors that influenced their decisions to pursue careers in either urban, regional/rural, remote or international locations, (3) determine their educational plans in the immediate future, and (4) explore the factors that might attract them to pursue postgraduate study with the University or elsewhere.

## LITERATURE REVIEW

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The nursing workforce in Australia is under pressure from several quarters. The nurses are ageing as reflected in both the increasing average age of nurses (from 44.3 years in 2009, 44.6 years in 2012, to 44.4 years in 2015) and the percentage of those aged 55 years and over (from 19.8 per cent in 2009 to 23.1 per cent in 2012). This trend is expected to continue, according to HWA (2014a) and the National Health Workforce Dataset (NHWD, 2016).

In 2016, 89.1% of the nursing workforce was female, indicating nurses are more likely to be women (NHWD, 2016). From 2013 to 2016, the male proportion increased by 0.5% to 10.9%, representing an increase of 3,419, with males aged between 23-34 years increasing by 1,867. These figures showed very modest increase by comparison to the female numbers; the male gender was and still is remarkably under-represented in a pool of over 360,000 nurses and midwives registered in Australia in 2015.

The majority of Australian registered nurses were employed in the medical, surgical, and mixed medical/surgical areas (23% or approximately 58,000), followed by aged care (10% or approximately 25,100) in 2012 (HWA, 2014a). While nurses were found in clinical settings, including aged care, medical/surgical, peri-operative, mental health, and emergency, there are fewer nurses in research, policy, and health promotion. Also, 56.2% of the workforce was in the public sector, 34.3% in private, and 3% in both, in 2016 (NHWD, 2016).

Moreover, disparities with distribution occurred across states and territories. Statistics showed that, in 2016, about 55.2% of the nurses were located in New South Wales (28.2%) and Victoria (27.1%), and 20.3% were located in Queensland (NHWD, 2016). In the same year, 72.2% of the workforce (227,568) worked in major cities, 17.8% (56,097) in inner regional, 8% (25,188) in outer regional and 2% in remote/very remote (6,247) areas. Based on the ratio of the number of health professionals in an area's population, the numbers of registered nurses were highest in major cities, and least in out-back locations.

The shortage and maldistribution of nursing staff have led to the recruitment of internationally qualified nurses to fill the positions. The nursing workforce comprised of 80.4% (253,444) individuals who obtained their initial qualification/s in Australia, 0.4% (1,362) obtained one initial qualification in Australia and one overseas, and 17.7% (55,770) obtained their initial qualification(s) overseas (NHWD, 2016). The majority of those who had overseas qualifications came from England and India. While employment of qualified overseas nurses may be a solution, this arrangement brings with it problems and challenges (Limpangog, 2013), which are essential to examine, but are beyond the scope of this paper.

Succession planning is another problem besetting the workforce. New nurses need the best possible supportive structures to commence their career paths plus meet the needs and expectations of health service employers. To achieve this requires much collaborative planning and adequate support from the workplaces. Thus, it is vital that retention and attrition issues be addressed. For one, leadership is paramount; nurse managers creating a conducive work environment for nurses is crucial (HWA, 2014b).

Beecroft, Dorey and Wenten (2008) reported an American study to determine the relationship of new nurse turnover intent with individual characteristics, work environment and organizational factors. A prospective study was conducted from 1999 to 2006 involving new paediatric nurses (n=889); logistic regression analysis was performed. The relationships between turnover intent and actual turnover were compared using Kaplan–Meier survivorship. Results showed that when new graduate nurses were satisfied with their jobs and felt committed to the organization, turnover intent decreased. Increased seeking social support to cope with the transition was associated with turnover intent.

The workplace environment is vital to consider when it comes to nurse recruitment and retention. The environment must be safe and supportive as this is critical to the graduate nurse transition and integration (Johnstone, Kanitsaki, & Currie, 2008). The concept of support was re-defined recently and the critical barriers identified. The negative attitude of staff members toward new nurse graduates was a compelling factor impacting on retention. It was also found that essential for retention and satisfaction of new nurses were placements with well-staffed units and transition-to-work programs (Scott, Engelke, & Swanson 2008).

In a Switzerland study on retention (Addor, Jeannin, Schwendimann, & Roulet Jeannert, 2017), it was revealed that half (n=287) of the participants left the workplace, or nursing altogether, at least once. The reasons behind leaving employment or nursing included personal choices, work-family conflict, heavy schedules, high workload, underused skills, lack of participation in decision-making, or unsupportive nursing management. In a study examining the relationships between authentic leadership and work engagement by Giallonardo, Wong, and Iwasiw (2010) using a predictive non-experimental survey design, it was found that job satisfaction was significantly associated with these two factors. Moreover, Cowin and Hengstberger-Sims (2005) reported that self-concept might provide the reason for graduate retention. Monitoring of self-concept throughout the transitional period for new nurses could lead to early detection and appropriate intervention strategies, thereby improving retention.

The matter of continuing education of nurses is equally pertinent. Nurses opt to pursue postgraduate studies for various reasons including higher income and opportunities, as well as increase network and professional development. Hickey, Sumsion, and Harrison (2013) commented that intrinsic and extrinsic rewards influenced career development and decisions of undergraduates to pursue education and that work experiences such as prior clinical placements and employment support were noteworthy considerations. In the case of generalist nurses practising in rural and remote settings, continuing education was essential as they cared for clients with a wide variety of conditions, including critical care and emergency conditions. However, access to continuing education for these nurses could be problematic owing to distance and equity issues (Hendrickx & Winters, 2017). It was imperative to provide continuing education to nurses working in said geographical locations, utilising re-

cent advances in technology. In providing postgraduate studies for past graduate nurses, the incorporation of two strategies for the graduate online education setting was implemented with the purpose of promoting caring for self and others through online Caring Groups (Brown & Wilson, 2016). The sites were well received by the participants in the study.

To recapitulate, the global nursing shortage and high attrition of nursing students and nurses remain a challenge for the profession. A recurrent pattern of maldistribution of nurses in clinical specialties and work locations has also occurred. It is imperative that tertiary institutions examine their directions and priorities with the goal of meeting the mounting health needs of the wider community. The continuous shortage has led to the need to employ nurses who qualified abroad (Cousins, Burrows, Cousins, Dunlop, & Mitchell, 2016). It is paramount that the education provider understands the factors that influence decisions to seek and retain employment in particular locations (metropolitan, regional/rural or remote, international) and make students aware of the diverse career pathways of nursing graduates, whether clinical, education, or research. Crucial also is to better assist students who are considering a career in various areas of nursing and strengthen their readiness for practice. Another important consideration is determining the educational pursuits of the graduates. In knowing the alumni's future educational plans, the university is informed about how to meet their future educational needs and aspirations. By providing adequate contextual information, the adoption of the findings to other universities and contexts may be facilitated. It is expected that the study will be extended in the future to benefit other academics, service managers, recruiters, and stakeholders to alert them of strategies that may be used to entice graduates to seek employment in various areas and plan for addressing the educational needs of postgraduate nursing students. The end goal is to help enhance the nursing workforce by focusing on leadership and retention.

## METHODOLOGY

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In collecting information about the participants' employment destinations and educational aspirations, an observational design is most appropriate. Observational designs aim to discern and identify variables of interest, such as individual characteristics, knowledge, beliefs, and attitudes about a particular topic, phenomenon, or event (Shields & Smyth, 2016). More specifically, the study is descriptive and retrospective.

A survey, using a questionnaire, was administered online. It was self-completed, measuring only one-time point. It accessed the required information and linked the present outcomes to past events. Quantitative and qualitative data were obtained from this survey. The quantitative data identified the locations of employment, educational plans for the future, as well as the factors contributing to decisions about employment and postgraduate education. The qualitative data gave access to self-disclosed reasons relating to choice of employment area and factors that would entice graduates to undertake postgraduate studies.

## SAMPLE

A sample of 23 students who qualified for the award of a degree in nursing in the calendar years 2011 to 2016 completed the online survey. It was decided that for the pilot, the survey would be opened only to recent graduates. The mean age was 33 years, the youngest being 23 years, the oldest 51 years. Nineteen (19) were females; four were males. Of the respondents, eight had completed the Bachelor's degree, ten the Master of Nursing Practice pre-registration program, and five the Bachelor of Nursing/Bachelor of Emergency Health program. Two graduated in 2012, one in 2013, five in 2014, ten in 2015, and five in 2016.

A total of 694 Bachelor of Nursing pre-registration graduates were registered in the Alumni list at the beginning of 2017, and they were initially contacted. Only 23 responded within the timeframe, indicating a very low response rate. A more significant sample, comprising all graduates, will be surveyed in the larger study.

## ***DATA COLLECTION***

A graduate employment location and further educational aspirations questionnaire was developed, based on the yearly survey for Australian Health Practitioner Regulation Agency (AHPRA) registration, and distributed online. Not all the questions were taken from the AHPRA survey; additional questions on the reasons for employment destinations and educational pursuits were added. The final instrument was a 21-item questionnaire with open- and closed-ended questions that gathered data such as demographics, year of graduation, current employment status, the location of primary and secondary jobs and principal area of nursing activity (Questions 1 to 12). The reasons that prompted the graduates to seek employment in their particular workplaces were also surveyed (Question 13). Responses as to graduates' educational needs and plans were gathered in Questions 14 to 17. The factors that might encourage graduates to undertake postgraduate education were explored (Questions 18 and 19). Finally, responses regarding the value of continuing education and further comments were sought (Questions 20 and 21). The questionnaire did not require any revision after two graduates trialled it before it was administered online.

## ***ETHICAL CONSIDERATIONS***

A protocol for this research was submitted to the University Human Research Ethics Committee. Following approval, steps were undertaken to ensure that requirements were met.

## ***PROCEDURE***

Representation to the alumni about the study was made through the official committee of the University, which held the list of past students and their addresses who were potential participants. The questionnaire was sent to the graduates online. A letter introducing the study and requesting participation and an explanatory statement were attached to the questionnaire. The explanatory statement provided details of the research process in order to help potential participants decide whether to participate or not. Any query regarding the study was to be directed to the Executive Officer, University Human Research Ethics, whose contact details were provided on the explanatory statement.

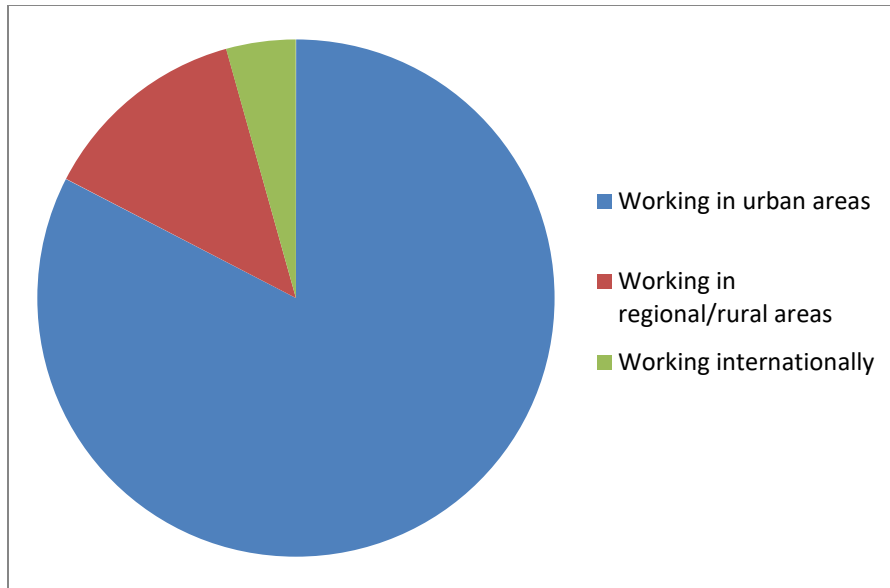
## ***METHOD OF ANALYSIS***

Descriptive and frequency analyses were performed on the data collected. A frequency distribution was used to organise the data (Fisher & Fethney, 2016). The occurrences or frequencies of responses were summarized and reported in tables and depicted in charts. For the qualitative data, content analysis was undertaken. Counting and reporting the frequency of concepts, words and behaviour mentioned in the data was undertaken (Creswell, 2003; Vaismoradi, Turunen, & Bondas, 2013).

## ***RESULTS***

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All respondents were employed, 22 were working in Australia on a permanent basis, except for one. Nineteen (19) respondents were working in urban areas with three in regional/rural areas, and one working internationally (See Figure 1).



**Figure 1. Employment location of students**

Twenty-one (21) graduates had a single primary place of work; however, two reported that they had secondary jobs. Twenty-one (21) worked principally in clinical settings, one worked in research, and one worked both in a clinical and outside a clinical setting. The main task of work was standard nursing care for 21 nurses, and education and research for one participant.

When queried about the factors that influenced graduates' decision to pursue their careers in specific locations, it was revealed that there were multiple reasons for workplace decisions. The most common answer was the "opportunity provided to students to undertake their graduate year, and subsequent employment offered that helped students decide where to find employment." This was followed by the "culture of the healthcare setting" and by "positive clinical placement experiences" of students (See Table 1).

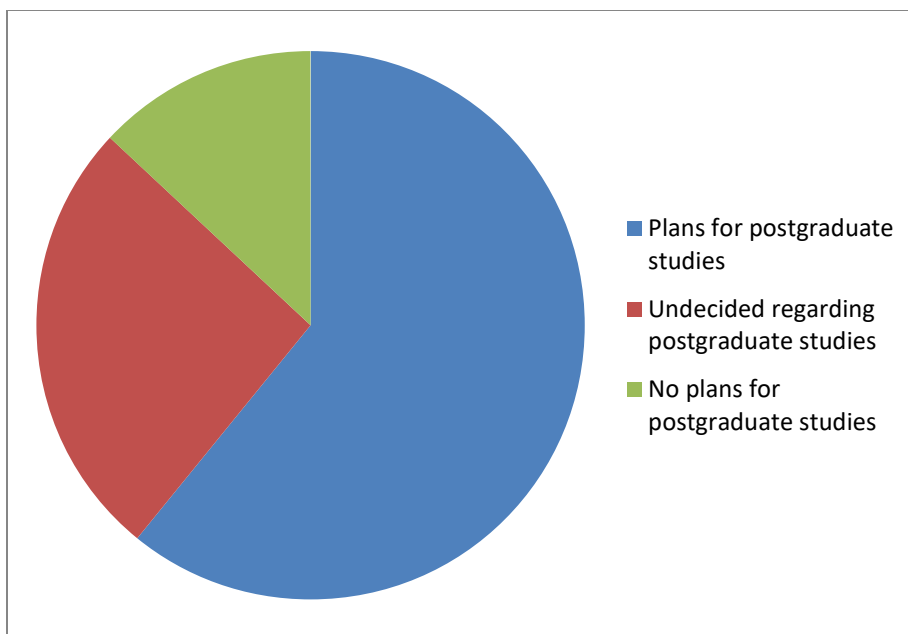
**Table 1. Reasons for Choice of location**

REASON	Number*	Percent
Opportunity to do a graduate year	8	35
The culture of the organization	7	30
Student placement experiences	5	22
Passion and enjoyment	4	17
Employer's request	3	13
Career advancement	2	9
Location	2	9
Money	1	4

\* Number of times the item was identified

On the topic concerning educational pursuits, analysis of the data revealed that 17 respondents had not undertaken any postgraduate study. The programs undertaken by the other six respondents include Master of Advanced Nursing (Mental Health), Graduate Certificate in Neonatal Care, Bachelor of Midwifery, Master of Advanced Practice (Midwifery), Postgraduate Certificate in Critical Care,

Master of Advanced Nursing and undertaking Education subjects, and Postgraduate Critical Care. Fourteen (14) participants had plans for postgraduate study in the next five years, six were undecided, and three did not have plans (See Figure 2). Four (4) identified critical care as the nursing speciality they wished to pursue. Other speciality areas of interest included Emergency nursing, Cardiac nursing, Midwifery, Education, and Anatomy/Physiology/Pathophysiology.



**Figure 2. Pursuing postgraduate studies**

The participants suggested multiple ways to entice past students to pursue postgraduate studies. Frequently recurring answers were: “good undergraduate learning experiences”, “online” delivery of courses and “flexibility”, and “the range of courses/programs being offered” (See Table 2).

**Table 2. Factors to attract Graduates to Pursue Postgraduate Studies**

FACTOR	Number*	Percent
Good experience during the undergraduate study	6	26
If provided online	5	22
The range of courses being offered	4	17
Flexibility with work	3	13
Others (International Health / Neuroscience; scholarship; location; word of mouth; progression into academia)	5	22

\* Number of times the item was identified

Eighteen (18) participants signified their interest to study. However, they qualified that this applied only if they were government-supported places. Two (2) indicated a willingness to pay full fees, and if “it [the course] was good enough”. Continuing education was necessary for 21 graduates. Table 3 summarises the reasons why continuing education is a priority for these alumni.

**Table 3. Importance of Continuing Education**

REASON	Number*	Percent
Professional growth	9	39
Career advancement	4	17
Personal benefit	4	17
Community/Patient care	3	13
Work overseas	1	4

\* Number of times the item was identified

The motivation for undertaking further education was the desire to grow personally and professionally. Closely related was a marked focus on employment outcomes and career advancement. Some quotations on the value of continuing education are included:

*It [continuing education] is important for furthering knowledge in speciality areas.*

*Need to be able to provide the best care*

*The medical field is ever-changing, and further education can only benefit me, my colleagues, my workplace, and ultimately my patient care. You can never learn too much when it comes to health care provision*

*It is necessary for senior positions.*

*Yes as education is Power and knowledge is growth - become better at your job.*

*Always learning and improving to provide the best care for our community!*

Table 4 summarises the specific strategies that might attract individuals to pursue postgraduate education from the graduates' perspectives. The recurring responses were "the courses students are looking for must be offered", "flexibility" in delivery, and adequate and assertive promotion. The latter referred to the exploration of promotional activities and the roles of advertising and marketing in promoting postgraduate studies.

**Table 4. Strategies That Might Entice Individuals to Pursue Postgraduate Studies**

STRATEGY	Number*	Percent
Availability of courses/subject content	7	30
Flexibility/online/convenience	5	22
Actively inform students of the many opportunities available in post-grad studies	3	13
Attractive career option	2	9
Scholarship	1	4

\* Number of times the item was identified

## DISCUSSION

This section examines the major findings of the study. It focuses on the objectives that have been achieved, implications, relation to other similar studies, the meaning and relevance of the findings, and the limitations.

The objectives of the pilot study have been achieved. The first objective was to determine where the students subsequently worked following graduation. It appeared that the location was decided by the opportunity provided to the students to undertake their graduate year and subsequent employment offered. However, the location was also determined by the prevailing culture of the workplace and by positive clinical placement experiences gained by the students. Similarly, Hickey et al. (2013) concluded that the experiences at the workplace, particularly the support available to students, influence career development and decision-making. In addition to practicum experiences, the location of work was also an essential factor. In a UK pilot study aimed at exploring the influence of clinical placements on final-year nursing students' career decisions, it was concluded that the experiences in the third year were a determining factor in their decision about their first employment position (Wareing, Taylor, Wilson, & Sharples, 2017). The same authors highlighted the level of support of clinical staff as critical for recruitment and retention.

Nursing schools must continue recognising the value of strong partnerships with hospitals and health services in providing quality clinical placements. Dufault, Bartlett, Dagrosa, and Joseph (1992) reported on collaborative programs between industry and academia, the central outcome of which was an increase in students' competencies and learning. Other outcomes of the partnership between industry and academia included increased recruitment and retention of nurses in the hospitals and greater ease in their orientation and transition. The "turf" issues separating the two needs to be negotiated and the wall dividing them broken down.

The turnover rate of new graduate nurses is unusually high. Rhéaume, Clément, and LeBel (2010) studied why new graduate nurses intended to leave their current employer. Survey data were collected from 348 new graduate nurses over five years, beginning in 2004 and ending in 2008, in eastern Canada. Intention to leave was associated with the work environment, foundations for quality nursing care, and psychological empowerment. A similar trend was reported by Meyer, Shatto, Delicath, and von der Lancken (2017), who concluded that the clinical environment was a potent force for professional and job satisfaction and for the intention to stay in their position. This conclusion was corroborated by Shatto and Lutz (2017) who posited that a supportive environment free from bullying, a positive preceptor experience, and self-confidence are vital for retention to happen.

Various internship programs have been set up to facilitate the smooth transition of new graduates to the workforce. These programs are essential in assisting the movement of beginning nurses into special units, such as critical care, oncology, or neuroscience, which could be daunting for new graduates (Hartshorn, 1992; Price, DiIorio, & Becker, 2000). These have the potential of improving the working conditions that nurses deem essential in their decisions to seek and maintain employment, whether in urban or regional areas.

The second objective was to identify the factors that influenced past students' decisions to pursue careers in urban, regional/rural, remote, or international locations. The majority of the participants sought employment in the urban areas. Nursing students studying at metropolitan universities were likely to seek employment in metropolitan areas and unlikely to work in regional areas, a hypothesis that would be tested in the larger study. Similarly, graduates from regional/rural universities were more likely to stay and work there (Penman, Oliver, & Petkov, 2003). However, it is critical that urban graduate nurses develop familiarity with nursing in regional areas and be attracted to consider employment options in these areas if the maldistribution of nurses in Australia is to be addressed.

Part of the solution to nursing shortages is to increase the number of student places in areas with nursing candidate gaps and to attempt to contribute significantly also to the regional workforce. Including regional nursing in the curriculum and forming strong partnerships with health organizations to improve awareness of employment opportunities in regional and rural areas are strategies that could be explored. We also need to consider how the university might meet regional and rural nurses' educational needs. Developing strong partnerships with industry (Valentín, 2000), establishing intern-

ship programs, and offering courses/programs that are relevant can also contribute to achieving this purpose.

This study revealed another aspect worth investigating – gender issues. The sample of this study depicted a substantially smaller proportion of males (17%) to females (83%), representing the female-dominated nature of nursing. Other research findings also indicated that males were more likely to leave the course than females (McLaughlin, Muldoon, & Moutray, 2010). Furthermore, those who completed the course thought that nursing was more appropriate for women. The prevalent stereotypes and gender bias inherent in the nursing culture tend to make the profession more challenging for males. With the current shortage of nurses, this gender bias is not helpful, and strategies to reduce/eliminate this are imperative.

The third objective that was achieved was concerned with determining the educational aspirations of past students. In this study, the majority wanted to further their education, and many were intrinsically and extrinsically motivated. However, the availability of government support was an important factor to consider in deciding about postgraduate education. In Australia, postgraduate studies rarely attract fees support from the government, and this places a financial burden on students. Therefore, a gap to bridge and opportunity to develop is how to make postgraduate education more accessible to these potential students.

The fourth objective was to explore the factors that might attract students to pursue postgraduate study with the University or elsewhere. The participants suggested multiple exciting and creative ways of accomplishing this. Emphasis was placed on making popular courses available. Some courses were currently unavailable at the University, and this meant that students needed to study outside their residential areas if they chose to undertake a course only offered elsewhere. The other alternative was to study online, but this meant limited contact with the tertiary provider. Universities in the 21st century are driven by revenue and do not offer courses deemed unviable despite interest from potential students. An innovative collaboration between universities might be a solution to this limitation. Cross-enrolment and cross-crediting by institutions of higher education have been shown to be beneficial as a model for collaboration in distance education (Pritchard & Jones, n.d.).

Past students indicated their highly satisfying and positive university experience as a factor when considering postgraduate studies. This market with its readymade links to the University should be capitalised upon. One student commented, “Easy to go back and study as I am already familiar with the educational system”, while another remarked, “The nursing lecturers are superb.” Students who have had positive experiences with their university were likely to pursue further studies in the same university, another hypothesis that would be tested in the next phase of the study.

For some students, the perception of the value in education takes a consumerist view. They want ‘value for money’ (Kandiko & Mawer, 2013). They wish to know the details of the time, facilities, and resources that will be invested in them. To support students’ choice of postgraduate study, there should be more information and transparency over how the money is spent on teaching and learning activities, what qualifications academics have, and how teaching is structured and allocated.

This study is meaningful and relevant for several reasons. It provided a window to see the gaps in higher education and nursing practice, and opportunities in research and collaboration. It conveyed many insights that are informative, valuable, and illuminating in the context of nurse shortage and nurse education. The partnership with hospitals and health services in providing education and support at the workplace could not be overemphasised. A clinical environment that was satisfying, positive and nurturing was crucial for employment decision and retention. Increasing awareness of the opportunities available in regional/rural and remote areas was a strategy that might address the maldistribution of nurses, as well as reducing/eliminating gender bias. This study also confirmed that past students were keen about postgraduate studies realising its many benefits, but they have some hurdles to overcome to participate in further education.

This pilot study has limitations as the data were derived from the responses of a small group of bachelor degree graduates between 2011 and 2016. Constrained by small numbers, the implications and recommendations are provisional. The results will be tested in a full study with validated instruments in the future. With a larger dataset, the conclusions about graduate destinations and postgraduate educational pursuits of graduates of a metropolitan Australian university will be generalizable, valid and reliable. The ultimate goal is to examine how the university is contributing towards producing a sustainable nurse workforce by providing education and training to future and continuing nurses.

## CONCLUSION

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This study has provided information about the destinations of students who completed an undergraduate nursing degree at a metropolitan campus. A significant proportion of the graduates subsequently worked in urban settings, and the reasons prompting them to work in metropolitan areas were clarified. These reasons were the opportunity provided to the students to undertake their graduate year, the offer of employment; the prevailing culture of the healthcare setting; and the students' positive clinical placement experiences. Providing highly satisfactory clinical placement experiences is paramount for recruitment and retention.

Equally important to consider is the provision of professional and educational support. The majority of the graduates deemed continuing education a priority and had plans to pursue postgraduate education if the University were to offer the right courses, deliver flexibly and/or online, and appropriately design courses for people who are working.

Future directions for research will include canvassing a bigger sample of alumni students, testing the hypotheses framed, and continuously monitoring graduate destinations and educational aspirations. How graduates might be encouraged to work in rural and regional areas will be further explored. Further research will also be undertaken involving graduates from other universities and other countries in order to compare the work practice of graduates over the same time frame.

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## BIOGRAPHIES

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## KNOWING ME, KNOWING YOU: TEACHERS' PERCEPTIONS OF COMMUNICATION WITH THEIR STUDENTS ON FACEBOOK

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### ABSTRACT

Aim/Purpose	The purpose of the current study is to explore positive and negative aspects of teacher-teacher communication via Facebook, as perceived by teachers in secondary education.
Background	Teacher-student relationship is key to teachers' wellness and professional development and may contribute to positive classroom environment. In recent years, as social networking sites (e.g., Facebook) became popular, these connections have extended to such platforms. However, most studies of the use of social networking sites in the school context are pedagogically-driven, and research on the ways teacher-student relationship is facilitated by these platforms is meager.
Methodology	We utilized a qualitative approach, analyzing responses to open-ended questions about this topic by middle- and high-school teachers' all across Israel (N=180). We used both top-down and bottom-up analyses.
Contribution	This study contributes to the growing literature about the overall impact of using social networking sites on the educational milieu. Specifically, it contributes by shedding light on teachers' perspectives of that phenomenon. Insights from this study are important for educators and education policy makers.
Findings	Overall, teachers who were connected to their students de facto, as well as teachers who expressed a wish to be connected to their students, acknowledged the advantages of befriending their students on Facebook, in terms of both teacher- and student benefits. Teachers' overall viewpoint on the negative aspects of Facebook-connections with students is multifaceted. As such, our findings highlight the complexity of using social networking sites by teachers.

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Recommendations for Practitioners	We recommend that educators who wish to extend the relationship with their student to online platforms do so wisely, taking advantage of the benefits of using these platforms, and being aware of (and cautious about) potential drawbacks. We encourage educators to learn more about the potential uses of social networking sites and instant messaging services, and then to examine whether these uses may fit their educational agenda. We recommend that education policymakers make evidence-based decisions regarding the use of social networking sites by teachers and encourage school communities to discuss these issues together.
Recommendations for Researchers	As technology develops rapidly, we recommend that researchers examine the topics raised in the current research with regards to other platforms, in order to better understand the technological aspects that may affect students' perceptions of the use of social networking sites and instant messaging services to communicate with their students. The issues studied here should also be studied in different cultural contexts. We recommend broadening the research and making results available to policymakers when making decisions regarding social media in educational contexts.
Impact on Society	Understanding teachers' perspectives of their relationship with their students in today's digital, networked world gives us a better understanding of the changing role of teachers; hence, it may assist in planning teacher training and professional development, with the ultimate goal of realizing a better educational system.
Future Research	Future studies should focus on other social networking sites and instant messaging services, as well as on other countries and cultures.
Keywords	teacher-student relationship, teacher-student communication, social networking sites, SNS-mediated communication, Facebook

## INTRODUCTION

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Teacher-student relationships are key in students' academic, social, and emotional development, and are vital for teachers' professional growth. Communication is the main mechanism through which teachers and students exchange information, and through which teachers supply students with academic and personal support; hence, communication is an integral, necessary part of teacher-student relationship. Naturally, teacher-student communication goes beyond school time. As social networking sites (SNS)—like Facebook, Twitter, Instagram, etc.—have been widely adopted among Internet users of all ages, they serve as a natural arena for social interactions for both students and teachers. As a result, teacher-student relationship is often facilitated by SNS-based communication.

Although this study is focused on teachers' perspective, it is important to emphasize that positive student-teacher communication and relationship are key to students' learning, as well as to their social and emotional development. A recent meta-analysis of teacher-student out-of-class communication, examining studies that span over a few decades and cover altogether thousands of students, had revealed positive effects of such communication on both affective and (perceived) cognitive learning (Goldman, Goodboy, & Bolkan, 2016). Similar findings have been recently found regarding teacher-student communication that is facilitated via instant messaging apps (Hershkovitz, Abu Elhija, & Zedan, 2019; Nkhoma, Thomas, Nkhoma, Sriratanaviriyakul, Truong, & Vo, 2018). Indeed, one of the most prominent characteristics of instant messaging—that is, immediacy—has been repeatedly indicated as an important factor of positive teacher-student communication via digital platforms (e.g., Hershkovitz & Forkosh-Baruch, 2019; Rosenberg & Asterhan, 2018). Immediacy—in the context of classroom teacher-student interactions—as was shown via meta-analyses of that construct, is an im-

portant factor affecting learning by increasing students' motivation to learn and their attitudes towards learning (Allen, Witt, & Wheelless, 2006; Witt, Wheelless, & Allen, 2004).

This reality of teachers and students communicating via SNS raises some intriguing questions, since these platforms enable (and possibly promote) new kinds of communication. Interaction via SNS may trigger behavior, as well as cognitive and emotional processes (Fischer & Rauber, 2011; Slater, 2007), and therefore might impact teacher-student relationship at large and, consequentially, teachers' perceptions of their professional identity. Even the very term used in many SNSs to describe connected users—namely, “friends”—may challenge the traditional student-teacher hierarchy, where teachers are allowed some power over their students even when developing close relationship between the two. In that sense, teacher-student friendship on SNS has much to do with teacher-student communication and appropriate behavior, with technological challenges, and with teachers' professional development (Manca & Ranieri, 2017).

Confronting this new reality, school authorities and policymakers have been pondering about their position regarding teacher-student SNS-based communication, often prohibiting such communication altogether. However, most policies are not based on empirical evidence, but rather on notions and public opinion (which naturally tends to be biased towards negative rather than positive aspects of SNS (cf. Arbuthnott & Scerbe, 2016; Maheswaran & Meyers-Levy, 1990; Zillman, Chen, Knobloch, & Callison, 2004). As they are set up without being based on empirical evidence, policies may be changed in the same manner; in Israel, where the study reported in this article was conducted, the Ministry of Education first adopted a banning policy; however, about a year and a half later, the regulations were refined, allowing restricted SNS-related communication (Israeli Ministry of Education, 2011; 2013).

Therefore, the main objective of this study is to gain deep understanding of teachers' perceptions of benefits and drawbacks of using SNS as a communication tool with their students. Our focus is on secondary school teachers, a population which is still under-researched in that context (Akçayır & Akçayır, 2016).

## RELATED WORK

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### *TEACHERS' PROFESSIONAL IDENTITY IN THE INFORMATION ERA*

The teacher's role is continually changing, from being the major knowledge source to being a role model and mentor who constantly reflects upon his or her purpose, personal identity, relevance of the professional work to the real world, and relationships with students and colleagues (Fullan & Hargreaves, 2014). This is especially challenging in an era of transition, in which teachers need to be prepared to feel confident in settings saturated in information and communication technologies (ICT) (Banas & York, 2014; Istenic Starčić, Cotić, Solomonides, & Volk, 2016). This requires change in educational perceptions as well as in the professional identity of educators (Hargreaves, 2003).

In recent years, research regarding professional identity in teaching has broadened and deepened and has been in the center of the research discourse in education (Rodgers & Scott, 2008; Thomas & Beauchamp, 2011). The literature differentiates between the “personal self”, which refers to the sum of personal information on the individual, and the “professional self”, which refers to the sum of information on the individual focusing on his or her professional functioning. The professional identity is shaped within interaction of the person with him or herself, as well as with the social, cultural and professional environment (Akkerman & Meijer, 2011). However, the digital era coerces the teacher to enmesh between the two identities, as in many virtual spaces—like in the case of social networking sites—teachers act as both their “personal self” and “professional self”. As demonstrated in previous studies, positive beliefs and attitudes related to the value of technology in their role as teachers, together with computer self-efficacy, promote teachers' utilization of technology as part of their definition of the teaching profession (Prestridge, 2012; Sadaf, Newby, & Ertmer, 2016).

Additionally, policy changes and organizational reforms may create contradictions between the personal perceptions and others' perceptions regarding the scope of the term "professionalism" in teaching; consequently, this may create incongruity within teachers' professional identity (Beijaard, Meijer, & Verloop, 2004; Coldron & Smith, 1999). An example of such changes, which is relevant to our study, is the extension of teacher-student communication to online environments, beyond school grounds (Thorne, Sauro, & Smith, 2015). These changes raise the need to include ethical, social, and emotional aspects in teachers' identity definition, especially within the context of the digital era (den Brok, van der Want, Beijaard, & Wubbels, 2013). Indeed, it was mentioned recently that the professional learning needs of teachers might include ICT proficiency, which is considered an effective means to support and even promote their professional identity; this is frequently not addressed (Czerniawski, Guberman, & MacPhail, 2017).

### ***TEACHER-STUDENT RELATIONSHIP AND COMMUNICATION***

Student-teacher relationship is key to students' academic, social, and emotional development and may affect classroom and school environment at large (Birch & Ladd, 1998; Cornelius-White, 2007; Gregory & Weinstein, 2004; Hamre & Pianta, 2001; Sabol & Pianta, 2012). Strong, supporting student-teacher relationship might promote students' feelings of safety, security, and belongingness and may eventually lead to higher academic achievements (Hershkovitz & Forkosh-Baruch, 2019). In contrast, conflictual situations in such relationship might place students in situations where they do not feel connected to school's academic and emotional resources and may lead them to failure (Roorda, Koomen, Spilt, & Oort, 2011). Importantly, positive or negative teacher-student relationship might also influence teachers' well-being and professional development (de Jong, 2013; Gu & Day, 2007; Hamre, Pianta, Downer, & Mashburn, 2008; O'Connor, 2008; Roorda et al., 2011; Spilt, Koomen, & Thijs, 2011; Veldman, van Tartwijk, Brekelmans, & Wubbles, 2013; Yoon, 2002). Indeed, the importance of positive teacher-student connections and relationship is undisputed, being interdependent (Frymier & Houser, 2000).

Communication between teachers and students is an integral part of their relationship. Digital media open new opportunities for such communication, thereby allowing greater scope in terms of width, depth, and range of topics within online communication. In recent years, the popularity of instant messaging services (e.g., WhatsApp, Snapchat, Facebook Messenger) and social networking sites (e.g., Facebook, Twitter, Instagram) for interpersonal communication has grown dramatically. This phenomenon is prominent among teens. A 2015 survey has found that over a half of U.S. teens text their friends on a daily basis and that 89% of the teens use at least one social networking site (Lenhart, Smith, Anderson, Duggan, & Perrin, 2015). Due to their popularity among children and teens, teachers and instructors often use these platforms as a way to "meet" with their students where they are (Akçayır, 2017).

Conceptualizing teacher-student relationships, Hamre and Pianta (2006) noted that in addition to individual features, three components shape the relationships between teachers and students: perceptions and beliefs, information exchange processes, and external influence. These components are highly relevant to the current era, where teacher-student communication is extended to social networking sites (SNS). The use of these platforms is accompanied by potentially impactful perceptions and beliefs (e.g., Köseoğlu, 2017), is changing the way of communication *de facto* (e.g., Stieglitz & Dang-Xuan, 2013), and, following that, is serving as an important external factor (e.g., Mazer, Murphy, & Simonds, 2007).

The use of SNS for teacher-student communication symbolizes the blurring of traditional school borders and may affect those very borders. That is, the frequent, free communication that characterizes SNS might bring about a paradigmatic change in teacher-student connections, which in turn may have impact on schooling altogether (Wentzel, 2010). It has been argued that students who have good interactions with their teachers have close, warm relationship with them and are often motivated and more interested in learning (Fredriksen & Rhodes, 2004; Mazer, 2012; Wong, 2014).

In these platforms, communication is naturally highly social and is often characterized by self-disclosure. In such cases, this communication between teachers and students is naturally interpersonal; hence, both the teacher and the student communicate with each other as individuals, but still take into account their school roles (i.e., teacher role or student role) and their group affiliation. This complicates the more frequent teacher-student communication, which is based on their traditional roles (Dobransky & Frymier, 2004). Furthermore, this new type of communication may affect the traditional learning spaces (Mazer, Murphy, & Simonds, 2009).

Although researched extensively in higher-education contexts, research on the use of instant messaging and social networking sites for teacher-student communication in primary and secondary schools is meager. A recent literature review of the use of instant messaging in education has found only three studies conducted in secondary school level and no studies whatsoever in primary schools (Tang & Hew, 2017); moreover, two of these three studies are explicitly limited to pedagogical aspects. Similarly, the use of social networking sites for teacher-student communication has been mostly studied in formal, pedagogical contexts. When examining communication via these platforms, various advantages are being recognized, encompassing both functional and social aspects; these serve a wide range of purposes, such as information exchange, facilitating a positive social atmosphere, creating a dialogue among students, and supporting learning (Asterhan & Rosenberg, 2015; Bouhnik & Deshen, 2014; Schouwstra, 2016) – all of which are directly connected to teacher-student relationship.

## THEORETICAL FRAMEWORK

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Our study of student-teacher relationships is based on the axes defined in Ang's (2005) Teacher-Student Relationship Inventory (TSRI), namely, Satisfaction, Instrumental Help, and Conflict. We found this framework suitable for two main reasons. First, this inventory was validated by populations of middle school teachers, while previous scales, mainly Pianta's (1992) STRS, were mostly focused on much younger ages. Secondly, Ang's axes well connect with the special characteristics of SNS.

The first axis of this framework is Satisfaction, which refers to experiences reflecting positive experiences between students and teachers; these are linked to positive adjustment to school (Wentzel & Asher, 1995). Studies, not necessarily technology-related, show that teachers prefer students who demonstrated positive—as opposed to negative—attitudes (e.g., Brophy & Evertson, 1981). Furthermore, supportive and positive teacher–student relationships predict positive educational outcomes among lower secondary and high school students (Davis, 2003).

The second axis is Instrumental Help, that is, when students refer to teachers as resource persons, such that they might approach for advice, sympathy, or help. Studies of teacher–student relationships among secondary-school students state that one of the major dimensions connected to student outcomes is instrumental help. Teachers that are concerned about their students' well-being and academic performance, exhibiting interest in them, seek out to assist them in any way they can (Brophy & Evertson, 1978; Coladarci, 1992; Wentzel, 2003). Teachers that show they care for their students are also those who provide assistance, advice, and encouragement, beyond the formal demands of their profession. Their students develop a positive connection to their teachers as well as higher engagement in class; hence, they strive for goals and outcomes in accordance to their teachers' academic values (Ang, 2005).

The third axis is Conflict, referring to negative and unpleasant experiences between students and teachers. Conflict is positively related to behavioral problems (Pianta, Steinberg, & Rollins, 1995) and negatively related to engagement in class (Ladd & Burgess, 2001), i.e., the higher the levels of conflict students feel towards their teachers, the more likely these students will demonstrate more behavioral problems and less engagement in class.

This framework will serve us in understanding teachers' perceptions of teacher-student relationship and communication via Facebook, which is the focus of the current study.

## RESEARCH QUESTIONS

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Following the literature review—understanding the key role teacher-student relationship and communication takes in teachers' professional development—and considering the importance of SNS-mediated communication in today's digital era, we formulated the following research questions:

1. What are the positive aspects of teacher-student communication via Facebook?
  - a. From the perspective of those teachers who are “friends” with their students?
  - b. From the perspective of those teachers who are interested in a “friendship” with their students?
2. What are the negative aspects of teacher-student communication via Facebook?

## METHODOLOGY

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### *DATA COLLECTION AND INSTRUMENTS*

The data analyzed in this paper were collected as part of a broader research of student-teacher relationship and Facebook-mediated communication (Forkosh-Baruch, HersHKovitz, & Ang, 2015; HersHKovitz & Forkosh-Baruch, 2017). Facebook is still the most popular SNS, with almost 1.4 billion monthly active users (Facebook, 2017). Despite claims about Facebook being massively abandoned by teens (Madden et al., 2013; Meertens, 2014; Miller, 2013), it was still the most popular SNS among the young population at the time of data collection, and even much afterwards (Lenhart et al., 2015).

Data was collected anonymously using an online questionnaire that was distributed via schools' communication platforms (with the assistance of educators and schools), social networking sites (mostly Facebook and Twitter), and various relevant professional and personal mailing lists, as part of a broader research. The full questionnaire was comprised of background information (e.g., age, gender, teaching seniority), perceptions of teachers' use of Facebook, self-report of personal use of Facebook (generally and in the context of teaching), and the adapted version of Ang's TSRI (see Theoretical Framework section above). Our target population was teachers in lower and higher secondary schools from all over Israel. Informed consents were attained through the online questionnaire.

As part of the full questionnaire, teachers were asked about their current use of, and their connections with their students via Facebook. According to their response, they were grouped into four categories:

1. Connected teachers, who have an active Facebook account and are connected to current students of theirs;
2. Wannabe Connected teachers, who have an active Facebook account, are not connected to current students, but are interested in such a connection;
3. Not Wannabe Connected, who have an active Facebook account, are not connected to any current student, and are not interested in such a connection;
4. Not on Facebook teachers, who do not have an active Facebook account.

In this article, we focus on three open-ended questions that were part of the online questionnaire. First, “How [does/will] the connection [with your current students] on Facebook contribute to you?”. Second, “How [does/will] the connection [with your current students] on Facebook contribute to them?”. These questions were presented only to the Connected and the Wannabe Connected participants. Last, “What, in your opinion, are the negative aspects of teacher-student relationship via Facebook?”; this question was presented to all participants.

As mentioned above, the timing of the questionnaire distribution is important to understand, as a few months prior to this period, the Israeli Ministry of Education had modified its policy regarding SNS, allowing limited Facebook-based connections between teachers and students via groups and only for learning purposes; before that, any teacher-student SNS-based communication was prohibited.

### ***PARTICIPANTS***

Altogether, 180 teachers from Israeli public secondary schools countrywide participated in this study, aged 21 to 68 ( $M=46.6$ ,  $SD=10.8$ ), 138 female (77%) and 42 male (23%). The proportion between male and female teachers agrees with a national survey administered in 2012 (Central Bureau of Statistics, 2013), in which 81% of middle-school teachers and 73% of high-school teachers were female. The average age in our population also agrees with the survey: 44.8y/o in middle school and 45.7y/o in high-school. Years of experience ranged from 1 to 38 ( $M=18.9$ ,  $SD=10.7$ ), also identical to the average years of experience reported in the abovementioned survey.

### ***ANALYSIS***

The analysis of responses to both questions largely leaned on Ang's (2005) framework of student-teacher relationship, which include three axes: satisfaction, instrumental-help, and conflict. In the case of the first question—focusing on contributions of teacher-student Facebook-mediated communication—the two first axes were clearly identified with minor diversity within each axis. As for the second question, which discusses negative aspects of such communication, all responses are relevant to the conflict axis in Ang's framework. Therefore, we coded these responses into sub-categories, based on a framework defined in a previous study of students' responses to the same question (HersHKovitz & Forkosh-Baruch, 2019). In that study, a bottom-up approach was taken to code the responses, and seven categories were found: exposure to information and privacy, paradigm shift of student-teacher relationship, improper behavior and identity issues, boundaries, inequity issues, technological and socio-technological aspects, and no negative aspects; each of these categories included a few dimensions. The same framework served for this study with only minor alterations deriving from the data itself. As in the previous study, the resulting categories are a product of a spiral process of analyzing the data; both the definition of the categories and the coding of the responses to the categories were done by both authors until full agreement was achieved. Hence, with regards to both questions the directed content analysis method (Hsieh & Shannon, 2005) was utilized.

### ***FINDINGS***

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We will now present the analyses of the responses to the two questions, first regarding positive aspects of teacher-student Facebook-mediated communication, then regarding perceptions of negative aspects of such communication.

#### ***POSITIVE ASPECTS OF TEACHER-STUDENT COMMUNICATION***

As stated in the Data Collection and Instruments section, the question regarding actual or potential contributions of Facebook-mediated communication between teachers and students was answered by only two sub-groups of the participants – the Connected and the Wannabe Connected teachers. All 35 teachers in the Connected group responded to this question, and 31 responses were coded. Of the 74 teachers in the Wannabe Connected group, 70 responded (95%), of which 69 were coded. Responses that were irrelevant were not coded, mostly because they did not convey any relevant information about the participants' perceptions of the issue discussed. For example, a response such as "Really contributing" (T47) was not coded, as it does not tell anything specific about the positive aspects of teacher-student communication via Facebook.

## Contribution to the Teachers

**Connected Teachers.** Of the 31 coded responses, 19 (61%) were coded as Satisfaction-related, and 21 (68%) were coded as Instrumental Help-related. Note that a single response may have been coded in both categories.

Satisfaction-related statements referred to two main themes. First, the strengthening of teacher-student relationship via the SNS-mediated communication. This is evident in references to notions such as closeness, openness, and trust. Participants explicitly mentioned that communicating with their students via Facebook “strengthens the teacher-student connection and adds appreciation and respect” (T109), and “contributes very much to the warm relationship created with my homeroom students” (T159).

Second, participating teachers referred to the fact that the strict boundaries that were formally set between them and their students are breaking. This happens due to mutual exposure to each other’s shared content. As two teachers put it, “When I confirmed students [as friends] on Facebook, I showed them that [...] our fields of interest coincide” (T18), “I feel like I’m living in their world and not disconnected” (T38)”. This might facilitate “Openness to personal aspects of the learners” (T171), and by “Observing them in their free time,” teachers often feel that they “know about [the students] more things than their parents do” (T84). Interestingly, teachers mentioned that this merging of the traditionally separated worlds becomes evident also in the physical world: “You can’t describe it. I think it’s hard to explain how a student who uploads a clip of a song he likes feels and a teacher just casually ‘likes’ it [...]. It’s a trigger for a conversation the next day [...].” (T154).

Statements related to Instrumental Help referred to efficiency, convenience, and immediacy. For example, “Efficient communication for sending messages, questions and answers” (T48); “Efficiency. To note everyone and fast. The messages pop up in their mobiles.” (T47); “Direct, accessible, online connection” (T177); “Quick interface for linking to various media – movies, texts...” (T103). Furthermore, teachers emphasized the convenience of using Facebook, rather than formal school online administrative systems, stating that “It’s better to notify this way instead of using the school online system or the school website where they don’t enter everyday” (T47). Finally, teachers referred to the virtual space as an additional learning space for students, where “even if they missed class, they’re connected, they receive summaries and messages” (T14).

**Wannabe Connected Teachers.** Of the 69 coded responses, 10 (14%) were coded as Satisfaction-related, and 65 (94%) were coded as Instrumental Help-related. Note that a single response may have been coded in both categories.

In addition to statements which are similar to those of the Connected teachers, the Wannabe Connected teachers also mentioned potential contributions of connecting with their students on Facebook to their own improvement of teaching and professional development, for example, “[This] will improve the quality of teaching” (T97), “Extension of my professional tools in updated settings” (T164), “Identifying fields of interest and implementing them in teaching” (T83). Moreover, teachers referred to Facebook as a time- and space-independent learning environment that “could contribute very much to the professional development, to originality of teaching, and to the connection with [...] the subject matters” (T44). Also, the fact that learning materials are accessible to students on Facebook allows “toning down of disciplinary issues (no more, ‘I didn’t hear, I wasn’t there’)” (T133).

Distribution of Satisfaction- and Instrumental Help-related categories in both groups of teachers is summarized in Table 1. We checked for differences between the two groups. Since a single statement could have been coded to multiple categories, we utilized a multiple response set procedure. Pearson Chi-Square test resulted in a significant difference,  $\chi^2(2)=35.19$ , at  $p<0.001$ .

**Table 1. Contribution to teachers: Distribution of satisfaction- and instrumental help-related categories in the Connected and Wannabe Connected groups**

	Satisfaction	Instrumental Help
Connected	19 (61%)	21 (68%)
Wannabe Connected	10 (14%)	65 (94%)

### Contribution to the Students

**Connected Teachers.** Of the 35 responses to this item among the Connected teachers, 27 were coded, the remaining 8 were irrelevant responses. Of these responses, 17 (63%) were coded as Satisfaction-related, and 18 (67%) were coded as Instrumental Help-related. Note that a single response may have been coded in both categories.

Satisfaction-related responses portray the notion of SNS-based communication as facilitating closeness, as a result of a better acquaintance. As one of the teachers stated, such communication is beneficial as it enables “A feeling of belonging. [The students] know about me and I [know] about them. We have nothing to hide. [...] This is real education” (T84). As a result, relationship becomes more intimate and secured: “[They] feel closer to me, are not ashamed to tell stuff, to consult” (T50); “[It] creates a sense of safe connection” (T94); “An excellent, respectful and supporting connection” (T48). Eventually, this paradigm shift leads to higher levels of teachers’ involvement in students’ lives, which the teachers perceive as an advantage: “I’m [...] part of their lives, a more personal connection, involvement in their lives” (T177); “[It] enables them to [...] see me as a person and not as a teacher. [It] leads to much more openness” (T4).

Regarding Instrumental Help-related responses, teachers first referred to the accessibility of students to learning materials and school-related announcements: “They know that anything they want to be updated about and to update – it’s done absolutely and quickly” (T105); “You can share materials like presentations, clips, worksheets, etc. [...] Since the students spend a lot of time [on Facebook], the chance they’ll use these materials is higher” (T176). Furthermore, participants referred to their own availability to their students: “[It] helps in homework, [my] response to difficulties and questions” (T94); “Availability of myself to them, they miss less important messages” (T107). This might lead to broadening of assistance beyond the specific teacher’s expertise: “I help them also in other subject matters in which they experience difficulties” (T102).

**Wannabe Connected Teachers.** Of the 74 responses to this item among the Wannabe Connected teachers, 69 were coded, the remaining 5 were irrelevant responses. Of these responses, 14 (20%) were coded as Satisfaction-related, and 66 (96%) were coded as Instrumental Help-related.

In addition to statements that are similar to those of the Connected teachers, the Wannabe Connected teachers seemed enthusiastic about the possibility of connecting with their students for enhancing learning and even changing teachers’ roles. This is evident in ideal, even utopic, statements that refer both to Instrumental Help and Satisfaction. Examples for Instrumental Help-related responses that demonstrate this anticipation are the following: “The accompanying adult is no longer the main focus, the teacher’s role is in guidance” (T82); “Students’ Facebook is shallow and superficial, they are involved in it most of the day. When a teacher will insert educational and moral contents it might change their involvement in rubbish. It may encourage curiosity of the learning to read relevant material on the Internet about the same subject the teacher is talking about” (T52); “[This connection] can contribute to their learning experience and open their horizons as well as the teacher’s horizons” (T44).

Distribution of Satisfaction- and Instrumental Help-related categories in both groups of teachers is summarized in Table 2. Difference between the two groups is statistically significant, with  $\chi^2(2)=27.88$ , at  $p<0.001$ .

**Table 2. Contribution to students: Distribution of satisfaction- and instrumental help-related categories in the Connected and Wannabe Connected groups**

	Satisfaction	Instrumental Help
Connected	17 (63%)	18 (67%)
Wannabe Connected	14 (20%)	61 (88%)

Finally, we examined within-subject differences in reference to the two categories of contribution of SNS-mediated communication (Satisfaction, Instrumental Help) to teachers and students. In the Connected group, no significant differences were found in either category, with  $Z=-0.71$ , at  $p=0.48$ , for Satisfaction, and  $Z=-1.41$ , at  $p=0.16$ , for Instrumental Help ( $N=31$ ). Also, in the Wannabe Connected group, no significant differences were found, with  $Z=-1.00$ , at  $p=0.32$ , for Satisfaction, and  $Z=-1.16$ , at  $p=0.25$ , for Instrumental Help.

### ***NEGATIVE ASPECTS OF TEACHER-STUDENT COMMUNICATION***

The question regarding negative aspects of Facebook-mediated communication between teachers and students was presented to all participants. All 180 participating teachers responded to this question, of which 170 responses were coded (94%). As mentioned above, irrelevant responses were not coded, because they did not convey any relevant information about the participants' perceptions of the issue discussed. For example, a response such as "Students should not be friends with their teacher on Facebook and vice versa" (T116) was not coded, as it does not tell anything specific about the negative aspects of teacher-student communication via Facebook.

#### **Exposure to Information and Privacy**

This category includes statements referring to potential consequences of excessive exposure to information by either teachers or students, thereby leading to a negative outcome in terms of invasion of privacy. Overall, 86 responses were coded in this category. Statements under this category may be examined along different dimensions.

**Unidirectional vs. bidirectional view of privacy invasion.** Many teachers saw the risk of invasion of privacy as two-sided: "Mutual exposure to parts of the lives of teachers and students" (T53); "The students and the teachers are exposed to the private life aspects of the other" (T54); "The possibility of exposure to personal-public out-of-class life of students to teachers and teachers to students" (T103). Some teachers referred to students and teachers separately regarding different privacy-related issues, for example, "As a teacher, you can't [...] post photos or support a certain political party [on Facebook]. As for the students, they can't post photos exposing negative behaviors, such as drinking alcohol [...] or hurting other students" (T18).

However, some teachers mentioned only one side's privacy as being invaded; in most cases, they referred to the teachers. For example, "Loss of modesty and privacy, for example, the teacher can upload a photo of hers in a bikini or kissing with a boyfriend/husband" (T95); "There absolutely shouldn't be on the teacher's profile things that relate to his life, his actions, humor that kids don't understand. There's no reason in the world for students to see what I do [...] when I don't teach them" (T52); "[It] causes excessive nosiness of students in the teacher's life" (T134). Interestingly, some teachers explicitly mentioned that privacy should be kept only on their side, as they might benefit from being exposed to students' personal life, "The teacher's personal life is his alone and do not need to be open to the students. On the other hand... If the teacher can once in a while browse students' profiles, he can know about problems arising, such as banning, etc." (T86).

**Scope of exposure.** Teachers referred to the extended scope of shared information posted on Facebook in concern of invasion of privacy. For example, "I don't need my students to know beyond

what I want them to know” (T32); “If I, as a teacher, sees personal provocative posts such that require attention or monitoring – should I invade the private space of my students and react?” (T1).

### **Paradigm Shift of Student-Teacher Relationship**

This category refers to the undermining of traditional teacher-student relationship as part of an educational paradigm shift in which relationships tend to undergo radical changes. Teacher-student hierarchy is challenged in general, more so when both parties are engaged in professional and social interactions via social networking sites. Overall, 46 responses were coded in this category. The paradigm shift referred to under this category might be evident in different aspects of teacher-student relationship.

**Respect.** Teachers mentioned the issue of authority and respect as an inherent component of their professional identity; these may be compromised as a result of connections via Face-book. For example, “As teachers, we should be more representative towards our students, we represent values, we represent a sector. Just as a lawyer doesn’t connect with his clients on Facebook and shares his personal life with them. [...] Facebook ruins the purity of the connection between the teacher and the student” (T95); “Teachers/students might compromise the [...] limitations of authority, and then there’s a problem here” (T159). Some responses clearly stated that the ramification of lack of respect “eventually creates a kind of disrespect” (T108). Moreover, some teachers addressed the possible diffusion of respect and authority issues to the classroom, for example, “The distance between the teacher and the student may completely disappear, which can influence the student’s manner in the classroom and even cause disciplinary problems” (T70); “This basic distinction [between a friend and a teacher] will make [the teacher’s] work difficult later on” (T1).

**Friendship.** Basically, teachers referred to the need for separation between being a teacher and being a friend with their students. For example, “Sometimes it creates a tight and personal connection between them, and this shouldn’t happen” (T99); “Sometimes you come across students who find it difficult to identify student-teacher relationship as oppose to friend-friend relationship” (T109); “Facebook is [...] a social network – having my students in this network may create a friendship-like connection with my students, and I don’t have any interest in that!! I wish to be a teacher, not a friend!!” (T149). Some teachers emphasized the students’ need to distinguish between a friend and a teacher, as “friends they have more than enough, and they need from us to be their teachers and educators” (T1).

**Communication and language.** Some teachers mentioned potential implications of the very nature of Facebook-mediated communication, which is characterized by being “Loss of the teacher’s authority by the communication being intensive and friendlier and there’s less fear of saying things from ‘behind the keyboard’” (T34). The language and expression that are routinely used on social networking sites might cause to be “carried away to improper discourse between a teacher and her students, the teacher may forget her status and the limitations on her means of expression” (T66). Moreover, “there’s a chance that teachers who use Facebook will express themselves as friends and not as a leader of the learning group” (T121).

### **Improper Behavior and Identity Issues**

This category refers to behavior that was considered by the teachers to be unfit in the context of communication between teachers and students. This includes cases in which identity might be manipulated. Altogether, 22 responses were coded under this category, in which several aspects can be identified.

**Inappropriate behavior.** Many teachers mentioned different degrees of inappropriate behavior, from using bad language—“Once in a while students express themselves baldly towards teachers” (T49)—to intentional offense—“Unfortunately, one could insult, gossip and reveal personal information – and everybody will see it” (T6)—and intentional misuse of information, such as “Malicious

use by a student of things written by the teacher” (T176) or “Illegal transfer of information” (T160). At the end of this continuum, a few teachers even mentioned “Harassments and threats” (T106).

**Identity issues.** A few teachers also raised identity-related concerns. For example, “You’re not sure who you’re connected to in real-time, you can only check later on” (T153); “Some people use fake names or steal others’ Facebook [account]” (T117).

### **Boundaries**

This category refers to students’ concerns regarding the blurring of boundaries when student-teacher communication is mediated via SNS. Mostly, students set clear boundaries between school time and after-school time. Altogether, 69 responses were coded under this category. In general, teachers’ statements referred to boundaries of the teacher’s role. Mostly, teachers were concerned about the excessive work overload that exceed school hours: “It takes up time beyond school hours” (T94); “Some students expect an immediate response from the teacher and forget that she has a life and she cannot be available any time” (T102); “I think the main disadvantage is related to working hours. The learning does not end with the last bell, the teachers are not gratified for working beyond class hours” (T32); “They expect an immediate feedback, it compels the teachers to be always online, there’s no separation between the house-space and the work-space, it burdens with more work” (T97); “Ongoing connection in the afternoon hours, not all kids know how to disconnect and there’s no boundary” (T119).

Furthermore, a few teachers expressed their professional worries about dealing with the responsibility involved with being exposed online to students’ behavior. For example, “Broadening of the teacher’s responsibility over students to an additional domain without having skills or legitimacy to treat problematic behavior that they demonstrate on Face-book” (T107); “The teacher is often exposed to improper language, improper photos, and then she finds herself helpless regarding how to act” (T119).

### **Inequity Issues**

Only 3 teacher statements referred to this category, mentioning the fact that not all teachers and not all students are connected via Facebook, furthermore not all the connected students are involved in the learning-related interactions online: “Not all the teachers are connected” (T144); “Not all the students have a Facebook profile” (T50); “Not all the students cooperate with the group, and then there’s a situation in which some students are involved and some are not. [Those who are not involved] feel left out [in class]” (T102).

### **Technological Aspects**

Only 2 teacher statements were coded under this category, referring to two aspects. One statement addressed the lack of awareness to several Facebook features which can cause exposure of information about the teacher: “Facebook users are not always aware of all the options of the software, teachers included. Students may succeed in accessing [information about] the teacher’s personal life through mutual friends” (T121). The other statement also referred to information exposure, raising concerns about lack of control: “Facebook is not in absolute control of the user. On my Wall, you can write things to me, tag me, sometimes without my permission or knowledge. Until I notice, students could see the published [information]” (T172).

Distribution of the seven categories referring to negative aspects in the four groups of teachers (by their connection type) is summarized in Table 3. Here again, we checked for differences between the groups using multiple response set procedure. Overall, Pearson Chi-Square test resulted in a non-significant difference, with  $\chi^2(21)=22.65$ , at  $p=0.36$ . We tested for differences between each pair of groups and found no differences.

**Table 3. Distribution of the seven categories referring to negative aspects in the four teacher groups**

Category  Group	Exposure to Information and Privacy	Paradigm Shift of Student-Teacher Relationship	Improper Behavior and Identity Issues	Boundaries	Inequity Issues	Technological and Socio-Technological Aspects	No negative aspects
<i>Connected</i>	19	7	4	14	2	0	3
<i>Wannabe Connected</i>	36	16	10	33	0	0	5
<i>Not Wannabe Connected</i>	24	16	7	15	0	2	4
<i>Not on Facebook</i>	7	7	1	7	1	0	0

## DISCUSSION

Teacher-student interactions are key to teacher-student relationship, which are known to be associated with teachers' professional-development and well-being (Caires, Almeida, & Vieira, 2012; Spilt et al., 2011), as well as with students' academic, social, and emotional growth (Birch & Ladd, 1998; Davis, 2003; Hamre & Pianta, 2001; Sabol & Pianta, 2012). As social networking sites (SNS) are very popular, interactions are often extended to the virtual media, continuing schooling beyond time and space boundaries. While many studies about SNS and learning have focused on academic aspects (Greenhow & Askari, 2017; Manca & Ranieri, 2016), in our study we explored benefits and pitfalls of teacher-student connections on Facebook, as perceived by middle- and high-school teachers.

Overall, we found that teachers who were connected to their students de facto, as well as teachers who expressed a wish to be connected to their students, acknowledged the advantages of befriending their students on Facebook, in terms of teacher as well as student benefits. In terms of students' benefits, SNS-mediated communication allows accessibility beyond boundaries to their teachers. In that sense, this communication might be considered out-of-class communication. Indeed, a recent meta-analysis shows that student-instructor out-of-class communication is beneficial for students, both in affective and cognitive aspects of learning (Goldman et al., 2016). Out-of-class communication may facilitate a feeling of comfort between teachers and students and assist teachers in better knowing their students; this, in turn, may lead to sharing of personal information, as well as openness (Nadler & Nadler, 2000). Despite some differences between traditional and SNS-mediated out-of-class communication via online social networks, the latter was also found to be associated with better student-teacher relationship and with better classroom environment (Abd Elhay & Hershkovitz, 2019). These contribute not only to students, but are also beneficial for teachers, as teachers would be better informed about their students from a broader perspective and would be able to better facilitate learning in the classroom and beyond it.

Emphasizing that point, the Connected teachers in our study referred to both satisfaction- and instrumental help-related benefits rather evenly, highlighting the appreciation of closer relationship with their students. In contrast, the Wannabe Connected teachers mostly referred to a more practical (i.e., instrumental) point of view, as observed by the relatively high number of statements mentioning

teacher's possibility to assist their students, compared to statements exhibiting feelings of closeness. Hence, despite SNS serving as a platform for promoting closeness, the teachers who would like to connect to their students but are not connected *de facto* mostly see the efficiency aspects in using these platforms. This is in line with our previous findings, according to which Wannabe Connected, compared with the Connected teachers, perceived teacher-student SNS-mediated communication as more professional and learning oriented (Forkosh-Baruch & HersHKovitz, 2018). Also, it was shown that after participation in social media activities, teachers (and students) appreciate the social and functional opportunities afforded by these platforms, and not only the learning-related possibilities (Schouwstra, 2016).

Furthermore, this difference between the two sub-group of teachers portrays an ongoing course of development which refers to the role of media technologies in education altogether. As Livingstone (2012) contemplated, "Are these simply learning tools [...] Or do they herald a more fundamental transformation in learning infrastructure?" (p. 20). Following that question, Livingstone suggested that utilization of digital media did not reflect its fullest capacity within the educational milieu. The current study exhibits a more positive trend according to which social media may have the potential to facilitate the desired change in "relations between pedagogy and society, teacher and pupil, knowledge and participation" (Livingstone, 2012, p. 20), thereby creating a paradigm shift.

Looked at from a broader perspective, having high expectations from a digital technology prior to, rather than after, experiencing it is not limited to the educational field and has been an inclination for many years. As it seems today, the Internet has not dramatically changed large systems that govern our life, such as public administration or law (cf. Rethemeyer, 2007; Whiteman, 2017); early messages about a "new order" enabled by the Internet (e.g., Rushkoff, 2003) are nowadays softened by emphasizing the advantages of new media along with realizing their limitations (Coleman, 2017). In this sense, and in light of our findings, experiencing SNS can serve best in appreciating online media limitations.

As our findings suggest, teachers' overall viewpoint on the negative aspects of Facebook-connections with students is multifaceted. This complexity is reflected in our data by at least two points. First, the richness of negative aspects of Facebook-mediated communication recognized by teachers. Second, the fact that some of these aspects were also considered by our research population as positive. Specifically, three themes were mentioned both as concerns (while asked about negative aspects) as well as benefits (when asked about positive aspects): exposure to information, paradigm shift of student-teacher relationship, and boundaries. This demonstrates the complexity of using social networking sites for both personal and professional purposes, as management of the shared content becomes challenging (Fox & Bird, 2017). Teachers, knowing their own weak spots, might want to share personal information with their network-friends, but may fear that their students will be exposed to it (Akçayır, 2017; Sumuer, Esfer, & Yildirim, 2014). This is also evident in a recent study, showing that teachers report less privacy concerns, more ethical concerns, and higher levels of social intimacy when referring to their willingness to befriend their students on Facebook (Kuo, Cheng, & Yang, 2017). Interestingly, the very same complexity was also found prominent in a parallel study taken from students' point of view (HersHKovitz & Forkosh-Baruch, 2017, 2019). An interesting research path may involve yet another important stakeholder, namely, parents. A preliminary study in this direction had recently revealed a discrepancy in parents' and teachers' perceptions of both sides' communication; for example, while parents prefer communicating with their children's teachers via multiple digital platforms, teachers prefer limiting this communication to only a few digital environments (Forkosh-Baruch, 2018).

Taken together, these concerns should be examined in the context of an atmosphere of change, which characterizes the field of education in recent decades. As part of this change, teachers are no longer seen solely as conveyers of information, but also as mentors and role models for their students, responsible for their academic, social, and emotional well-being (Goble & Porter, 1977; Harden & Crosby, 2000; Oser, Dick, & Patry, 1992). This, in turn, has highlighted some major issues fo-

cused on the relationship between teachers and their students, which are still discussed to this day, e.g., self-disclosure, or boundaries between professional and personal lives (Alsup, 2006; N. Bishop, 1996). These issues are magnified by the use of social media, due to information immediacy, availability, accessibility, and volume.

Interestingly, according to our findings, there are no differences between the teachers' groups in the distribution of the categories related to negative aspects of teacher-student Facebook connection. This might be a result of the overemphasis on negative aspects of online communication in the mass media (J. Bishop, 2014; Stern & Odland, 2017; Young, Subramanian, Miles, Hinnant, & Andsager, 2017). Indeed, the blurring of boundaries between personal and professional lives is perceived as a major challenge for many other professionals in the social media era (Conradie, 2015; DeCamp, Koenig, & Chisolm, 2013; Jameson, 2014; Ventola, 2014).

In spite of efforts of education systems, negative aspects of teacher-student SNS-mediated communication diffuse into schools and homes, highlighting harmful incidents over potential benefits. Our findings indicate that teachers' expectations prior to connecting with their students are of a "fuller" relationship than they are in practice. We believe that these expectations should be preserved and actualized, as such a connection may assist teachers and students to thrive (professionally for the former; academically, socially and emotionally for the latter). Of course, teachers should be equipped with means for dealing with such issues and also should be guided in a way that will assist them to further develop their professional identity, which is crucial for technology adoption (Liu & Geertshuis, 2016; Tondeur, van Braak, Ertmer, & Ottenbreit-Leftwich, 2017).

Unfortunately, often educational policymakers decide to bypass the need to deal with negative aspects of teacher-student SNS-mediated relationship, banning altogether this means of communication. We do not support such an approach, which takes away the decision-making responsibility from students, teachers and school authorities. However, we do not approve an "act-as-you-wish" approach. Instead, we agree with Ahn, Bivona, and SiScala (2011) and believe that—like any other school-related controversial issue—such policies should be discussed and concluded "in house", in full collaboration with students, school staff, and parents, and in a way that will best reflect school values and beliefs.

Of course, this study is not without limitations. First, it was situated in a single country, characterized by a specific culture of education, technology, and implementing technology in schools. Our findings should be validated by similar studies in other countries. Second, it was referring to a single social networking site; as not all the SNS are to be considered the same, the study should also be replicated with regards to other SNS; this will allow to examine the specific features that make a given platform more appropriate than the other for teacher-student communication. Additionally, even when considering this narrowed-down point of view, the sampled population is not to be considered as representing the whole teacher population in the country discussed here. Despite these limitations, we feel that the contribution of the current study is of importance for promoting a better teacher-student communication via SNS and a better teaching in the digital age at large.

## CONCLUSIONS

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In conclusion, our study highlights the complexity of using social networking sites by teachers. Educators appreciate the benefits of integrating these platforms into their professional practices while acknowledging various concerns (Köseoglu, 2017; Šimandl, 2015). As evident in our study, higher levels of positive attitudes towards teacher-student Facebook-mediated communication were demonstrated prior to the establishment of the online connection, compared to reports by teachers who were communicating *de facto* with their students via Facebook. In order to preserve these levels of satisfaction from teacher-student SNS-mediated communication, teachers should be equipped, both in pre-service and in-service training, with means for dealing with the more complex issues involved in this communication.

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## BIOGRAPHIES

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## POSITIVE VS. NEGATIVE FRAMING OF SCIENTIFIC INFORMATION ON FACEBOOK USING PERIPHERAL CUES: AN EYE TRACKING STUDY OF THE CREDIBILITY ASSESSMENT PROCESS

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### ABSTRACT

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Aim/Purpose	To examine how positive/negative message framing – based on peripheral cues (regarding popularity, source, visuals, and hyperlink) – affects perceptions of credibility of scientific information posted on social networking sites (in this case, Facebook), while exploring the mechanisms of viewing the different components.
Background	Credibility assessment of information is a key skill in today's information society. However, it is a demanding cognitive task, which is impossible to perform for every piece of online information. Additionally, message framing – that is, the context and approach used to construct information – may impact perceptions of credibility. In practice, people rely on various cues and cognitive heuristics to determine whether they think a piece of content is true or not. In social networking sites, content is usually enriched by additional information (e.g., popularity), which may impact the users' perceived credibility of the content.
Methodology	A quantitative controlled experiment was designed (N=19 undergraduate students), collecting fine grained data with an eye tracking camera, while analyzing it using transition graphs.
Contribution	The findings on the mechanisms of that process, enabled by the use of eye tracking data, point to the different roles of specific peripheral cues, when the message is overall peripherally positive or negative. It also contributes to the theoretical literature on framing effects in science communication, as it highlights the peripheral cues that make a strong frame.

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Findings	The positively framed status was perceived, as expected from the Elaboration Likelihood Model, more credible than the negatively framed status, demonstrating the effects of the visual framing. Differences in participants' mechanisms of assessing credibility between the two scenarios were evident in the specific ways the participants examined the various status components.
Recommendation for Practitioners	As part of digital literacy education, major focus should be given to the role of peripheral cues on credibility assessment in social networking sites. Educators should emphasize the mechanisms by which these cues interact with message framing, so Internet users would be encouraged to reflect upon their own credibility assessment skills, and eventually improve them.
Recommendation for Researchers	The use of eye tracking data may help in collecting and analyzing fine grained data on credibility assessment processes, and on Internet behavior at large. The data shown here may shed new light on previously studied phenomena, enabling a more nuanced understanding of them.
Impact on Society	In an era when Internet users are flooded with information that can be created by virtually anyone, credibility assessment skills have become ever more important, hence the prominence of this skill. Improving citizens' assessment of information credibility — to which we believe this study contributes — results on a greater impact on society.
Future Research	The role of peripheral cues and of message framing should be studied in other contexts (not just scientific news) and in other platforms. Additional peripheral cues not tested here should be also taken into consideration (e.g., connections between the information consumer and the information sharer, or the type of the leading image).
Keywords	credibility assessment, message framing, social networking sites, peripheral cues, eye tracking

## INTRODUCTION

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Credibility consumers' connection to a given message — or the extent to which they believe it — is key to its comprehension and acceptance (Heesacker, Petty, & Cacioppo, 1983). Indeed, critical thinking, which credibility assessment is an integral part of, is considered to be one of the most prominent skills in today's information age (Levy & Ramim, 2016). However, assessing credibility is a demanding cognitive task, and as people are constantly exposed to huge amounts of information streams online in a plethora of digital channels, it is unreasonable to expect them to implement a thorough credibility assessment process for every piece of information they see. Rather, people rely on various cues and cognitive heuristics to determine whether they think a piece of content is true or not, especially when they are not familiar with the subject matter (Fogg, 2003; Metzger, 2007; Petty & Cacioppo, 1986; Sundar, 2008).

Social Networking Sites (SNS) — like Facebook, Instagram, or YouTube — are amongst the most popular websites for young Internet users (Smith & Anderson, 2018). As such, they may serve as catalysts for learning, with users interacting with streams of knowledge in new ways (Buchem, 2011; Haugsbakken & Langseth, 2014; Kop, 2012). These platforms are characterized by a very large volume of activity, which translates into a very large volume of shared and consumed content.

Originally intended for social interactions, SNS have developed into major channels of news consumption (Gottfried & Shearer, 2017; Hermida, Fletcher, Korell, & Logan, 2012; Kwak, Lee, Park, & Moon, 2010; Tandoc & Johnson, 2016). However, as opposed to traditional news venues (e.g., newspapers or television), SNS users are often actively sharing news, adding their own (often subjective) take on the original content, which makes credibility assessment extremely challenging (Bucchi, 2017;

Sharon, Ryder, Osborne, Laslo, & Swirski, 2017). That is, SNS often present their users with a blend of mass and interpersonal communication, with no clear boundaries between that two – a result of sharing (and re-sharing) the original content and adding additional layers of information on top of it (Król & Wiśniewska, 2017; Neubaum & Krämer, 2017).

Content posted on SNS is usually enriched by additional information, automatically added by the website, such as details about the user who posted it (most commonly including username and profile image), measures of popularity, and/or indications of publication time. These peripheral cues might impact users' perceived credibility of the content (Hayat & HersHKovitz, 2018; Hayat, HersHKovitz, & Azaran, 2019; HersHKovitz & Badarneh, 2018). This is explained by the Elaboration Likelihood Model (ELM) (Petty & Cacioppo, 1986), according to which people take a peripheral route when evaluating content they are not familiar with or are not motivated to evaluate. For example, content popularity — easily visible on Facebook by the number of Likes, Shares, or Comments — may elicit "*bandwagon heuristics*", according to which "if others think that this is a good story, then I should think so too" (Sundar, 2008, p. 83). This theory is backed up by recent studies demonstrating the effects of peripheral cues on credibility assessment in the social media (Granjon & Benedic, 2017; Hayat & HersHKovitz, 2018; Hayat, HersHKovitz, & Azran, 2019; HersHKovitz & Badarneh, 2018; Huang, 2015; Lin, 2016; Waddell, 2018; Zhou, 2012).

In addition, message framing may have an effect on how people consume the information embodied in the message. Framing is the context and approach used to construct information. Different framings have been repeatedly found to have an effect on message acceptance (Gallagher & Updegraff, 2012; Schütz & Wiedemann, 2008). In the context of SNS, framing may also be associated with the peripheral cues surrounding a message; for example, posting same text messages with different indications of popularity (e.g., high/low) may impact message acceptance (HersHKovitz & Badarneh, 2018). However, there is still lack of research into the mechanisms involved in this process. The current research aims at bridging this gap.

The purpose of this study was to examine how message framing, based on peripheral cues, affects credibility; whereas an updated literature review of this understudied association is depicted in the next sub section 1.1. The use of an eye tracking camera allowed to explore this phenomenon at the granularity of specific peripheral cues. Sub section 1.2 reviews the use of this methodology within the context of credibility assessment.

## ***MESSAGE FRAMING AND CREDIBILITY ASSESSMENT***

It has been repeatedly demonstrated that different framings impact perceptions of credibility (e.g., Cobb, 2005; Detenber, Ho, Ong, & Lim, 2018; O'Keefe & Jensen, 2008; Roh, Rickard, McComas, & Decker, 2018; Schütz & Wiedemann, 2008; Smith & Petty, 1996). Of special significance are "positive" and "negative" framings (Chong & Druckman, 2007).

Researchers find bidirectional associations between positive emotions and message popularity. On the one hand, the appearance of positive emotions in a post leads to this post being more popular; on the other hand, people feel more positive emotions as their posts become popular (Bazarova, Choi, Sosik, Cosley, & Whitlock, 2015; Kite, Foley, Grunseit, & Freeman, 2016). It has also been established that design is strongly associated with emotions and attitudes, where appealing (or unappealing) designs eliciting positive (or negative) emotions (Jang & Namkung, 2009; Lee, Ha, & Widdows, 2011; Norman, 2003; Simon, Brexendorf, & Fassnacht, 2013). Emotions expressed in posts to which SNS users are exposed may even be contagious, increasing the positive or negative feelings of the user (Kramer, Guillory, & Hancock, 2014), and this, in turn, may affect information processing (Nabi, 1999; Tiedens & Linton, 2001). In short, various peripheral cues of a Facebook post (e.g., number of Likes and Shares), may increase credibility assessments of that post by increasing positive emotions towards it (Maathuis, Rodenburg, & Sikkels, 2004; Mileti, Prete, & Guido, 2013; Nabi, Gustafson, & Jensen, 2018; Söderlund & Rosengren, 2007; Wang & Hickerson, 2016).

## ***STUDYING CREDIBILITY ASSESSMENT USING EYE TRACKING***

Traditional credibility studies mostly rely on assessment tasks and self-reporting methods. But Internet studies, specifically in the fields of human computer interaction and usability, opt for eye tracking data to explore actual behavioral patterns (Poole & Ball, 2005). Therefore, it is not surprising that the latter methodology has emerged in studies of online credibility and trust (e.g., Kammerer & Gerjets, 2012; Lee & Pang, 2017).

Tracking a person's eye movement while conducting a credibility assessment task, makes it possible to explore two aggregated measures of the evaluation process. First, at what the person was looking can be easily associated with specific cues on the screen. Second, how long the person was engaged with each cue (and with the whole task) is immediately obvious. These two components are directly associated with theories of credibility assessment, specifically with the Prominence-Interpretation theory (Fogg, 2003). Based on this theory, credibility assessment depends on two processes: noticing something and interpreting it. The analysis of location and duration enabled by information obtained from eye tracking allows to understand what was prominent and to estimate interpretation efforts, as longer gazes are indicative of a higher level cognitive processing (Follet, Le Meur, & Baccino, 2011). For example, in a study of credibility evaluation of online information, the authors measured, among other variables, time spent on reading the references section of a blog post; this measure was used as an indicator of interest in evaluating information based on the possibilities afforded by this section (Glasheen, 2013).

In addition, based on locations of gazes and their timestamps, it was possible to induce the path a person took while engaged in an evaluation process. This too may be directly associated with the Prominence-Interpretation theory (Fogg, 2003) - as based on this theory, the evaluation process is multi step. Deciphering the series of elements examined by a person illuminates the multiple steps he or she took, and when they stopped the process and made a decision. This path can then be analyzed and visualized in various ways, benefitting different kinds of explorations (Eraslan, Yesilada, & Harper, 2015; Peysakhovich & Hurter, 2018). In the past, researchers have interpreted behavioral patterns in Web searches by looking at the use of similar paths without using eye tracking (e.g., Cartright, White, & Horvitz, 2011; Xie & Joo, 2010). To the best of our knowledge, the process of credibility assessment has not yet been considered by examining empirical data on the path a person takes while conducting credibility assessment. To gain a more nuanced understanding of the evaluation process, this methodological approach was selected.

## **RESEARCH QUESTIONS**

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To meet the goals of this study, the following research questions on the credibility assessment of scientific status on Facebook were formulated:

1. Which components of the status are reported by participants as important for credibility assessment?
2. Which components of the status are viewed in practice during a credibility assessment task, when statuses are either positively or negatively framed using only peripheral cues?

## **METHODOLOGY**

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### ***RESEARCH POPULATION***

Participants were 19 undergraduate students from a large public university in the center of Israel. Participants were students of various disciplines, including Exact Sciences, Life Sciences, Social Sciences, and the Humanities; they were recruited on campus while studying in the library (all were recruited during a single day) – the authors contacted students arbitrary at the library, with the inclusion criteria being B.A. students and knowledgeable with the language in which the information was pre-

sented (Hebrew). Participants included 11 males and 8 women, with ages ranging from 19 to 28 years old ( $M=23.7$ ,  $SD=2.5$ ).

## RESEARCH DESIGN

To study the ways people assess differently framed scientific content on Facebook, where framing is based on peripheral cues, a controlled experiment was designed, in which each participant was exposed to two statuses, one of which was framed positively and the other negatively. Hence, this is a within subject design, with the manipulated independent variable being the post framing (positive/negative); whereas this approach was taken, due to the fact that different people may present different credibility assessment behaviors (derived from different cognitive, meta cognitive and affective processes involved in the task).

The participants were shown two mock statuses, made up by the authors and presented as if they were posted on Facebook. It is important to note that as this study was about *perceived credibility*, the question of whether the content presented in the statuses was true or false was irrelevant.

The "positive" status presented information on wine produced from vines grown from the seed of an ancient Assyrian vine found in archeological diggings. The "negative" status presented information on the extraction of a component in moles' defecation that reduces their pain when they are injured and mentioned that this component might be used to develop effective painkillers for humans.

The language of both statuses had a similar level of difficulty, and the postings had similar lengths; both were presented in a popular science style, that is, in a way accessible to the layperson, with no jargon; both were presumably posted about the same time (a two day difference). Lastly, both presented topics to which it was assumed that laypersons could connect, and of which they would have a similar knowledge (or ignorance) level. This assumption of "similarity" was supported by the collected data (see the Findings section).



**Figure 1: Positively framed (left) and negatively framed (right) statuses used here**

As mentioned, the positive and negative framing was based on peripheral cues; we used components normally presented in Facebook alongside any status to determine differences:

- Number of Likes, Comments, and Shares: higher for the positive status;

- Username and profile image of the person who posted the status: appealing image and scientifically associated name for the positive status, Facebook default image and general name for the negative status;
- Leading image: appealing for the positive status, unappealing for the negative status (for matter of simplicity, we will refer to it as "image");
- Nature of hyperlinks added: science.org vs. health4u.co.il for the positive vs. negative statuses, respectively.

Images of the statuses are presented in Figure 1.

Detailed differences between the two posts are presented in Table 1. Indeed, the positively framed messages were perceived as more credible as the negatively framed message (recall that the text was identical in both cases) (see the Findings section).

**Table 1: Characteristics of the two statuses used in the study**

Component	Positively framed Status: Assyrian Wine	Negatively framed Status: Mole Defecation
Text	***Drinking wine like in the Assyrian period*** Grape seeds from the Assyrian period, discovered about a decade ago in archeological diggings in the region of Florence (Italy), were successfully sprouted by a research team of Siena University. Seven years later, the Assyrian vines were already giving fruits, in the form of red grape clusters. The process of producing wine from these grapes was successfully completed a few weeks ago, after it has been aged in wood barrels for a few months. Now, people from both the scientific community and the wine community are waiting to taste the Assyrian wine. <a href="https://www.science.org/wine.html">https://www.science.org/wine.html</a>	Soon to come: ParacetaMole? Researchers from Georgetown University (USA) were able to isolate a painkilling material from moles' defecations. More than twenty years ago, biochemists in different parts of the world had noticed that moles use their defecations to help their offspring after being wounded. Now, for the first time, the researchers were able to isolate the component in charge of reducing the pain. The head of the research team said that this component is considered to be combined in painkillers, as it is cheap and highly available. <a href="https://www.health4u.co.il/acamole.html">https://www.health4u.co.il/acamole.html</a>
User Profile Image	Shiny objects pop up from a person's brain	Facebook Default
Username	Science for All	Feel Well
Attached Hyperlink Domain	science.org	health4u.co.il
Leading Image	Shiny, attractive red grapes, held between a person's healthy looking palms	A weirdly appearing mole, on top of a Paracetamol package
# Likes	42,518	1
# Comments	192	1
# Shares	73	-

## RESEARCH TOOLS

Both an eye tracking camera and a research questionnaire (pen and paper) were used to collect data from the participants. The eye tracking camera was used to capture participants' gaze at the screen while they were conducting a credibility assessment task; the questionnaire was used to collect participants' self-reported data on that task and on the other research variables.

### Eye tracking camera

Eye Tribe Tracker™ was used, which is a low cost portable eye tracking camera manufactured by the Eye Tribe™ company, whereas data from the eye tracking sessions was collected using Eyeproof™, an online software developed by the same company. Although the device has a relatively low sampling frequency level (60 Hz), its accuracy — within the context of Social Science research — is comparable to more sophisticated, higher frequency devices (Dalmaijer, 2014; Funke et al., 2016; Ooms, Dupont, Lapon, & Popelka, 2015). Note that a frequency of 60 Hz means that every second, 60 data points are collected.

### Research questionnaire

The pen and paper questionnaire consisted of three parts. In the first part, participants were asked to report on certain *demographic variables* (age, gender, and the faculty where they studied) and on their *Facebook use characteristics* (extent of use, active/not active, number of Facebook friends). The second part contained two sets of self-reporting items related to the participants' credibility assessment tasks. Participants were asked to report on the status they had just viewed. In particular, they were asked about three constructs, namely perception of credibility, perception of the text, and level of knowledge in the subject matter.

**Perception of credibility:** a single item was used, “The status is believable” (item 1), ranked on a 6-point Likert scale.

**Perceptions of the text:** we used six items (items 2-7), ranked on a 6-point Likert scale. The main purpose of this category was to validate the assumption of similar texts, that is, to make sure that the two statuses did not differ in their texts (as the participants perceived them). An example item: “The status is informative”. These items were averaged to calculate an index of text perception.

**Level of knowledge in the subject matter:** we used 3 binary (Yes/No) items (items 8-10). The purpose of this set of items was to compare participants' previous knowledge of the topics presented in the statuses and to validate our assumption of similar levels of knowledge. An example item: “Have you previously heard about the [Assyrian vines/moles’ defecation being able to relieve pain]?”

The full 10 items are presented in Table 2.

The third and last part of the questionnaire, done only after the two tasks of credibility assessment were completed, explicitly mentioned the peripheral information that is usually presented alongside content posted on Facebook and asking the participants about the importance they had attached to each of these components while conducting the credibility assessment task. These components included number of Likes, number of Comments, number of Shares, time stamp, and profile image of the user who posted the status, username of the person who posted the status, the existence of a hyperlink, and the existence of an image. The importance of each component was ranked on a 6-point Likert scale, from 1 (not important at all) to 6 (very important).

**Table 2: Part II of the research questionnaire, credibility assessment tasks**

#	Item/Question
1	The status is believable
2	The status is informative
3	The status is up to date
4	The information in this status is interesting to me
5	The status was easy for me to understand
6	I think the person who wrote the status is an expert in the field
7	I would like to keep reading and deepening my knowledge of this subject
8	Have you previously heard about the [Assyrian vines/moles' defecation being able to relieve pain]? [Yes/No]
9	Answer this item only if you answered "Yes" in the previous item; otherwise end here. Have you previously heard about the [Assyrian wine/ability to use moles' defecation in painkillers]? [Yes/No]
10	Answer this item only if you answered "Yes" in the previous item; otherwise end here. Is the information in the status compatible with your knowledge about it? [Yes/No]

## PROCEDURE

As mentioned above, participants were recruited while studying in a university library. The researchers (the three authors) were positioned in a closed, quiet room within the library. Participants were recruited individually; each was asked to enter the room separately. After being told what was going to happen, and after they signed an informed consent form to participate in the study, they were seated in front of a computer connected to the eye tracking camera.

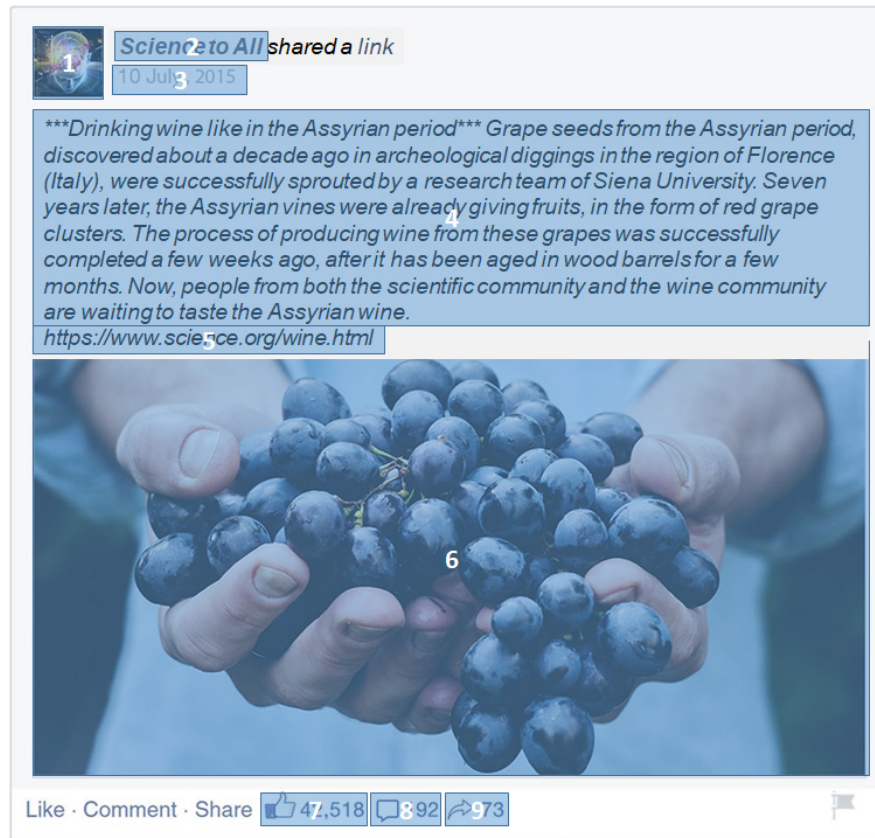
Participants filled in the first part of the pen and paper questionnaire (demographic and Facebook use characteristics). Then, they went through a short session to calibrate the eye tracker, after which the first status was presented to them on the computer screen. They were instructed to watch the status as long as they wanted, until they could determine the credibility they assigned it; their eye gaze was recorded throughout this process using the eye tracking camera. When they finished, the recording was stopped, and the participants were asked to fill in the section in the second part of the questionnaire on the watched status. This process of calibration, status watching, and filling in the questionnaire was repeated for the second status. About half of the participants (arbitrarily chosen) watched the positive status (Assyrian wine) first, and the rest watched the negative status (mole defecation) first. Finally, participants were asked to fill in the third part of the questionnaire. The whole process took about 15 minutes per participant.

It is important to note that only after watching the two statuses and filling in the corresponding parts of the questionnaire — that is, while filling in the third part of the questionnaire, where the peripheral components were explicitly mentioned — were the participants exposed to any mention of the various status components. When initially presenting the research to the participants, we told them the study was about credibility assessment in social networking sites; we did not mention differences between the statuses, nor did we mention possible cues in the statuses. Obviously, we wished to avoid any bias in the participants' a priori attitudes to either of the statuses. Therefore, the language of the instructions was extremely important; for example, participants were explicitly asked to "watch the status", not to "read" it.

## DATA PROCESSING

To explore the mechanism of viewing the different status components, an *Area of Interest* (AoI) was defined for each one. That is, each component had a corresponding physical area, defined on the two dimensional plane of pixels. Note that these AoIs were non-overlapping; they were used only for data analysis and were not presented during data collection; also note that these AoIs did not fully

cover the whole image, and there were blank spaces between them. See Figure 2 for a demonstration of the AoIs for one of the statuses. We used these AoIs to define the measures of viewing the statuses.



**Figure 2: Areas of interest (AoIs) corresponding to the status components (the status presented here is an English translation of the original status shown to the participants)**

## RESEARCH VARIABLES

The main variables in the analysis of the mechanism of credibility assessment referred to the location of the various status components, that is, for each Area of Interest (AoI) measures were defined for *gaze*, *fixation* and *order*. For a review of eye tracking metrics, see Poole and Ball (2005).

When analyzing data from an eye tracker, the most basic metrics are related to gazing; a gaze point is the point at which the participant is looking at a given moment. As mentioned above, the eye tracker that was used has a frequency level of 60 Hz, where data is captured 60 times per second. Using this data, it was possible to estimate the *overall gaze time* for a given image.

Fixation refers to a series of gaze points that are very close in space and time, and the gaze lasts for at least a given time, above a predefined threshold. In this case, based on the specification of the employed technology, fixation was defined as a threshold of 150 milliseconds. Using this metric, *percentage of fixations in an AoI* was calculated. That is, for each AoI, calculating the percentage of fixations on this AoI out of the overall fixations on the entire image.

Using fixation data, it was also possible to measure *time to first fixation on an AoI*, that is, the time that passed from the beginning of the recording to the first fixation on this AoI. The lower the value of this variable, the earlier the participant had viewed that AoI and the higher its priority. For example, for a given participant, a given area yielded a value of 1 for priority if the participant's earliest fixa-

tion was in this area. (Note that if users never fixate on a given AoI, it will not have a priority value.) This enabled us to calculate the *AoI priority* for each area as the average of its priority across all participants. Finally, fixation data enabled to model *transitions between AoIs*; this is discussed in the Findings section.

Based on the questionnaire, we calculated the *importance of peripheral cues in assessing credibility*, referring to the following cues (each separately): number of lines, number of Comments, number of Shares, status recency, user profile image, username of the person who posted the content, availability of hyperlink, and availability of image.

## FINDINGS

### DESIGN VALIDATION

Bearing in mind that the design of the two statuses was such that they were supposed to affect the participants positively or negatively based on the peripheral cues only was necessary to validate that the participants did not perceive the status texts differently. To do so, participants' perceptions of the texts using six items (items 2-7 in the questionnaire) was measured. Cronbach's alpha for these items had a value of 0.7, which is acceptable for a preliminary exploratory study like this one (Peterson, 1994). Therefore, these items were averaged to create a *text perception* index. Item statistics and index statistics are summarized in Table 3.

Table 3: Comparing participants' text perceptions of the two statuses (N=19)

Item (sorted by p value, increasing)	Mean (SD), Positive Sta- tus	Mean (SD), Negative Status
2. The status is informative.	4.4 (1.3)	4.3 (1.4)
3. The status is up to date. †	4.1 (1.3)	4.2 (1.2)
4. The information in this status is interesting to me.	3.5 (1.5)	3.7 (1.5)
5. The status was easy for me to understand.	5.0 (0.9)	5.4 (0.6)
6. I think the person who wrote the status is an expert in the field.	3.0 (1.1)	2.9 (1.6)
7. I would like to keep reading and deepening my knowledge of this subject.	2.7 (1.5)	3.4 (1.7)
<b>Average</b>	3.8 (0.8)	4.0 (1.0)

† N=18 for this item;

Despite the small sample size, the standard t test was suitable, as the outcome of normality tests was satisfying. Specifically, we referred to Kim's (2013) guidelines for evaluating normality by calculating  $Z_{Skewness} = \frac{Skewness}{SE_{Skewness}}$  and  $Z_{Kurtosis} = \frac{Kurtosis}{SE_{Kurtosis}}$ ; if either of these (absolute) values is larger than 1.96 (for samples smaller than 50), the distribution should be considered non normal. For the positive status,  $Z_{Skewness}$  and  $Z_{Kurtosis}$  yielded values of 1.24 and 1.01, respectively; for the negative status,  $Z_{Skewness}$  and  $Z_{Kurtosis}$  yielded values of 1.05 and 1.18, respectively. Therefore, we assumed normality and continued with the standard t test. When comparing these two variables, no significant difference between them was found, with  $t(18)=0.73$ , at  $p=0.47$ . Thus concluding that the statuses' text similarity was validated.

### STATUS DESIGN AND PERCEIVED CREDIBILITY

Next, the item measuring credibility (item 1) was approached. Its skewness values for the positive and negative statuses were -0.66 and -0.52, respectively, with  $SE=0.52$ , thus giving Z values of 1.26 and

0.98, respectively. Kurtosis values for the positive and negative statuses were -0.78 and -0.63, respectively, with  $SE=1.01$ , giving Z-values of 0.77 and 0.62, respectively. The four Z-values were below Kim's (2013) threshold; therefore, assuming normality.

*Perceived credibility* had a mean of 4.16 ( $SD=1.30$ ) for the positive status, and 3.16 ( $SD=1.26$ ) for the negative status. This difference was significant, with  $t(18)=2.21$ , at  $p<0.05$ . Therefore, it was concluded that there was a connection between the status design and its perceived credibility.

## GAZES AND FIXATIONS

There was no significant difference in the overall time it took to watch each of the statuses. On average, the positive status took 32.8 seconds ( $SD=13.1$ ), and the negative status took 33.9 seconds ( $SD=12.0$ ). Skewness values for the positive and negative statuses were 1.85 and 0.97, respectively, with  $SE=0.52$ , thus giving Z values of 3.52 and 1.85, respectively. Kurtosis values for the positive and negative statuses were 4.40 and 0.45, respectively, with  $SE=1.01$ , giving Z values of 4.34 and 0.44, respectively. Only one of these four Z values was far below Kim's (2013) threshold; the others were either larger or very close to it. Therefore, it was not possible to assume normality, and the Wilcoxon Signed Rank test was used to compare the gazing data. The test resulted in  $Z=-0.16$ , at  $p=0.87$ , leading to conclude that the viewing times for the two statuses were not significantly different.

Throughout all participants' sessions, the eye tracking system recorded 1534 fixations on the positive status (Assyrian wine) and 1573 fixations on the negative status (mole defecation). Area 8 (indications of Comments) had only 6 fixations; area 9 (indication of Shares) was absent in the negative status and had no fixations on the positive status, so we omitted this AoIs' data. Fixations that occurred outside the AoIs were also omitted. This reduced the data to 1192 fixations on the positive status and 1198 fixations on the negative status.

The average number of fixations per participant was 62.7 ( $SD=16.9$ ) for the positive status and 63.1 ( $SD=22.1$ ) for the negative status. Skewness values for the positive and negative statuses were -0.14 and 0.60, respectively, with  $SE=0.52$ , giving Z values of 0.27 and 1.15, respectively. Kurtosis values for the positive and negative were 1.31 and -0.73, respectively, with  $SE=1.01$ , giving Z values of 1.29 and 0.72, respectively. As these four Z values were much lower than Kim's (2013) threshold, normality was assumed, and the two means were compared using the t test, resulting in  $t(18)=0.08$ , at  $p=0.94$ . Hence, the average number of fixations on the two statuses was not significantly different.

Not surprisingly, the area with the most fixations in both statuses was the text area (area 4), with 1007 fixations (85%) on the positive status and 931 (78%) on the negative status. Notably, in both cases, the second most popular area was the image area (area 6), with 127 fixations (11%) on the positive status and 192 fixations (16%) on the negative status. The third most popular area was the hyperlink area (area 5), with 25 fixations (2%) on the positive status and 24 fixations (2%) on the negative status. The remaining areas, i.e., profile image (area 1), username (area 2), posting timestamp (area 3), and indications of Likes (area 7), received less than 2% of the fixations in each of the statuses. Results are summarized in Table 4. When comparing the distributions of fixations for the two statuses, a significant difference was found,  $\chi^2(6)=26.2$ , at  $p<0.001$ .

Bearing in mind that for *AoI priorities*, the higher the number, the higher the priority of the relevant AoI, some interesting differences were found in the *AoI priorities* of the two statuses when comparing mean values across all participants. On average, in both cases, the highest priority (first fixation) was the image (area 6), and the second most prioritized area was the text (area 4). After these, the two statuses diverged.

For the positive status, the other AoIs, sorted by their *AoI priority*, were: profile image, username, posting timestamp, indication of Likes (with the same value), and hyperlink. For the negative status, the other AoIs, sorted by their *AoI priority*, were hyperlink, profile image, username, indication of Likes, and posting timestamp.

**Table 4. Number (and %) of fixations on each Area of Interest (AoI)**

AoIs	Number of Fixations (%)	
	Positive Status (Assyrian Wine)	Negative Status (Mole Defecation)
1 – Profile Image	6 (0.5%)	19 (1.6%)
2 – Username	10 (0.8%)	13 (1.1%)
3 – Posting Timestamp	9 (0.8%)	15 (1.3%)
4 – Text	1007 (84.5%)	931 (77.7%)
5 – Hyperlink	25 (2.1%)	24 (2.0%)
6 – Leading Image	127 (10.7%)	192 (16.0%)
7 – Indication of Likes	8 (0.7%)	4 (0.3%)
<b>Total</b>	<b>1192 (100%)</b>	<b>1198 (100%)</b>

### ***REPORTED IMPORTANCE OF PERIPHERAL CUES***

Using the data collected in the questionnaires, the level of importance that the participants attached to each of the peripheral cues (N=19) was measured. Of highest importance was the hyperlink (M=4.84, SD=1.61), followed by the image (M=3.63, SD=1.95), recency (M=3.58, SD=1.87), username (M=3.47, SD=1.58), number of Comments (M=3.05, SD=1.72), number of Shares (M=2.89, SD=1.79), and user profile picture (M=2.84, SD=1.95). Of least importance, based on the participants' self-reports, was the number of Likes (M=2.63, SD=1.54).

### ***TRANSITIONS BETWEEN AREAS***

To better understand the mechanisms involved in examining a status before making a decision on its credibility, the transitions of fixations between pairs of AoIs were analyzed. From these transitions, a directed transition graph was built, modeling the probability of moving from one AoI to another. The graph is shown in Figure 3; each node indicates an AoI, and the (directed) edges between nodes denote transitions between the corresponding AoIs.

#### **Aggregated exploration**

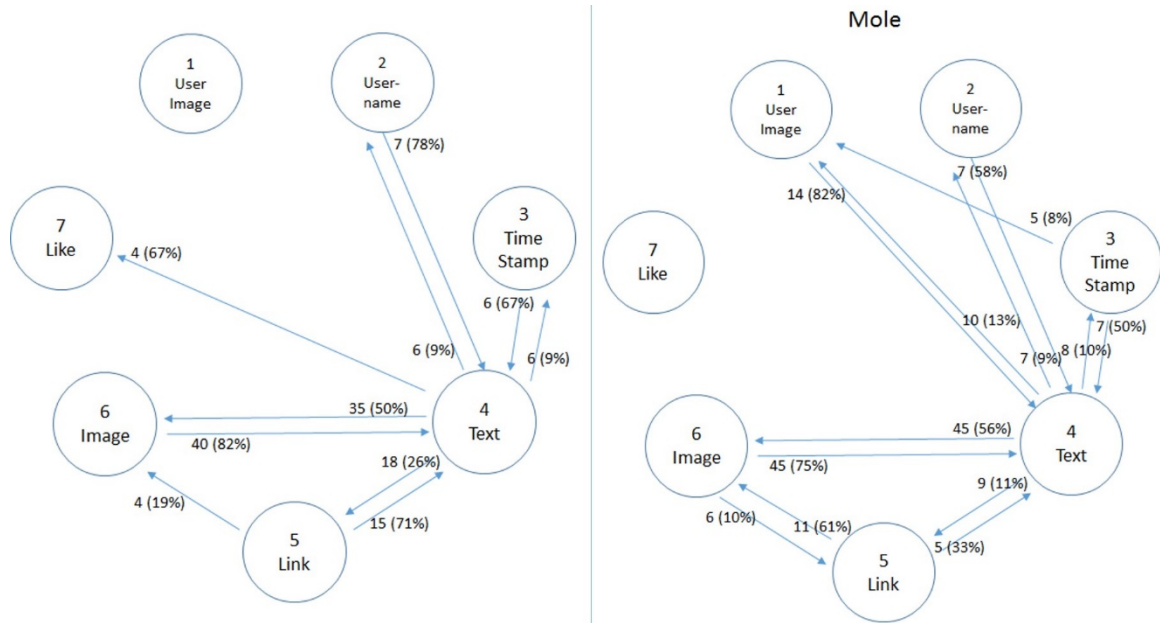
First, analyzing transitions at the transition level—that is, considering any transition made by any of the participants during the session—was conducted. Overall, there were 169 transitions between AoIs for the positive status (Assyrian wine), and 205 transitions between AoIs for the negative status (mole defecation). For purposes of simplicity, only transitions that occurred at least four times are discussed. In the transition graphs shown in Figure 3, the numbers on each edge represent the number of corresponding transitions, and the percentage of transitions is calculated from the source node. That is, the percentage values on each node's outgoing edges should sum up to 100 percent. However, for the findings to be more meaningful, we only present the most common transitions.

The most common transitions in the positive status (Assyrian wine), in absolute values, were from the image to the text (40 transitions) and from the text to the image (35 transitions). The next two most common transitions were from the text to the hyperlink (18 transitions) and from the hyperlink to the text (15 transitions). The other transitions occurred 10 times or less. The most popular ingoing AoI was the text area (74 ingoing transitions), followed by the image area (44 transitions), hyperlink (21 transitions), user image and timestamp (9 transitions each), number of Likes (7 transitions), and user image (only 5 ingoing transitions).

The most common transitions in the negative status (mole defecation), in absolute values, were from the image to the text (45 transitions) and from the text to the image (45 transitions); the next two most common transitions were from the user image to the text (14 transitions) and from the hyperlink to the image (11 transitions). The remaining transitions occurred 10 times or less. The most popular ingoing AoI was the text area (with 80 ingoing transitions), followed by the image area (61

transitions), then user image (18 ingoing transitions), hyperlink (15 transitions), timestamp (14 transitions), username (13 transitions), and number of Likes (only 4 ingoing transitions).

These findings are summarized in Figure 3. When looking at the two transition graphs, it is possible to observe some additional differences between the positive (top) and the negative (bottom) cases, most notably the absence in the positive status of transitions between the user image and the text AoIs (in both directions), as well as a lack of transitions from the hyperlink to the images and from the timestamp to the user image. The negative status lacks transitions from the text to the number of Likes, but these appear for the positive status.



**Figure 3: Transition graphs for positive (left) and negative (right) statuses; representing all transitions observed at least four times. Percentage is for all outgoing transitions (including those not represented)**

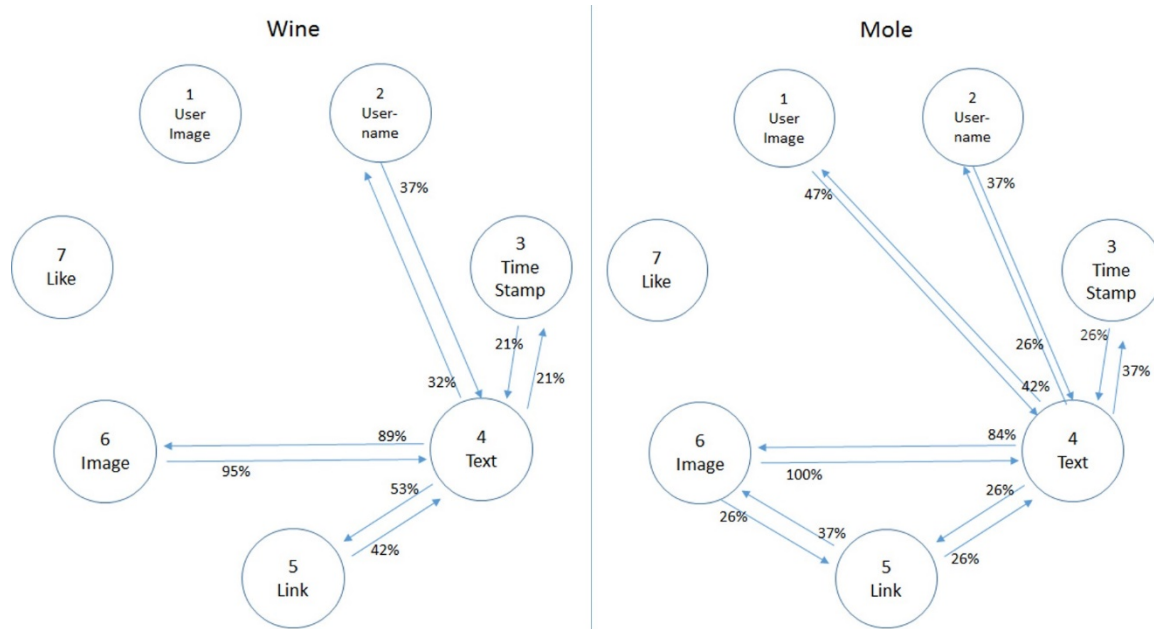
### Participant level analysis

When analyzing transitions at the participant level, each transition observed in a participant's data was counted only once for this participant. Taking into consideration transitions observed for at least four participants enabled to explore common transitions.

Figure 4 shows the findings. In this case, numbers on each edge (in percentage) represent the frequency of the corresponding transition ( $N=19$  equals 100%). Overall, eight unique transitions were observed for the positive status and 12 for the negative status. In both cases, the most dominant AoI was the text area; it served as a hub for most transitions (for all transitions, in the positive case). In both statuses, transitions between the text and the image areas (in both directions) were the most common and were observed for at least 16 participants (84%). In the positive status, the second most common pair of AoIs in which we observed transitions was the text and hyperlink areas; each transition was observed for at least eight participants (42%). In the negative status, the most common pair was the text and user image areas, with each transition was observed for at least eight participants (42%).

Interestingly, all AoIs between which transitions were observed for the positive status were also found for the negative status. However, two pairs of AoIs were observed for the negative status but

not for the positive one: text and user image, and image and hyperlink. These findings are summarized in Figure 4.



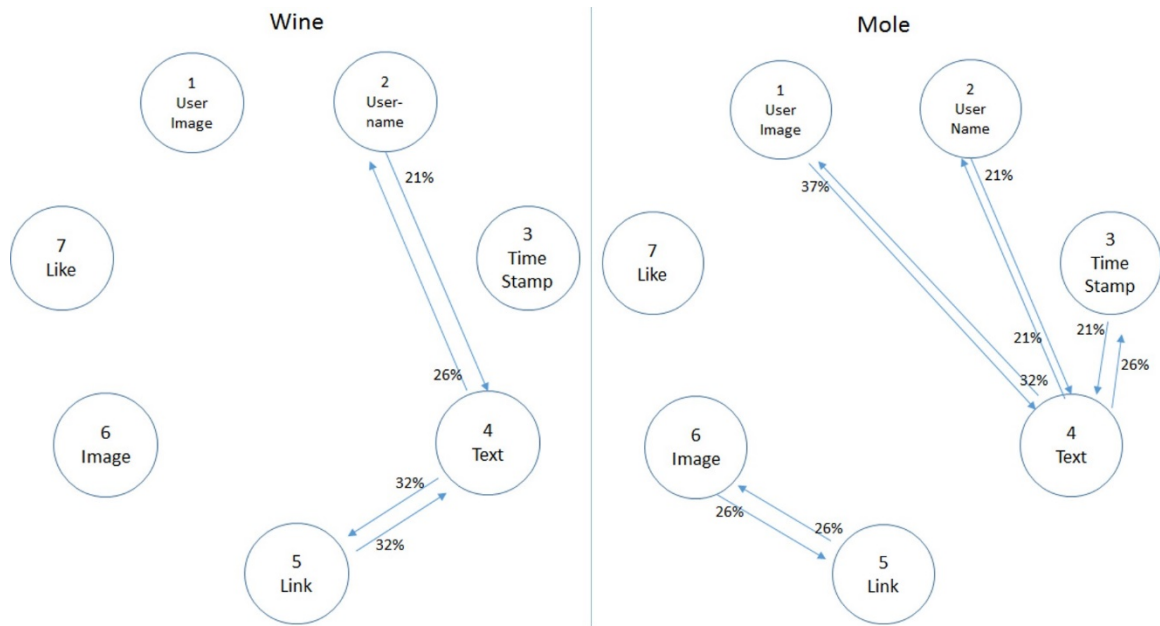
**Figure 4: Transition graphs for the positive (left) and the negative (right) statuses; multiple transitions between AoIs were counted only once for each participant, and appear here only if they were observed for at least four participants. Percentage represents all participants (N=19)**

### Participant level distinguishing analysis

To deepen the understanding of the differences between the two scenarios— still at the participant level—only those transitions observed at least once for a given participant in one status and not observed for the same participant in the other status were explored. As in the previous sub section, only common cases were considered, i.e., if they occurred for at least four participants.

When comparing positive and negative status, a different behavior in four transitions was found. Six participants (32%) transitioned from the text to the hyperlink AoIs or vice versa in the positive status, but not in the negative status. The same was true for the text and username AoIs, albeit to a lesser extent (text to username, five participants, or 26%; username to text, four participants, or 21%).

In contrast, eight transitions appeared in the negative status but not in the positive status. At the former case, four participants (21%) transitioned from the text and the username AoIs or vice versa in the negative status but not in the positive status. In addition, four and five participants (21% and 26% respectively) transitioned from the text to the timestamp or vice versa in the negative but not in the positive status. Also, and not surprisingly — since they were not prominent at all in the positive case — transitions between the user image and the text AoIs, as well as between the image and the hyperlink AoIs (in either direction), were observed for a few participants in the negative status and not in the positive case.



**Figure 5: Transition graphs for positive (left) and negative (right) statuses; represented transitions that were observed (by the same participants) in one status and not in the other, if this occurred for at least four participants. Percentage represents all participants (N=19)**

### ***SUMMARY OF FINDINGS***

Overall, a connection was found between the status design and its perceived credibility, with the positively framed status (Assyrian wine), compared to the negatively framed (mole defecation), perceived as more credible.

Using an eye tracking camera, it was possible to examine the ways in which the participants had examined both statuses. It was found that there were no differences in the overall time taken to examine both statuses, and that the three most viewed AoIs in both cases (counting number of fixations) were the text, the leading image, and the hyperlink. This is in line with the participants' self-report, based on which the most important message cues for credibility are hyperlink and image.

Analyzing the transitions between AoIs, it was found that in both statuses, the most common transitions were from the image to the text and from the text to the image. In the positive status, the next two common transitions were from the text to the hyperlink and from the hyperlink to the text, while in the negative status they were from the user image to the text and from the hyperlink to the image. Additionally, the positive status lacked transitions between the user image and the text AoIs (in both directions), as well as transitions from the hyperlink to the images and from the timestamp to the user image; The negative status lacked transitions from the text to the number of Likes, while these showed up for the positive status.

Analyzing transitions at the participant level, it was found that the most dominant AoI in both statuses was the text area; it served as a hub for most transitions (for all transitions, in the positive case). In both statuses, transitions between the text and the image areas (in both directions) were the most common. In the positive status, the second most common transition was between the text and hyperlink areas, and in the negative status it was between the text and user image. Interestingly, all AoIs between which we observed transitions for the positive status were also found for the negative status; however, two pairs of AoIs were observed for the negative status but not for the positive one: text and user image, and image and hyperlink.

Still at the participant level, looking specifically at transitions that were unique to one status, we found transitions between the text and the hyperlink AoIs, as well as between the text and the username AoIs, which appeared in the positive status but not in the negative status. In contrast, transitions between the text and the timestamp, as well as between the text and the username, appeared in the negative status but not in the positive status.

## DISCUSSION

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This study explored the mechanisms of credibility assessment of scientific information posted on Facebook. Given the richness and importance of peripheral cues on social networking sites (e.g., user profile image, number of Likes, etc.), we were interested in their role in the assessment process. More specifically, a within subject approach was taken to explore differences between positive and negative framing using these peripheral cues. The analysis of the fine-grained data collected using an eye tracking camera shed a new and interesting light on the effects of this framing on credibility assessment processes.

The positively framed status was perceived, as expected from the Elaboration Likelihood Model (ELM), as more credible than the negatively framed status, with no differences in the readability or understandability of the text itself. This clearly demonstrates the effects of the visual framing, a finding in line with previous studies of the role of framing in credibility or trust assessment (Harris, Sillence, & Briggs, 2009; O'Keefe & Jensen, 2008; Pengnate & Antonenko, 2013). In addition, positive/negative affect was associated with the positive/negative framings, a finding in line with previous studies of affect in information processing (Fang, 2014; Kim, Kioussis, & Molleda, 2015). As the findings indicate, the differences in participants' mechanisms of assessing credibility between the two scenarios were not evident in the aggregated viewing behavior. They were evident, however, in the specific ways participants examined the various status components. Note that this more nuanced understanding was enabled by the unique methodology taken in this study.

Overall, the text and the image areas were the most prominent in both assessment processes. The text prominence was obvious and not surprising, as users were explicitly guided to assess the credibility of the presented statuses, hence were drawn to the text area which was prominent in its size. The image prominence was not surprising either; previous studies note the important role visual aids play (Fogg et al., 2003; Metzger, Flanagin, & Medders, 2010). Third in order of prominence was the hyperlink area; this may indicate the participants' examination of the information source rather than the information sharer. This distinction is particularly important in social networking sites (SNS), as information may be reposted many times, creating layers of information sharers and obscuring the original source. As such, the findings are in line with previous studies indicating the importance of hyperlinks in credibility assessment (Borah, 2014; Johnson & Wiedenbeck, 2009). Moreover, hyperlinks and images were the two most important factors in that process, as reported by the participants. That is, both the eye tracking and self-report data highlight the importance of these two peripheral cues.

As mentioned above, the methodology used here permitted a nuanced understanding of the credibility assessment process. By examining the transitions between various areas on the screen, it was possible to observe how the mechanism differed when the overall context was positive or negative. The negative status had 20% more transitions than the positive status, indicating more profound (but not longer) information evaluation. Transitions were found from the text to the area indicating the number of Likes only for the positive status; this resonates with previous findings, according to which popularity is more influential when the framing is positive (Borah & Xiao, 2018).

When examining these transitions at the participant level, some clear within subject differences were found between the positive and the negative statuses. In the negative case, we observed transitions that were not present in the positive case, specifically transitions to or from the user image, as well as transitions between the image and the hyperlink. That is, the importance of the source — be it the

information sharer or its original source—grows when the framing is negative; this finding supports previous explorations of the interaction between source and framing (Creyer, 1997; Hussein, Manna, & Cohen, 2014; Kim & Kim, 2014). Moreover, as both out of the network and within the network source related cues were taken into consideration (the former by adding the hyperlink, the latter by adding the user image and the username), it is argued that adult users of SNS do acknowledge that on these platforms the content is shared by various sources, and hence may represent a proprietor's content or a message from network peers (Neubaum & Krämer, 2017). However, as recent studies have found no significant effects of profile image related features (e.g., gender, facial expression) on credibility assessment (Wang, 2016; Xu, 2014), more research is required to determine the specific role of the profile image.

## CONCLUSIONS

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This study contributes to the growing literature on credibility assessment in SNS by considering the assessment process rather than just focusing on the resulting perceived credibility. When people admit posting fake information on social networking sites (Buzzetto-More, Johnson, & Elobaid, 2015), and when these platforms are used not only for entertainment, but may also serve for professional development (Wandera, James-Waldon, Bromley, & Henry, 2016), the findings of this study have some far fetching implications. It was recently shown that digital literacy and Internet experience are negatively associated with credibility assessment of online materials, hence it makes Internet users more critic about the content they encounter online (Shen et al., 2019). Indeed, it is the goal of many media literacy programs worldwide to evaluate incoming information (Manzoor, 2018), and evidence exists of the explicit benefit of such programs in the specific context of online information verification (Seo, Erba, Altschwager, & Geana, 2019). As part of digital literacy education, the major focus should be given to the role of peripheral cues on credibility assessment in social networking sites. Educators should emphasize the mechanisms by which these cues interact with message framing, so Internet users would be encouraged to reflect upon their own credibility assessment skills, and eventually to improve them.

The findings on the mechanisms of that process, enabled by the use of eye tracking data, point to the different roles of specific peripheral cues, when the message is overall peripherally positive or negative. Thus, this study also contributes to the theoretical literature on framing effects in science communication, as we highlight the peripheral cues that make a strong frame. This understanding leads the way to a new set of research questions emphasizing the process of credibility evaluation.

This study is not without limitations. As it represents a relatively small population size, the results of the statistical comparisons should be considered cautiously. In addition, the items the participants were asked to evaluate were fabricated. Note that this is a common practice in assessing perceptions of SNS content, specifically credibility (e.g., Turcotte, York, Irving, Scholl, & Pingree, 2015). Finally, the research population, recruited at a single university campus in Israel, was not necessarily representative of relevant generalized populations, e.g., the nation population, or undergraduates in the country. Still, we believe that the current study makes an important contribution to the understanding of credibility assessment processes in the digital age.

Addressing these issues, we recommend that future studies should consider data collection in a more authentic context (using, for example, a think aloud protocol while participants browse their own Facebook page), referring to more SNSs, and studying additional populations (which will vary by, e.g., age, education level, and cultural aspects).

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## THE IMPACT OF PRESERVICE AND NEW TEACHERS' INVOLVEMENT IN SIMULATION WORKSHOP AND THEIR PERCEPTIONS ABOUT THE CONCEPT OF CONFLICT IN EDUCATION

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### ABSTRACT

Aim/Purpose	<p>In the modern world, simulation has become a new phenomenon in education, which conveys new and innovative ideas of curriculum, instruction, and class-room management. It makes certain of Aristotle's words when he said that "The things we have to learn before we do them, we must learn by doing them". One might think that simulation in education is one of these technologies.</p> <p>This study examined preservice and new teachers' perceptions about the concept of conflict and educational conflict management in a simulation workshop conducted at the Academic Arab College's Simulation Center in Haifa, Israel.</p>
Background	<p>Simulation engages learners in "deep learning" and empowers their understanding. In other words, simulation provides an alternative real world experience. As part of our work at the Educational Simulation Center in the Arab Academic College in Haifa, Israel, we examined the performance and contribution of educators who visit the center and participate in educational conflict management simulation workshops.</p>
Methodology	<p>A mixed methods study was conducted. A total of 237 participants of preservice teachers from diverse professions were divided into 15 groups to examine the research question: How does the experience of participating in a simulation workshop affect preservice teachers' perception about the concept of conflict?</p>
Contribution	<p>This study seeks to contribute to simulation and conflict management in education. This contribution to the body of literature can help researchers, scholars, students, and education technology professionals to advance simulation research studies.</p>

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Findings	The study findings indicate that there is a high degree of satisfaction (more than 90%) among preservice teachers in participating in the workshop. It also indicates a positive and significant change in participants' perceptions of the concept of conflict and the management of conflict situations.
Recommendations	In light of the study findings, it is recommended that new teachers be exposed to simulation workshops with a variety of scenarios dealing with different conflict situations. This exposure could contribute to their professional development and conduct in a more efficient and convenient manner in schools.
Keywords	conflict, satisfaction, simulation in education, simulation scenario

## INTRODUCTION AND STUDY BACKGROUND

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The importance of teaching methods and their contribution to the quality of learning has been shown to be widely relevant in several studies (Cobb, & Jackson, 2012; Davies et al., 2013). There is no doubt that in the near future, the training of professionals in various areas of knowledge in university will involve training that is appropriate to their specialization, in addition to acquiring skills and abilities for their own work in the field (Cropley, 2015).

Simulation is defined as a learning tool that enables the creation of 'new connections' between theoretical knowledge and practical knowledge as an event or situation in a particular defined context in a given professional field (Hargie, Boohan, & Murphy, 2010).

A simulation-based learning approach is used in different disciplines where students need to develop experience, especially in situations where experience involves high costs and/or risks. For example, medical simulators allow students to diagnose and treat puppets that can react in somewhat complex and realistic ways. Trainee pilots (and aeronautical students) use flight simulators to learn how the aircraft interacts in a variety of conditions. Thus, it can be assumed that the main purpose of simulation is to provide an experience as close as possible to "what is happening in the real world." The advantage of using simulation lies in the ability to experiment and re-run a scenario based on alternative approaches and strategies. Simulation enables participants to develop and enrich their experience in dealing with specific situations while being exposed to different situations in a non-judgmental environment.

In most teacher educational colleges, the training model in the field is still taking place, and it is good that it remains so. The field of education deserves to be learned from the successful experience of using simulated models for training in nursing (Society for Simulation in Healthcare [SSIH], 2015), medicine and business administration (Dolvin, & Pyles, 2011). Hayden, Smiley, Alexander, Kardong-Edgren, and Jeffries (2014) believe that simulation can serve as an appropriate educational tool for training students in nursing and medicine. Albaqawi (2018) argues that simulation is an effective teaching strategy, and the inclusion of simulation increases student learning.

Simulation has been found to be a useful teaching strategy that contributes to learning, development of competencies, safety, and self-confidence (Norman, 2012). Simulation minimizes the variability of community based experiences, thereby providing a more consistent and predictable learning environment. The National League for Nursing (NLN) has endorsed simulation as a necessary teaching approach to prepare students for the demanding role of professional nursing (National League for Nursing, 2015). Nursing faculty use simulation as a way to provide valuable active learning experiences that can be substituted for real life clinical experiences.

In the field of teacher-training, traditional pedagogies are still the highest norms in the field in higher education institutes. Such training is usually based on imparting knowledge and skills through lectures by written, observable and audible texts (Sfard, 1998). This training style does not always provide teachers with the opportunity to apply their new knowledge to actual educational situations, and as a

result, the gap between acquired knowledge and the knowledge required in the field is increasing (Raymond, 2010). Such educational situations cause considerable difficulties among many preservice teachers in determining the relevance of their learning, which increases the sense of a clear disincentive among these teacher students to learn in a successful, enjoyable and practical way their preoccupation with the teaching process in the field (Beck, 2015; Vaserman-Goteleg, 2017).

Over time, there is a growing expectation that teachers will conduct their work in the field as professionals. Professionalism, in this context, includes many components, such as professional knowledge in the field of teaching (Timperley, Wilson, Barrar, & Fung, 2007), use of appropriate authentic teaching tools, meeting accepted standards of conduct, leading students through clear moral processes, the ability to identify difficulties and the skills of students' assessment of learning (Okas, van der Schaaf, & Krull, 2014).

This behavior of teachers involves ethical behavior, educating and ethical teaching (O'Neill, & Bourke, 2010; Barrett, Casey, Visser, & Headley, 2012). Teachers must make informed decisions about what to do in order to achieve the best for the learners (Aho et al., 2010). They are required to conduct a class that involves complex interactions between the current teaching context, past knowledge, and personal beliefs and values, with a variety of difficulties, such as difficulties with inappropriate behavior by individual learners (Confait, 2015).

The assumption in this study is that teachers, at all stages of their work, encounter difficulties and that a good understanding of the concept of educational conflict will enable them to function better in conflict situations through conflict management skills. This study was conducted in order to examine how participation in an educational simulation workshop will influence the perception of the concept of conflict among preservice teachers.

Simulative learning in the Educational Simulation Center is based on learning in four-hour workshops in groups of up to 15 participants. Facilitators trained in educational groups run the workshops. Along with the facilitator, one or more actors join the required roles in accordance with the conflict scenario discussed in the workshop with the participants. Three different scenarios are used in each simulation workshop. In each scenario, a different participant undergoes the experience. The experience lasts about six minutes, during which the experimenter is exposed to a practical experience of the scenario opposite a professional actor. The simulation is broadcast to the group members via a real-time video system. During the experience, only the actor and the experimenter are present in a separate studio. After the end of the experiment, a debriefing of the simulation is conducted by the facilitator and with the participation of the experimenter, the actor and all the group members.

The simulation workshop promotes and implements the "conflict management" approach, or, more accurately, the "transformation of conflicts" in the educational field. This approach enables the development of effective and meaningful learning by raising educators' awareness of the importance of the adaptive use of communication skills, such as listening, empathy, assertiveness, good communication and collaboration.

Before participating, all the workshop participants sign consent forms to participate in the workshop and to be videotaped during the workshop, in addition to signing a form confirming the use of the workshop videos for educational purposes for the group members. After the debriefing stage, the facilitator holds a discussion to provide a summary feedback to the experimenter for preserving the successful skills as well as the behaviors that should be improved. Following this stage, the workshop moves to the next scenario.

## **LITERATURE REVIEW - SIMULATION IN EDUCATION**

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There are different definitions for the concept of Simulation. In this study, we adopt the definition that sees the simulation as an active imitation of activities taking place in the real world and experi-

menting with them in a friendly, safe and non-threatening environment (Gaba, 2007; Lu, Hallinger, & Showanasai, 2014). The use of simulation opens possibilities beyond the education and training of individuals towards organizational development and process optimization (Rall, & Dieckmann, 2005; Rudolph, Simon, Dufresne, & Raemer, 2006; Small, 2007), and its usage, can be important to maximize learning and facilitating change on an individual and systematic level (Rall, Stricker, Reddersen, Zieger, & Dieckmann, 2008).

The purpose of simulation in education is to provide participants with educational situations as close as possible to “what is happening in the real world.” The advantage of using simulation lies in the ability to experiment and repeat a scenario several times based on alternative approaches and strategies (Kaufman & Ireland, 2015). Simulation enables participants to develop and enrich their experience in dealing with specific situations while exposing them to conflict situations in a friendly, supportive and non-judgmental environment. Education simulation workshops enable:

- Receiving educational feedback from experienced teachers, moderators and experts in the field
- Carrying out repeated experiments as needed
- Applying exposure to the curriculum in practical aspects
- Coping with learning content at different levels of difficulty and complexity
- Exposure to practical learning/teaching strategies
- The ability to learn in a friendly and supportive environment
- Learning experiences without negative results
- Achieving clear goals for defined results
- Learning experiences that are reproducible under standard conditions as they happen in reality.

Simulation allows encountering problematic situations, experiencing the results of decision making and actions, and practicing and modifying decisions repeatedly without the risk of ineffective actions or decisions (Kaufman & Ireland, 2015).

Conflict may occur in any organization and of course in school. Conflict management is an important skill and should therefore be imparted to teachers. The effectiveness of educational conflict management by the teacher determines the type of impact on the quality of teacher performance at school (Saiti, 2015). Training teachers in conflict management through simulation workshops exposes them to a variety of methods that help them manage educational conflicts successfully in the school through active experience. Cooperation and coherence are key factors in fostering a constructive strategy for managing conflict and improving the personal performance of the teachers in school.

In educational simulation workshops, the approach of “debriefing with good judgment” is a key factor to highlight the importance of instructors disclosing their judgment skillfully (Rudolph et al., 2006). This approach is based on theories and findings in behavioral sciences to improve professional efficiency through “reflective practice.” The approach adopts the self-reflection technique, which helps the participants identify, understand and solve dilemmas that arise in the simulation and according to the instructor’s judgment.

The reality encountered by new teachers in the field is significantly different from the way this reality was perceived by them during their training (Oppenheimer-Schatz, Maskit, & Zilbershtrom, 2011). The gap between training and reality in the field gives teachers the feeling that they are not ready to actually teach in front of a class. In order to reduce oppressive feelings among new teachers and preservice teachers, an increase was observed in the use of simulations aimed at training educational teams and developing collective cooperation in conflict scenarios. Training new teachers and preservice teachers using simulation could impart them with optimal communication and negotiating skills and provide them with important skills to manage conflict situations they may encounter in their classes.

In light of this, the background in the use of simulation in education is based on the possible contribution of simulation on several levels:

- Reducing the difficulties of adaptation and the professional shock of new teachers by equipping them with practical experiences.
- Bridging the gap between theory and practice, despite the fact that the students are equipped with traditional training.

Providing an experiential experience from the “real” world of teaching that was revealed to the teachers when they entered the school.

## RESEARCH METHODOLOGY

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### *OBJECTIVES AND RESEARCH APPROACH OF THE STUDY*

The study aims at investigating preservice teachers’ perceptions of the concept of conflict in the educational context. The mixed methods research approach was used. Mixed methods research began in the late 1980s and is being used increasingly by a growing number of researchers (Creswell & Clark, 2011; Dunning, Williams, Abonyi, & Crooks, 2008). It is important to understand the perceived value of combining two different methodologies. Mixed methods research requires additional time due to the need to collect and analyze two different types of data (Johnson, Onwuegbuzie, & Turner, 2007). The combination of the two research approaches (quantitative and qualitative) is intended to illuminate the findings from different points of view, support them or express reservations about them. This combination is intended to strengthen the internal and external validity of the study (Salman, 2017). In this study, the integration is expressed in the level of performance when the combined qualitative and quantitative research tools fulfill the objective of the study and match its goal.

### *PARTICIPANTS*

The study comprised of 15 groups of preservice teachers from diverse areas such as language education, science education, mathematics and computer science, childhood education and special education. A total of 237 preservice teachers participated voluntarily in this study and received no compensation of any kind, 196 (83%) females and 41 (17%) males. Ages ranged from 21 to 46 years. Profession and gender aspects were not taken into account in the study.

### *RESEARCH TOOLS AND DATA COLLECTION*

Several tools were used in this study for the data collection such as:

- An online questionnaire about the perception of conflict as a symbol of negativity, aggressiveness and tension. The available answers were on a scale of 0 and 1 (0: agree with the statement, and 1: disagree with the statement). The questionnaire was distributed to the teachers prior to their participation in the workshop and again upon completion of the workshop. The participants had no experience in simulation in education.
- An online satisfaction questionnaire with a Likert 4-point scale (1: strongly disagree, 2: disagree, 3: agree, and 4: strongly agree). The questionnaire had four categories: the expertise of the workshop moderator; the quality of the scenarios dealt with in the workshop; the atmosphere during the workshop; and the organization of the workshop.
- Semi-structured interviews: 30 interviews were conducted during the study; two interviews were conducted upon completion of the workshop.
- Participant observations: 15 observations were conducted, one observation per workshop.

### ***PARTICIPANT OBSERVATIONS***

Observation is a systematic recording of events, behaviors and objects in the social environment chosen for the study. It is used as a tool for collecting information observed in the natural environment of the interviewee. In this study, the researchers conducted participant observations of the participants in the simulation workshops.

Participant observation is very similar to regular observation whereby the researcher becomes part of the group being studied (Kawulich, 2005). Participant observation is a method for researchers to learn about activities of the participants in the study in a natural setting by observing and participating in those activities (Dewalt & Dewalt, 2002).

The observations in this study were designed to reflect on the participants' learning process, paying attention to the methods of investigation, taking responsibility, participating in the discussions, teamwork, and the relationship between the participants and the facilitator, the actor and their colleagues in the workshop. The observations enabled us to examine the participants' behaviors during their learning in the simulation workshop on the following two levels:

- **Behavioral Level**  
To what extent do the participants invest time and effort, listen to the facilitator and their colleagues, participate in the discussions and express a position and opinion.
- **Emotional level**  
To what extent do the participants show signs of interest, enthusiasm, optimism and desire to take part in the discussions, emotional signs such as satisfaction, joy, anger, pressure and pride.

The observations enabled collecting data that served to strengthen the quantitative findings.

### ***SEMI-STRUCTURED INTERVIEWS***

Thirty interviews were conducted during the study and two after each workshop. The interview questions were validated by experts; the researcher and two academic group facilitators examined the questions, and agreement between judges was obtained.

Following are examples of questions from the interviews in three categories:

#### **The facilitator:**

- To what extent was, the debriefing conducted by the facilitator good enough?
- Do you think the facilitator was convincing in leading the workshop?
- How satisfied were you with the facilitator?

#### **The scenario:**

- To what extent did the scenario reflect the reality on the field?
- To what extent were you satisfied with the quality of the scenario?

#### **The climate in the workshop:**

- How did you feel in the workshop?
- How comfortable were you in attending and participating in the workshop?
- Did the workshop atmosphere advance your learning?

### ***RESEARCH QUESTIONS***

In this study, the following two research questions were examined:

1. How was the concept of educational conflict perceived by the teachers?

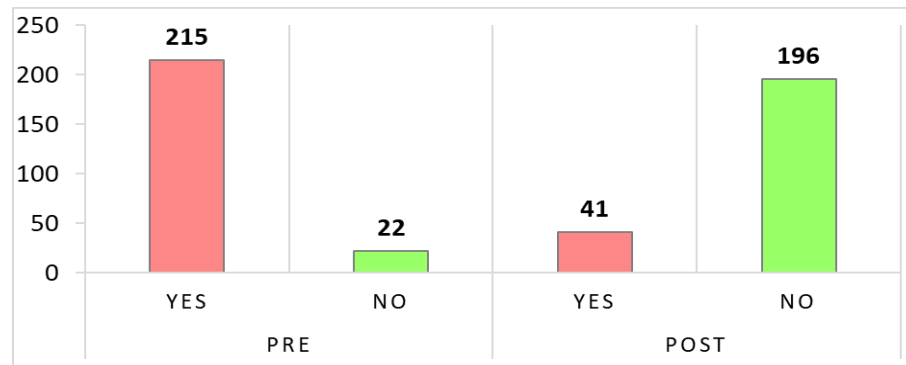
2. How did participation in a simulation workshop affect teachers' perceptions of the concept of educational conflict?

## FINDINGS AND DISCUSSIONS

As previously mentioned, quantitative and qualitative data were collected in this study. The quantitative data will be presented first, followed by the qualitative data.

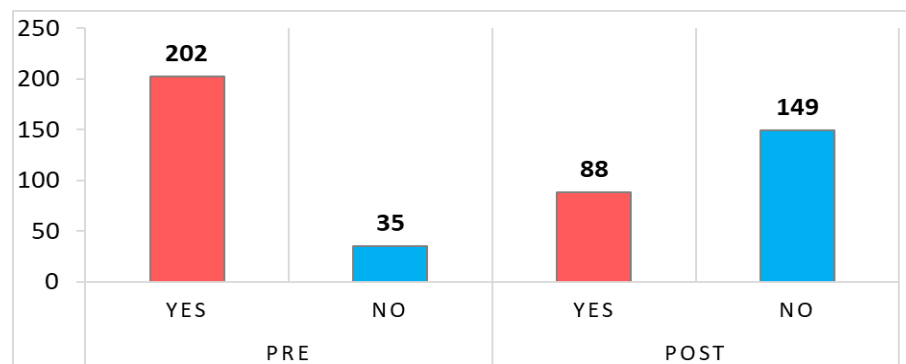
### QUANTITATIVE FINDINGS

Findings from the questionnaire prior to the workshop showed that the majority of preservice teachers (215, 90.7%) who participated in the study perceived conflict as a negative concept. Findings following participation in the workshop showed an almost opposite picture of the concept of conflict among the participants. Only 41 (17.3%) of the workshop participants continued to perceive conflict as a negative concept. Most of the participants felt that the concept of conflict is not necessarily negative; it exists in educational situations and must be managed positively.



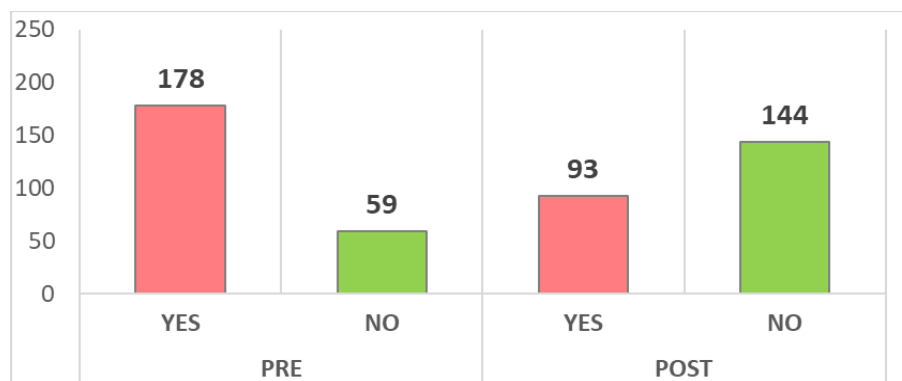
**Figure 1: Participants' perceptions of conflict as a negative concept prior to and after their participation in the simulation workshop.**

Findings prior to the workshop showed that more than 202 (85.2%) of the participants stated that the concept of conflict had a distinct symbolism of tension. Findings following participation in the workshop showed that only 88 (37.1%) of the workshop participants continued to perceive conflict as having a distinct symbolism of tension.

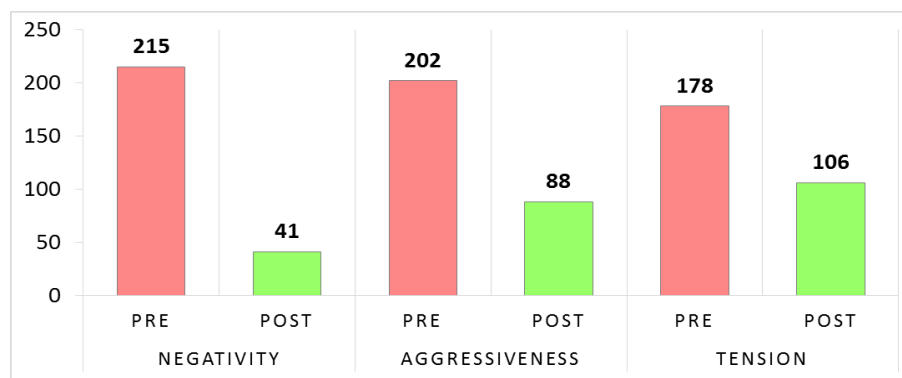


**Figure 2: Participants' perceptions of conflict as a symbol of tension prior to and after their participation in the simulation workshop.**

Prior to the workshop, 178 (75.1%) of the participants thought that the concept of conflict implied aggressiveness. Following participation in the workshop, only 93 (39.2%) of the workshop participants continued to perceive that the concept of conflict implied aggressiveness.



**Figure 3: Participants' perceptions of conflict as a symbol of aggressiveness prior to and after their participation in the simulation workshop.**



**Figure 4: Participants' perceptions of conflict as a symbol of negativity, aggressiveness and tension prior to and after participation in the simulation workshop.**

In order to examine if the changes in preservice teachers towards the concept of conflict is significant or not, a series of independent t-tests was conducted.

Table 1 presents data about preservice teachers' perceptions (mean and standard deviation) prior to and after their participation in the simulation workshop regarding the concept of conflict in aspects of negativity, aggressiveness and tension.

**Table 1: Responses of preservice teachers: negativity, aggressiveness and tension (scale 0, 1)**

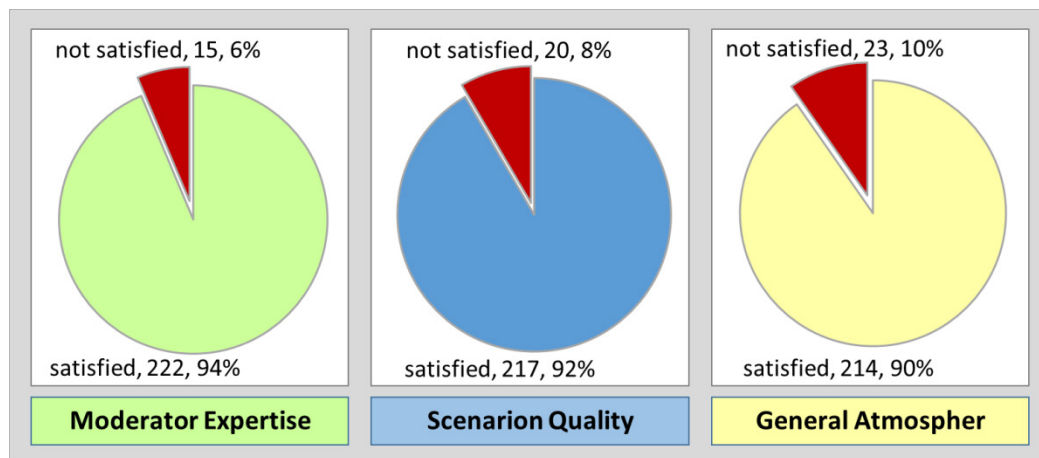
Aspect	Pre workshop(n=237)		Post workshop (n=237)		t
	M	SD	M	SD	
Negativity	0.91	0.19	0.16	0.23	24.32
Aggressiveness	0.85	0.26	0.37	0.28	12.33
Tension	0.75	0.28	0.39	0.29	8.45

Table 1 show that there were statistically significant differences between preservice teachers' perceptions about the concept of conflict in the three terms of negativity, aggressiveness and tension prior to and after the workshop. As shown in Table 1:

- A statistically significant difference was found between Pre (M=0.91, SD=0.19) and Post (M=0.16, SD=0.23) preservice teachers' perceptions toward the negativity symbolism of the concept of conflict ( $t_{(472)} = 24.32$ ;  $p=.001$ ).

- A statistically significant difference was found between Pre ( $M=0.85$ ,  $SD=0.26$ ) and Post ( $M=0.37$ ,  $SD=0.28$ ) preservice teachers' perceptions toward the aggressiveness symbolism of the concept of conflict ( $t_{(472)} = 12.33$ ;  $p=.003$ ).
- A statistically significant difference was found between Pre ( $M=0.75$ ,  $SD=0.28$ ) and Post ( $M=0.39$ ,  $SD=0.29$ ) preservice teachers' perceptions toward the tension symbolism of the concept of conflict ( $t_{(472)} = 8.45$ ;  $p=.002$ ).

The conceptual framework of the current study revealed a significant and imperative relationship between preservice teachers' satisfaction and different educational offerings given during the simulation workshops and scenarios. Based on this evidence, the issues of the moderator's expertise, the quality of the scenarios and the general atmosphere in the simulation workshop were examined regarding satisfaction of participants in the simulation workshop. Results show the vast majority (more than 90%) of participants in the study stated that these components greatly influenced their sense of satisfaction with the workshop.



**Figure 5: Participants' satisfaction of the simulation workshop.**

Figure 5 shows that:

- Most of the participants in the simulation workshop (94%,  $n=222$ ,  $M=3.56$ ,  $SD=0.665$ ) reported that they were very satisfied with the moderator's expertise in the workshop.
- Most of the participants in the simulation workshop (92%,  $n=217$ ,  $M=3.46$ ,  $SD=0.733$ ) reported that they were very satisfied with the quality of the scenarios in the workshop.
- Most of the participants in the simulation workshop (90%,  $n=214$ ,  $M=3.43$ ,  $SD=0.771$ ) reported that they were satisfied with the general atmosphere in the workshop.

In response to the question: 'To what extent do you intend to participate in similar simulation workshops in the future?' The participants' responses indicated great interest, where more than 95% ( $n=227$ ,  $M=3.59$ ,  $SD=0.629$ ) of them expressed their desire to participate in future simulation workshops.

## ***QUALITATIVE FINDINGS***

Quality content analysis is a method used typically for quality data analysis; furthermore, it may be used in an inductive or deductive manner.

In this study, we used the deductive approach, which is based on a preconceived theory or model, focusing on the categories and/or concepts determined in advance by the researcher, moving from general to specific (Burns & Grove 2005; Schadewitz & Timothy, 2007).

The deductive data analysis approach according to predefined categories was used in this study.

In this section, we will refer to two qualitative data types:

- Findings from the observations conducted during the workshop.
- Findings of interviews conducted with some of the participants after their participation in the simulation workshop.

### ***FINDINGS OF THE OBSERVATIONS***

The qualitative findings from the 15 observations conducted during the workshops relate to three main categories in this study:

- The facilitator
- The scenarios
- The climate in the workshop

The findings of the observations indicate that participants in the workshops had a positive attitude towards the facilitator, the scenario and the climate in the workshop. The findings also showed a positive interaction between the workshop participants and the moderator, and among themselves. This was expressed in cooperation, positive feedback, support and non-offensiveness, taking into consideration the performance of each participant during the workshop. The participants' conduct and participation in the scenarios indicated a great deal of will and adaptation of the scenarios to their daily lives at school, as some of them noted during the workshops. The participants stated that they were very comfortable during the workshops. The general feeling of a non-threatening atmosphere as well as the support from the facilitator and the workshop participants provided a very good opportunity to foster partnership and support and understanding in a non-judgmental environment. It helped the participants realize the inherent potential in managing the scenarios in a "sterile" and non-threatening atmosphere.

The findings of the observations were reflected in the behavior of the participants during the workshops according to the data collected from the interviews with the participants after the workshops.

### ***FINDINGS OF THE INTERVIEWS AFTER THE WORKSHOP***

Analysis of the interview data also focused on the three categories: the facilitator, the scenarios, and the climate in the workshop.

#### ***THE FACILITATOR***

Regarding the facilitator, the participants positively noted the facilitator's contribution to their understanding, increasing their involvement in the workshop, reinforcement of their self-confidence. For the most part, they positively noted the clarity and simplicity in presenting the workshop goals and objectives.

As evidence of this, some examples cited from the responses of different participants to questions about the workshop facilitator will be mentioned here. It is important to note that the examples were taken from the responses of different interviewees from various workshops.

**T1:** *"Thanks to the moderator, the atmosphere in the workshop was very comfortable, I felt at home, not threatened or stressed ... everything was really good."*

**T2:** *"At the beginning of the workshop, the facilitator explained exactly (in 10 minutes) what we were going to do. What forms should be filled in and why, what is videotaped and what is not, how to conduct the discussion in simple words with easy and practical concepts...It helped me to relax, focus and feel comfortable."*

**T3:** *"The facilitator observed proper rules of conduct in the workshop. He made it clear that in this workshop, we do not come to judge each other, but rather learn one from the other's experience... we all learn, we all win. The facilitator's words and the way he behaved with a pleasant tone of voice and learning strategies were very helpful to us. I also learned from him methods to manage my class at school."*

**T4:** *"I think that the facilitator conducted the workshop professionally and successfully; his pleasant and reassuring tone of voice, his use of simple and understandable terms, his respect and attitude encouraged me to take part in the workshop. He actually invited me to be involved throughout the workshop."*

**T5:** *"I liked the facilitator's method; I'm really going to adopt a large part of her way of managing the group. It is very pleasant; in almost every situation, even if it is difficult, she has a positive way of highlighting the good things, ignoring what is not positive and non-conducive to learning. Today, I really enjoyed good and successful modeling."*

**T6:** *"The facilitator's way of dealing with things and respect for us encouraged me to be involved in the workshop."*

As it can be seen from the above example of answers, the interview data indicate that most of the participants were generally satisfied with the facilitators of the workshops. Some of them related to different aspects of the facilitator, such as conversation management, invitation to share, assertiveness and harnessing, group cohesion, simplicity and clarity, positive attitude and modeling.

### ***THE SCENARIOS***

Regarding the scenarios, the general view in the interviewees' responses was that the scenarios were taken from daily life and largely reflect the reality they experience in the field. Some of them clearly noted that the scenario simulated an event that had actually happened to them at school. Some of the interviewees emphasized the professional actors' contribution to the success of the simulation and the scenarios. Others mentioned that they learned several techniques from the scenarios on how to manage educational conflicts.

Following are some examples of the responses of selected interviewees:

**T1:** *"For me, the scenario today in the workshop was excellent. It was really relevant for me."*

**T2:** *"The scenario was taken from my school life; it was an event that had happened to me a few weeks ago in class. It is amazing how many options the moderator gives me for handling the event. It would have been great had I attended the workshop before. I'm sure I would have behaved differently and achieved better results."*

**T3:** *"The scenario was good; the actor played the role quite nicely."*

**T4:** *"My experience in the scenario exposed me to possibilities of managing difficult events in different ways! It is easier, safer, attracts greater partnership and connections, and is maybe much more successful..."*

**T5:** *"The scenario was clear, even though it revolved around a very difficult situation. The actor and the facilitator made it realistic; it was very relevant for me."*

It can be seen from the sample responses that almost all of the participants felt that the scenarios reflected reality on the field, and exposure to and experience with them strengthened their knowledge and confidence in dealing with similar situations at school.

### ***THE CLIMATE IN THE WORKSHOP***

The analysis of the interview data showed that the overall atmosphere in the workshops was good and suited most of the participants. Some of the interviewees noted that the group comes from the

same school and that preliminary acquaintance of the group members could create a situation of discomfort and reluctance to be exposed to colleagues. But the workshop's successful management and atmosphere helped the participants to be open to themselves and to their colleagues.

Below are some response examples:

- T1:** *"The atmosphere in the workshop was very good for me; no competition; there was no right or wrong. Everyone is trying to learn from the scenario. Each presents his knowledge and experience to others."*
- T2:** *"We are a group of teachers from the same school, know one another and work together. It could have been difficult. No one wants to expose his weaknesses to his co-workers! However, the facilitator made the atmosphere very comfortable, supportive and constructive. Everyone understood that together we could learn more and sharing experiences could enrich us all. For me, it was a lot of fun. I got to know myself much better in the eyes of my co-workers."*
- T3:** *"I loved attending the workshop; it was a lot of fun. Everyone was supportive and encouraging even when you were not doing as well as possible. The way the facilitator worked his wonders with the group was amazing. Suddenly they could all see the beautiful side, the attempts to do well, the efforts to succeed. The negative reviews and critical inspections suddenly disappeared, as if they no longer existed. The group moved forward to succeed and saw success as a common goal that could be achieved together. Even when criticism was given, it was given in a pleasant and harmless manner. I learned to take many things from the workshop-learning atmosphere to my school, to my students and to my co-workers."*

The atmosphere in the simulation workshops as reflected in the responses of the interviewees seems very positive. The atmosphere helped the participants open up to the group and share their experiences. The sense of support and encouragement helped the group converge around the goal of success in managing educational conflicts, and in understanding that sharing knowledge and experience is beneficial to all.

As a summary of the qualitative data, it can be noted that participation in the simulation workshops clearly indicated a significant change in the perceptions of the concept of conflict of the workshop participants. Some of the participants stated that their participation in the simulation workshop opened their eyes to a whole series of daily pedagogical events that they had done in an offensive manner without noticing. In addition, most of the workshop participants noted that their participation in the workshop caused a fundamental change in their perceptions of the concept of conflict. They, also, stated that their participation in the workshop gave them, tools and skills to manage conflict events they experience in their fieldwork, and they learned how to transform these events from challenging and uncontrolled situations into opportunities for nurturing support and collaboration, something that would be more thoughtful and nonjudgmental.

An analysis of the qualitative data indicates that they support the quantitative findings of the study. This study was designed to investigate whether the participation by preservice teachers and new teachers in a simulation workshop affected their perceptions of the educational concept of conflict.

The findings indicate that the vast majority of the participants reported, quantitatively and qualitatively, a fundamental change in their perceptions of the concept of conflict.

The literature indicated that the use of simulation provides several educational benefits. Findings of satisfaction of the workshop regarding the four main components (the moderator's expertise, quality of the scenarios, general atmosphere of the workshop, and organization of the workshops) showed a great degree of satisfaction (over 90%). This finding is consistent with the findings of Hoban & Nielsen (2010) and Akpan (2001) regarding the importance of simulation in education and the contribution of simulation quality to the degree of satisfaction of the participants. Our findings expressed some aspects of implementing simulation models successfully in education as contributing to the participants' motivation, providing opportunities to ensure deep learning, support for participants' activity and creativity, and as a means for more effective education.

The findings of this study, similar to the findings of Henning, Lesperance and Harris (2007), showed that simulation in education helps participants experience a more positive view of events and conflict educational scenarios through practical experience based on critical thinking. Their participation in simulation workshop gives them a real-life experiential experience of the scenarios they encounter in the field of education. This experience provides the participants with important coping skills in real educational scenarios within guided, supportive and non-threatening contexts.

According to Zapko, Ferranto, Blasiman and Shelestak (2018), simulations can more readily satisfy the needs of learners by offering them various opportunities, repetition, and a tool to interact and deal individually with problems, educational events and unexpected situations during their work in the field. These findings are similar in nature to the findings of the current study.

## CONCLUSION

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Due to the inherent potential of the contribution of simulation workshops to the professional development of new teachers, we believe that optimal planning for the integration of simulations as part of the learning continuum in the professional development of teachers could leverage their practical knowledge and experience in the field. Hence, the preparation of scenarios based on the identification of needs and the integration of case studies of common interactions in the professional daily lives of the teachers participating in the workshop could further enrich their knowledge and experience.

Identifying strengths and challenges is an important component of research and can serve as a growing tool. Each simulation workshop must end with a reflective process of drawing conclusions and making decisions for the future. Effective planning of a final reflective process is a powerful and empowering foundation for the benefit of participating in the simulation workshop

Based on this, the following advantages of using simulation in teacher training can be noted:

1. Training participants in making decisions, predicting possible behaviors, and developing the ability to cope with various educational situations and scenarios.
2. The experience in the simulation workshops contributes greatly to preservice teachers' experience and self-confidence.
3. Making the concept of conflict a non-threatening concept as a means of producing hidden information so that its proper management leads to good results in the conduct of new teachers within the entire school system.
4. The professional development of preservice teachers and new teachers based on learning that leads to change. Simulative learning enables this change, so that in simulations, the teacher's hidden knowledge becomes open and declared knowledge, which strengthens, among other things, his self-confidence and thus his behavior in the classroom.

## CONTRIBUTION

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Three different levels of contribution are possible for the current study:

***THEORETICALLY:*** Findings may constitute an additional dimension of the literature on the integration of simulation in education and the contribution of this combination to cope with the difficulties faced by preservice teachers. In addition, this study could contribute to the literature on the development of pedagogical knowledge of novice teachers and the gradual integration of a simulation-based experience in teacher training.

***METHODOLOGICALLY:*** The study included a collection and analysis of a variety of quantitative and qualitative data regarding preservice teachers' perceptions of the concept of conflict. The findings of the two research approaches complemented each other and created a clear picture of the concept of conflict.

Practically, the findings could contribute to the development, planning and implementation of simulation-based activities in the teaching process and their assimilation in schools.

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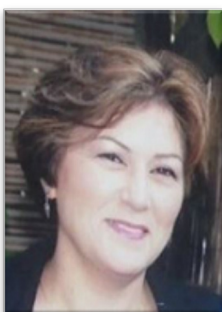
## BIOGRAPHIES

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## INFLUENCE OF ORGANIZATIONAL CULTURE ON THE JOB MOTIVATIONS OF LIFELONG LEARNING CENTER TEACHERS

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### ABSTRACT

Aim/Purpose	The aim of the research was to examine the relationship between the sub-dimensions of organizational culture perceptions, such as task culture, success culture, support culture, and bureaucratic culture and job motivations of ISMEK Lifelong Learning Center teachers.
Background	It is thought that if teachers' perceptions of organizational culture and levels of job motivation are assessed and the effects of school culture on the motivation level of teachers investigated, solutions to identified problems can be developed.
Methodology	The study was conducted using survey research. The sample population consisted of 354 teachers working for the Istanbul Metropolitan Municipality's Lifelong Learning Center (ISMEK). The personal information form prepared by the researchers, the School Culture Scale developed by Terzi (2005) and the Job Motivation Scale developed by Aksoy (2006) were administered to the teachers.
Contribution	This study will contribute to research on the job motivations of teachers involved in adult education.
Findings	The findings indicated that task culture differs according to gender. Teachers report high levels of job motivation, but job motivation varies with gender, education level, and number of years working at the ISMEK Lifelong Learning Center. A significant relationship was found between sub-dimensions of organizational culture and job motivation. Organizational culture explains more than half of the change in job motivation. The sub-dimensions of or-

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	ganizational culture, task culture, achievement culture, and support culture were found to be significantly predictive of job motivation.
Recommendations for Practitioners	In order to increase motivation of teachers, a success-oriented structure should be formed within the organization. It is necessary for teachers and managers to support each other and to establish a support culture in their institutions. In order to establish a culture of support, managers need to receive in-service training.
Recommendations for Researchers	This study was carried out in the ISMEK Lifelong Learning Center and similar studies can be done in classrooms, training centers, and study centers.
Impact on Society	Teachers working in adult education should be afforded a more comfortable working environment that will positively impact job motivation, resulting in a higher quality of education for students. Therefore, this research may contribute to an increase in the number of students who engage in lifelong learning opportunities.
Future Research	This qualitative study utilized a relational survey model. A more in-depth qualitative study employing observation and interviews is warranted.
Keywords	adult education, lifelong learning, organizational culture, job motivation

## INTRODUCTION

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Dufour and Eaker (1998) define culture as “assumptions, beliefs, values, and habits that constitute the norms for the organization” (p.131). This concept of culture is central to the belief that culture is learned. Schein (2004) notes that culture is a dynamic phenomenon that has always surrounded us (p.1). Culture is ever-changing and created through communication between members of a group. Organizational culture is defined as a system of meanings accepted by a cooperative for a particular group (Pettigrew, 1979, p. 574). Schein (1985) provides a more specific definition emphasizing cultural items stating that organizational culture is “shared beliefs, assumptions, and value systems among a group of people” (p. 17).

In the literature, the concept of school culture emerges as educational culture. According to Hemdon (2007), school culture is identical with organizational culture (p.42). School culture, defined as “the basic assumptions, norms and values, and cultural artefacts that are shared by school members, which influence their functioning at school” (Maslowski, 2001, pp. 8-9)

There are six basic characteristics of school culture in highly successful schools: shared vision, traditions, cooperation, shared decision making, innovation, and communication (Goldring, 2002). According to Gruenert (2000), a definition of school culture was developed in the field of educational management in order to explore the meaning, character, and atmosphere of the educational organization. While no single international definition of school culture exists, there are generally accepted opinions about what constitutes school culture. As an example, Hopkins, Ainscow, and West (1994) defined school culture as observable patterns, norms, values, philosophies, uncommitted practices, and procedures, along similar lines, Evans (1996 as cited in Karadağ, Kılıçoğlu, & Yılmaz, 2014, p. 105), states that school culture is a system of continually developed observable agreements between behaviors, actions, and members.

In non-formal educational institutions, a way of explaining the organization’s culture can be found in the symbolic values displayed in communication rituals. Communication rituals explain what will happen and when it should happen. Some examples of communication rituals frequently associated with teaching cultures are staff meetings, coffee breaks, discussions about students, sharing of materials, curriculum review, and lesson planning (Pratt & Nesbit, 2000, p. 124). Within adult education, three staff levels can be identified. The first includes individuals who work full-time in adult educa-

tion services and regard it as a permanent profession. The second level includes individuals who work full-time in general education services but participate in adult education part of the time. The third group can be divided into part-time paid employees and volunteers, which includes people outside the profession such as local leaders. Because full-time employment is very costly, individuals in the second and third group are heavily represented in many countries (Lowe, 1985, p. 153).

The andragogical theory is the most well-known adult learning theory. This theory is based on five basic assumptions: a) adult learners have an independent sense of self and can direct their own learning; b) they have accumulated life experiences that creates a rich foundation for learning; c) there are learning needs for changing social roles; d) education is problem-centered and interested in the immediate implementation of information; and e) adults are often motivated by intrinsic factors rather than external factors (Knowles, 1980, p. 43). Implementation of andragogical theory leads to differences in practice, but generally, as stated by Lowe (1985), adult education is “A series of learning experiences that are prepared and put into practice for the benefit of learners by trained staff” (p.20).

In adulthood, we create belief systems where we define how we fit into the world, into our cultural groups, and how we see ourselves. These belief systems function as “border structures” for the perception and understanding of new information. They become our reference frameworks or “view-points of meaning” and they influence how and why we learn. They also distinguish adult learners from children. Learning in childhood includes the process of acquiring culturally predicted values and beliefs; that is, learning contributes to the socialization process whereby children become responsible adults. Adulthood in modern societies emerges when we have the capacity to critically examine these accepted belief systems (Mezirow, 1990, p. 153).

Public/adult education has taken different definitions from day to day and has reached its present state. Foremost, public education is a form of education provided to individuals who previously had not benefited from formal education (İSMEK, 2007, p. 13). Additionally, non-formal education, meaning out-of-school education that reflects the oldest educational method of humanity, readily coexists with formal education. For example, a student who is studying at a high school in a formal educational setting can simultaneously participate in non-formal education (Okçabol, 2006, p. 7). OECD (1977) notes that public/adult education encompasses programs specifically designed to satisfy learning needs that are outside of compulsory schooling and for students, at any stage of their life, whose main concern is no longer attending school. According to UNESCO (1975), adult education is tailored to the specific needs and benefits of those who are older than fifteen years and not enrolled in a formal school or university system.

In Turkey, we can categorize adult educational institutions into three classes: private institutions, state institutions, and local governments. Private institutions include commercial institutions and foundation universities. State institutions include state-owned enterprises and ministries. Within local administrations, municipal education centers include İstanbul Municipality İSMEK, Ankara Municipality BELMEK, Kadıköy Municipality KASDAV, Bursa Municipality BUSMEK, and so on. The most prominent adult education center in Turkey is ISMEK comprised of 218 course centers. The next largest center is BELMEK with 160 course centers (BELMEK, 2016).

Motivation is defined as a set of mental and psychological processes of a person that make him/her take action, direct him/her to work, and help continue to work (Robbins, 2001, p. 161; Spector, 1996, p. 192). Motivation can also be explained as an internal force that influences the direction, intensity, quantity, consistency, and permanence of a person's behavior and actions (McShane & Glinow, 2003, p. 132). According to Bentley (1999), motivation is the power within a person to engage in certain actions, both positive and negative, and to reach individual desires, thereby ensuring satisfaction (p.180).

The motivation of a person is determined by the degree of harmony between the needs of the person and incentives (such as salary and social rights) provided by an organization (Aksoy, 2006, p. 54). When considered in this way, it can be said that motivation is a subjective process that depends on

the individual, the organization, and the incentives (Kakabadse, Ludlow, & Vinnicombe, 1988, p. 119). There are two dimensions of motivation: internal and external. In external motivation the causality of the behavior is outside or surrounds the individual. In this context, social support and encouragement from managers, students, and families and the awards and punishments given to teachers are sources of external motivation. The causality of behavior in internal or intrinsic motivation lies within the individual. Such motivation is due to the needs of the individual. Interest, talent, and curiosity are among the most important of these resources. It has been found that a high level of internal motivation is directly proportional to success (Lin, McKeachie & Kim, 2003). Motivation is about how people are treated as individuals and what they feel about the work they do (Keenan, 1996, p. 5).

The class and school where a teacher practices can be defined as their place of work. The motivation of teachers is crucial both for motivation of students and for educational reforms. Motivated teachers play a very important role in the realization of educational reforms through implementing resulting changes ensuring their success and fulfillment (De Jesus & Conboy, 2001). Teachers who cannot achieve success and satisfaction due to low motivation have high stress levels (Pithers & Fogarty, 1995). Positive school culture influences motivation of students and teachers, academic achievements of students, job satisfaction, cooperation and agreements of teachers, dedication and motivation of employees, and structure of school society (Canizo, 2002; Deal & Peterson, 1990; Giles, 1998; Harris, 2002; Kotter & Heskett, 1992; Masland, 1985; Lima, 2006). Studies also show that school culture is a primary factor affecting student achievement (Deal & Peterson, 1999; Smith, 2006). Kinman and Kinman (2001) have shown that organizational climate significantly influences motivation.

The literature shows that schools with high success have a defined school culture. These schools attach importance to rituals, traditions, symbols, heroes, stories, and ceremonies, which are concrete signs of school culture (Beare, Caldwell & Millikan 1989; Bolman & Deal, 1985; Deal & Peterson, 1999). Successful schools also attach importance to beliefs, values, norms, philosophy, mission, vision, aims, assumptions, and moral values (Alkire, 1995; Beare et al., 1989; Deal & Peterson, 1999; Schein, 1999). It is therefore clear that school culture is related to the academic achievement of students (Aidla & Vadi, 2007; Cheng, 1993; Dumay, 2009; Gaziel, 1997).

In light of the aforementioned, teachers' perceptions of organizational culture and job motivation levels should be assessed and the effects of school culture on the motivation level of teachers should be investigated, such that successful solutions to problems might be developed. In the literature, the number of studies investigating teachers working in adult education and job motivation was limited. Therefore, it is important to examine the relationship between organizational culture and job motivation. The aim of this research is to determine the relationship between organizational culture perceptions of ISMEK Lifelong Learning Center teachers and their work motivation, and at the same time examine the effects of teachers' motivation on organizational culture.

## ***RESEARCH QUESTIONS***

This study aims to determine the relationship between perceptions of organizational culture and job motivations of ISMEK Lifelong Learning Center teachers. To achieve this goal, this study attempts to answer following research questions:

1. What are the opinions of teachers related to the organizational culture of ISMEK Lifelong Learning Center?
2. Do their perceptions of organizational culture of ISMEK Lifelong Learning Center differ according to gender, age, level of education, years working at the Center, Center branch location, or working hours?
3. What is the level of job motivation of ISMEK Lifelong Learning Center teachers?

4. Do the job motivations of the ISMEK Lifelong Learning Center teachers differ according to gender, age, level of education, years working at the Center, Center branch location, or working hours?
5. What kinds of relationships and influences are there between teacher perceptions of the organizational culture of ISMEK Lifelong Learning Center and teacher job motivations?

## METHOD

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### *RESEARCH DESIGN*

The research model is a comparative relational survey model. The comparison type relational scan attempts to reduce the causes of a certain result to “one” and there are at least two variables in the relation determination by the comparison method. Groups are formed according to one of the independent variables to be tested and whether there is a differentiation between them according to the dependent variable (Karasar, 2011, p. 84). In this study, comparative relational screening model was used when the level of teachers’ organizational culture and job motivation were examined individually.

### *SAMPLE*

The total population consisted of 2829 teachers working at İSMEK Lifelong Learning Center in Istanbul in the 2016-2017 academic year. If the confidence level of the number of samples is 95% and the error rate is 5%, it should be at least 338. In the sample of the research, the questionnaires were sent to all 2829 teachers working at 354 different ISMEK Lifelong Learning Centers.

### *DATA COLLECTION TOOLS AND APPLICATION*

Data were gathered through personal information forms, Organizational Culture Scales, and Business Motivation Scales. A personal information form was prepared by the researcher to determine the demographic characteristics of participants in the study. In this form, participants were asked about gender, age, level of education, duration of service at the institution, teaching field (branch), and type of work (part-time/full time).

The School Culture Scale developed by Terzi (2005) consisting of 29 questions was used in this research. The scale has four dimensions: task culture, success culture, support culture, and bureaucratic culture. The scale is made up of 5 Likert types ranked as “Never,” “Rarely,” “Sometimes,” “Mostly,” and “Always.” According to the five-point scale, the teacher’s perception, and interpretation of organizational culture perception were assigned levels of 5.00-4.20 (always), 4.19-3.40 (mostly), 3.39-2.60 (sometimes), 2.59-1.80 (rarely) and 1.79-1.00 (Never). These intervals are obtained by dividing the serial width between the lowest value 1 and the highest value 5 (number of options) (Turgut & Baykul, 1992).

The reliability of the School Culture Scale was examined by the internal consistency coefficient. The mission culture consists of 6 items, the culture of success consists of 6 items, the support culture consists of 8 items, and the bureaucratic culture consists of 9 items. The Cronbach Alpha coefficient for the task culture subscale of the School Culture Scale was 0.66, the Cronbach Alpha coefficient for the bureaucratic culture subscale was 0.76, the Cronbach Alpha coefficient for the support culture subscale was 0.88, and the Cronbach Alpha coefficient for the success culture subscale was 0.83. The Cronbach Alpha coefficient of the scale as a whole was 0.80.

The Job Motivation Scale, comprised of 18 questions developed by Aksoy (2006), was used in this research. The scale is composed of 5 Likert types ranked as “Not satisfied at all,” “Not satisfied,” “Undecided,” “Satisfied,” and “Very satisfied”. According to the five-point scale, the teachers’ perception and interpretation of organizational culturally perceived levels were assigned values 5.00-4.20 (very satisfied), 4.19-3.40 (dissatisfied), 3.39-2.60 (undecided), 2.59-1.80 (dissatisfied) and 1.79-1.00

(not satisfied at all). These intervals are obtained by dividing the serial width between the lowest value 1 and the highest value 5 (number of options) (Turgut & Baykul, 1992). The reliability analysis for the Job Motivational Scale was found to have a Cronbach's Alpha score of .93.

### ANALYSIS OF DATA

The data obtained as a result of the research were analyzed with SPSS (Statistical Package for Social Sciences, Version 21.0). Significance was tested at .05 level and the findings were presented in tabular form for the purposes of the research. Assumptions were tested before analysis was made. Pearson product-moment correlation analysis was performed to look at the relationship between the variables. The job motivation and school culture variables were compared according to the demographic characteristics of the participants. T-tests were used for comparisons of two independent groups and one-way variance analysis (ANOVA) was used in more than two groups. If the difference in the results of the One-Way ANOVA test was significant, the Scheffe test was conducted to determine the source of the differences, i.e. which groups were included. Multilinear regression analysis was used to find the degree of order between two variables.

## RESULTS

Table 1 shows the average scores of the ISMEK Lifelong Learning Center teachers' scores on the organizational culture scale and the level of their subscales.

**Table 1. Organizational culture scale arithmetic mean, standard deviation, lowest, and highest values based on subscale scores**

SCHOOL CULTURE SUB-SCALE	<i>N</i>	$\bar{x}$	$\bar{x}_2$	<i>SS</i>	MIN	MAX
Task Culture	354	26.53	4.42	3.04	9.00	30.00
Success Culture	354	23.05	3.84	4.64	6.00	30.00
Support Culture	354	32.03	4.00	5.74	10.00	40.00
Bureaucratic Culture	354	31.88	3.54	5.53	15.00	45.00
TOTAL	354	113.48	3.91	14.29	55.00	145.00

School Culture Scale subscale scores are a maximum of 30 points in the Task Culture and Success Culture subscale, 40 points in the Support Culture subscale, and 45 points in the Bureaucratic Culture subscale. The higher the scores, the higher the perception of culture in that sub-area.

As shown in Table 1, the arithmetic mean of the scores of the sample group of teachers in the task culture sub-dimension was 26.53 and the standard deviation was 3.04; the arithmetic mean of the scores received from the success culture sub-dimension was 23.05 and the standard deviation was 4.64; the arithmetic mean of the scores obtained from the support culture sub-dimension was 32.03 and the standard deviation was 5.74; and the arithmetic mean of the scores obtained from the bureaucratic culture sub-dimension was 31.88 and the standard deviation was 5.53. The arithmetic mean obtained from the task culture sub-dimension equals to (average of) 4.42 ("always" item). The arithmetic mean obtained from the subcategory of success culture equals to (average of) 3.84 ("mostly"). The arithmetic mean obtained from the support culture sub-dimension equals to (average of) 4.00 ("mostly"). The arithmetic mean obtained from the sub-dimension of bureaucratic culture equals to (average of) 3.54("mostly"). The arithmetic mean of the scores obtained from all of the scale is in the range of 3.91("mostly").

As seen in Table 2, an independent t-test was used to determine whether school culture subscale scores differed according to gender variable, and the difference between the task culture and gender

variable arithmetic mean was significant ( $t = 3.19$ ;  $p < .002$ ). The difference was in favor of female teachers.

**Table 2. Independent group t test results to determine if school culture scale differences according to gender variable**

	GROUPS	N	$\bar{x}$	ss	t TEST		
					$t$	Sd	p
Task Culture	Female	253	26.84	2.74	3.19	351	.002
	Male	100	25.71	3.60			

As can be seen in Table 3, the post-hoc Tukey HSD test was conducted to determine the arithmetic mean of the organizational culture scale sub-dimension score of the teachers in the sample group according to the educational level variable. It was determined that this difference was realized at the level of  $p < 0.05$  in favor of the teachers who have been educated at the associate degree. According to this, the perception of task culture of teachers with associate degree education is higher than those of undergraduate and graduate level.

**Table 3. Tukey test results to determine which groups differentiate task culture scores according to educational level variable from organizational culture scale**

GROUPS (I)	GROUPS (J)	$\bar{x}_i - \bar{x}_j$	Sh $_{\bar{x}}$	p
Associate degree	Undergraduate	1.25	.44	.04
	Graduate	1.66	.55	.02
	High School	0.28	.71	.99

The level of the ISMEK Lifelong Learning Center teachers' scores on the Job Motivation scale is shown in Table 4.

**Table 4. Arithmetic mean, standard deviation, minimum and maximum values of ISMEK lifelong learning center teachers' job motivation scale scores**

VARIABLE	N	$\bar{x}$	ss	MIN	MAX
Job Motivation Scale	354	72.54	12.16	18.00	90.00

The high level of the Job Motivation Score means that the level of job motivation is high. The Job Motivation Scale maximum is 90 points. As shown in Table 4, the total score for Job Motivation was 72.54. The ratio of this score to 5 is 4.03 "Satisfied."

As shown in Table 5, an independent t-test was used to determine whether the job motivation scale scores differed according to gender, and the difference between the mean of job motivation and gender - was significant ( $t = 3.14$ ;  $p < .05$ ). The difference was in favor of female teachers.

**Table 5. Independent group t test results to determine if Job Motivation Scale scores differ according to gender variable**

	GROUPS	N	$\bar{x}$	ss	t TEST		
					$t$	Sd	p
Job Motivation	Female	253	73.97	10.82	3.14	144	.002
	Male	100	68.94	14.53			

As shown in Table 6, the Pearson correlation analysis between scores of the job motivation scale and scores of the organizational culture scale, found the relationship between task culture and job motivation to be significant in the positive direction ( $r = .45$ ;  $p < .001$ ). Thus, teachers' perception of task culture and job motivations affect each other. The relationship between success culture and job motivation was found to be significant in the positive direction ( $r = .76$ ;  $p < .001$ ). In this way, teachers' perception of success culture and job motivations affect each other. The relationship between support culture and job motivation was found to be significant in the positive direction ( $r = .76$ ;  $p < .001$ ). Thus, teachers' support culture perceptions and work motivations affect each other. The relationship between bureaucratic culture and job motivation was found to be significant in the positive direction ( $r = .62$ ;  $p < .001$ ). Thus, teachers' perception of task culture and job motivations affect each other.

**Table 6. Results of Pearson correlation analysis to determine relationships between school culture scale sub-dimensions and job motivation scale total score**

SCHOOL CULTURE SUBSCALE	JOB MOTIVATION SCALE TOTAL SCORE		
	N	r	p
Task Culture	354	.45	.001
Success Culture	354	.76	.001
Support Culture	354	.76	.001
Bureaucratic Culture	354	.62	.001

As shown in Table 7, the multiple linear regression analysis conducted to determine how job culture, success culture, support culture, and bureaucratic culture variables predict job motivation from the organizational culture subscales on job motivations, task culture, success culture, support culture, and bureaucratic culture showed a significant relationship with job motivation ( $R = .80$ ,  $R^2 = .64$ ) ( $F = 153.39$ ;  $p < .001$ ). These four variables account for 64% of the change in job motivation.

**Table 7. Regression analysis for school culture and job motivation total scores**

CONSTANT	R	R <sup>2</sup>	CONCERTED R <sup>2</sup>	F	p
School culture	.80	.64	.62	153.38	<.001

According to the standardized regression coefficients, the relative importance order of the predictive variables on job motivation is success culture ( $\beta = 0.40$ ), support culture ( $\beta = 0.37$ ), task culture ( $\beta = 0.13$ ) and bureaucratic culture ( $\beta = -0.02$ ). When the significance tests of the regression coefficients were taken into account, it was concluded that the success culture ( $p < .001$ ) and support culture ( $p < .001$ ) from the predictive variables were significantly predictive of job motivation.

**Table 8. Regression analysis for school culture subscales and job motivation total scores**

Variables (Constant)	Sh <sub><math>\bar{x}</math></sub>	$\beta$	t	p
Task Culture	.15	.13	3.02	.003
Success Culture	.16	.40	6.46	<.001
Support Culture	.13	.37	5.89	<.001
Bureaucratic Culture	.07	-.02	-.51	.607

## DISCUSSION

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The aim of the research was to examine the relationship between the sub-dimensions of organizational culture perceptions of ISMEK Lifelong Learning Center teachers and job motivation. There is limited research that investigates lifelong learning centers, and this is the main reason for conducting this research. This study showed there is a positive relationship (at a high level) between organizational culture and job motivation. These findings are consistent with the literature. Egan, Yang and Bartlett (2004) found that learning organizational culture can increase job motivation.

Organizational culture is responsible for two-thirds of the change in job motivation. Moreover, task culture, success culture, and support culture have been found to be significantly predictive of job motivation. Bureaucratic culture does not significantly predict job motivation. These results showed consistency with the results of Yilmaz (2009), Sözer (2006), Şahal (2005), Kavi (2006), Tanrıverdi (2007), Aladağ (2007), and Nnadozie (1993) affecting organizational culture motivation.

Further, this study found a meaningful relationship between teachers' sense of organizational culture and job motivation. When the perception of organizational culture increased, it became clear that job motivations also increased. According to the result of the analysis, the existence of success culture and support culture in the organization are the most important predictors of job motivation.

The research results obtained from this study and from the literature show there is a positive relationship between organizational culture and job motivation. Organizational culture (task, success, and support culture) is one of the important factors affecting job motivation. Based on this result, it can be interpreted that when ISMEK Lifelong Learning Centers' senior executives / policy makers focus on positively developing organizational culture, it will increase the motivation of teachers. In addition, if the motivation of the teachers increases, the quality of the services they offer will also increase.

## RECOMMENDATIONS

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For teachers to increase their job motivation, it is necessary to create a success-oriented structure in the organization. Organizations need to have supportive teachers and administrators. Since bureaucratic culture is not influential in job motivation, it is necessary to increase the support culture rather than the bureaucracy. In order to support a positive culture among the teachers, the managers must receive in-service training that fosters their ability to create supportive cultures in their institutions. Also, administrators should foster a culture that promotes job motivation which, in turn, enhances teacher success. Increasing the perception of positive organizational culture should increase the motivation of working teachers. One way to increase student motivation and student success, competitions between ISMEK Lifelong Learning Center branches might be arranged; the competition might stimulate teacher motivation especially among successful teachers. The reasons for the decrease in job motivation due to an increase in education level should be researched and necessary arrangements to address this situation made. In order to understand how male teachers' job motivation levels can be increased, in depth researches should be implemented.

This study was carried out using a survey model. An experimental study would contribute to additional in-depth study of the subject. This research can be supported by additional qualitative research that incorporates observation and interviewing. Once the qualitative study is done, relevant scales can be created. On the other hand, subsequent studies might include additional demographic traits. This study was carried out at ISMEK Lifelong Learning Center. Similar studies can be conducted in classrooms, training centers, and study centers. This research was limited to participation by volunteer teachers. In subsequent studies, ISMEK might provide an in-depth study that reaches all teachers working at the Lifelong Learning Center. This study can be repeated in subsequent years and differences found examined. The subcategories of organizational culture are taken into account on the scale used in this study. Different scales revealing more detail and different areas of focus might

be incorporated in future studies. This work has been done in a public institution, and as such, not necessarily generalizable to the private sector. For this reason, it would be beneficial to examine the relationship between perceptions of organizational culture and job motivation in private businesses, as well as the relationship between organizational culture and job motivation between private and public organizations. The study focuses on teachers' perception of organizational culture and job motivation. This study should also be applied on adult learners to investigate whether or not their motivation of study is predicted by organizational culture.

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## INTRODUCING A MINDSET INTERVENTION TO IMPROVE STUDENT SUCCESS

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### ABSTRACT

Aim/Purpose	The purpose of this paper is to introduce, describe, and document the methods involved in the preparation of a mindset intervention built into a freshmen development course, and established after years of longitudinal research, that is designed to have a positive impact on the outlook, achievement, and persistence of first generation and under-prepared students.
Background	A number of studies conducted in the past fifteen years have concluded that grit, the persistence and perseverance to achieve goals, and growth mindset, the belief that skills and intelligence can be developed, are positive predictors of achievement; however, little focus has been placed on the implications at institutions purposed to educate minorities, first generation college students, and learners from diminished socio-economic backgrounds.
Methodology	A series of models were created, custom self-assessment scales designed, and a lesson plan prepared purposed to deliver a mindset intervention to edify students about and change perceptions of grit, locus of control/self-efficacy, growth mindset, and goal setting. The mindset intervention, as presented in this paper, was delivered as part of a pilot implementation to students enrolled in a freshmen professional development course at a Mid-Atlantic HBCU in the Fall of 2019.
Contribution	This qualitative paper documents an ongoing initiative while providing a workable template for the design and delivery of a mindset intervention that

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	is believed will be highly effective with first generation and socio-economically disadvantaged learners. It represents the third paper in a five paper series.
Recommendations for Practitioners	As part of a commitment to positive student outcomes, faculty and administrators in higher education must be constantly exploring factors that may, or may not, impact student success.
Recommendations for Researchers	Research is needed that explores elements that may help to contribute to the success of under prepared college students, in particular those who are from low income, first generation, and minority groups
Future Research	The authors have introduced the mindset intervention with freshmen business students enrolled in a required professional development course. Results of the self-assessments and reflection questions are being collected and coded. Additionally, students are being administered a survey designed to measure the perceived efficacy of the initiative.
Keywords	grit, growth mindset, mindset intervention, self-efficacy, social cognitive theory, learning intervention, student retention, student success, business education, first generation college students, HBCU, minority learners, UMES, University of Maryland Eastern Shore, learning self-efficacy, goal setting, grit in education

## INTRODUCTION

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Success is much more than simply talent meeting opportunity. Rather, self-regulation, resilience, and mindset play a major role in determining ones achievement (Buzzetto-Hollywood, Quinn, Wang, & Hill, 2019). According to Burgoyne, Hambrick, Moser, and Burt (2018), “mindset refers to a person’s beliefs about the nature of their abilities—whether they believe their ability in a given domain is malleable or fixed.” (p.21)

The concept of growth mindset is most commonly associated with the work of Stanford University Professor Carol Dweck (2018), who explains that growth mindset is the belief that cognitive capabilities are not permanent but rather can be developed through hard work and dedication. An individual who possesses a growth mindset thrives on challenges and looks upon failures as learning opportunities from which one gains valuable feedback to help one continue on their journey forward to success. The opposite of a growth mindset is a fixed mindset, the belief that talent is set and unchanging and cannot be improved with practice and dedication. A person with a fixed mindset prioritizes success, is risk averse, and is derailed by setbacks.

Since growth mindset is anchored in the confidence one has in one’s own personal development, having a growth mindset requires that one has positive self-efficacy. Self-efficacy is a concept that refers to the confidence that one has in one’s innate ability to achieve goals. Self-efficacy was introduced by Albert Bandura (1977) and lies at the center of his social cognitive theory which posits that learning occurs in a social context that involves a dynamic and reciprocal interplay between the person, their environment, and their behaviors. Self-efficacy comes into play with the idea that the level of a person’s confidence in his or her ability to successfully perform a behavior has a direct impact on one’s goal achievement.

Findings have consistently shown that self-efficacy beliefs and mindset have a major influence on student success, impacting how a learner experiences and responds to learning situations and setbacks (Passarelli, 2014; Vuong, Brown-Welty, & Tracz, 2010). As such, in recent years the concept of

introducing interventions purposed to improve mindset and self-efficacy have been growing in popularity. But, what is a mindset intervention? There are no firm definitions of a mindset intervention; however, Passarelli (2014) explains:

“Interventions are not complicated. They can be as simple and low-cost as changing the kind of encouragement the student receives in an online lesson, or giving them a one-hour session on how effort and struggle increase academic capabilities.”

The goal of any mindset intervention is to improve a student’s frame of mind and therefore increase learning, and the evidence indicating efficacy of mindset interventions is strong (Dweck, 2018; Passarelli, 2014). Studies have found that mindset interventions are successful at increasing the grit (persistence and resilience to achieve goals) and academic performance of students (DeBacker et al., 2016; Dweck, 2018) and that they are also particularly effective with students from traditionally underserved groups (Claro, Paunesku, & Dweck, 2016). Accordingly, there is a small, but growing, number of minority serving institutions that are exploring the incorporation of mindset interventions as part of the total student experience.

The following paper will focus on the preparation of a mindset intervention established after years of longitudinal research that is purposed to have a positive impact on the outlook, achievement, and persistence of first generation and under-prepared students. The sections of the remainder of the paper are as follows: background, literature review, methodology, mindset intervention discussion, and conclusion and future work. This qualitative paper documents an ongoing initiative and represents the third paper in a five paper series.

## BACKGROUND

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Since, the initiative presented in this paper is contextualized at a Historically Black College or University (HBCU) it is essential to provide relevant information about HBCUs, the institution in question, and prior research conducted at said institution that inspired the effort under discussion. In many ways HBCUs are uniquely American institutions that are representative of a legacy of systematic oppression of marginalized groups. Founded during a time of forced segregation, for over 100 years Historically Black Colleges and Universities have existed to provide educational opportunities to students who might be otherwise disregarded (Buzzetto-Hollywood and Mitchell, 2019; Schexnider, 2017). Currently, there are 101 accredited HBCUs educating nearly 300,000 students (Buzzetto-Hollywood & Mitchell, 2019). As institutions of higher education, HBCUs are found to provide deeply supportive educational environments that are unparalleled elsewhere in the United States, with Black graduates of HBCUs more likely than Black graduates of majority serving institutions to be thriving (Buzzetto-More & Mitchell, 2009; Buzzetto-More & Ukoha, 2009; Seymour & Ray, 2015).

HBCUs have as their missions to engage and uplift students who are often marginalized (Lomax, 2006; Seymour & Ray, 2015). Gregory Clay of The Undeclared points out that this is because “HBCUs operate with a special mission in mind and a higher cause” as they seek to elevate and improve traditionally underserved communities (Clay, 2016). While the original challenges that existed during reconstruction and Jim Crow no longer exist, new educational inequities present themselves at today’s HBCUs, which impact students coming from historically marginalized communities (Buzzetto-Hollywood, Wang, Elobeid, & Elobeid, 2018; Lomax, 2006)

Established in 1886, the University of Maryland Eastern Shore (UMES) is a Historically Black, 1890 land grant institution. It is a member of the University system of the State of Maryland and primarily serves first generation, low income, and minority learners (Buzzetto-More, 2015). The student population is approximately 3400, as of the fall of 2016, with a student body that is 78% African American, 9.6% White, 1.4% Hispanic, and 11% international. The gender distribution of the University is 64% female and 36% male. The freshmen-to-sophomore retention rate is 71%, and the graduation rate is 41%. The student to faculty ratio is 15 to 1 and 85% of students receive financial aid. UMES was ranked in the top 20 among Historically Black Colleges and Universities (HBCU) in 2018 and

2019 and the acceptance rate for applying students is 62.4% with the majority of students coming from the Mid-Atlantic region (Buzzetto-Hollywood et al., 2018). UMES has a long history of providing academic programs and services for ethnically and culturally diverse students and toward that end, offers programs and assistance that attract, serve, retain, and graduate many first-generation college students.

The UMES Department of Business, Management, and Accounting (DBMA) is accredited by the Association to Advance Collegiate Schools of Business (AACSB) International. The Department offers a range of programs including business administration, accounting, marketing, finance, and business education. Additionally, certificate programs in business, marketing, and financial analytics were recently approved. The Department has an Assurance of Learning Committee that is purposed to continuously explore student learning outcomes through meaningful assessment, explore factors impacting the student experience, identify mechanisms through which teaching and learning can be improved, and promote innovative teaching strategies.

With an active commitment to student success, a series of studies were undertaken in the UMES DBMA. In the first study (Buzzetto-Hollywood et al., 2019), students were administered the standard 12-Question Grit Scale, developed by the team at the UPENN Character Lab, with the addition of a series of validated questions that sought to measure perceived self-learning efficacy. Additionally, student performances in online courses were recorded and correlations conducted. Basic statistical analyses such as mean, mode, standard deviation, variance, and confidence interval were calculated. Two hypotheses were introduced as part of this study and tested with Anovas and cross tabulations. The study found that higher grit scores correlated progressively to both self-discipline and self-efficacy but that a positive relationship to student achievement in fully online courses as measured with a p value of greater than .05 could not be confirmed.

The second study (Buzzetto-Hollywood & Mitchell, 2019) examined whether grit was a contributing factor to student persistence and success at minority serving institutions. The research study was initiated in the Fall of 2014 with the administration of the standard 12-item Grit assessment to all freshmen students enrolled in the business department. Students were then followed longitudinally over a five year period with GPA and persistence to graduation documented. During the analyses, grit score was compared to participant first year GPA's as well as retention and persistence to graduation via comparison tables and ANOVAs. According to the findings, there is a significant positive correlation between higher grit scores and both GPA and persistence to graduation. First year GPA, however, was not found to be a reliable predictor of academic success.

Following a thoughtful review of the results of both studies, it was concluded that grit alone might not be enough and that in order to have a significant impact on student success a change in mindset may be in order. This qualitative paper documents an ongoing initiative by introducing a mindset intervention that is purposed to be particularly effective with first generation and socio-economically disadvantaged learners.

## LITERATURE REVIEW

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There has been much focus in the literature over the past decade on the personality traits that impact student success. What has emerged over the years has been such concepts as grit, mastery goal orientation, and growth mindset and self-efficacy. Mindset interventions have been introduced a mechanism by which educators can build these desired traits in learners.

### ***GRIT***

Burgoyne et al. (2018) assert that grit and mindset go hand in hand. Duckworth, Peterson, Matthews, and Kelly (2007) introduced the construct of grit explaining that grit is a sustained capacity to maintain interest and effort in challenging long-term projects. More specifically, it is acknowledged as the “tenacious” long-term pursuit of goals despite setbacks and obstacles (Duckworth & Gross, 2014).

Many studies have reported that grit can serve as a predictor of success (Buzzetto-Hollywood & Mitchell, 2019). For example, Eskreis-Winkler, Duckworth, Shulman, and Beal (2014) examined high school juniors in 98 Chicago Public Schools who completed the 12-item grit assessment. According to the results, students with higher grit scores were more likely than their less gritty peers to graduate from high school. Additionally, when cadets at West Point were examined, higher grit scores were found to be a powerful prognosticator of persistence (Duckworth & Quinn, 2009). Research by Flaming and Granato (2017) found that grit levels have a direct relationship between overcoming adversity and perseverance. Further, two experiments by Dale, Samper, Loo, and Green (2018) concluded that the choice to continue forward or cease activities can largely be predicted by differences in grit: individuals higher in grit are more likely to persist in challenging tasks. This relationship; however, was only observed when a known reward was available that the participants believed that they had the ability to achieve. Recently, Tang, Wang, Guo, and Salmela-Aro (2019) conducted a study in Finland that investigated the association of grit and goal attainment as well as whether growth mindset and goal commitment impacted grit with a population of 2018 students in 6<sup>th</sup>-9<sup>th</sup> grades. According to their findings, grit is associated with both increased engagement and academic achievement. From a behavior standpoint, grittier individuals are found to participate in more self-regulated learning and deliberation (Wolters & Hussain, 2015). Finally, Park, Yu, Baelen, Tsukayama, and Duckworth (2018) found that grit has a direct relationship on the ways that people seek and retain information. Grittier individuals are known to engage in activities to seek meaning and purpose, in addition to having abilities that are malleable versus something that is fixed, also referred to as growth mindset (Park et al., 2018).

### ***MASTERY GOAL ORIENTATION***

The literature has linked grit in students to clarity of purpose and being mastery goal oriented (Arslan, 2014). Whereas most people set a performance goal where they seek to achieve a predetermined level of satisfactory performance in relation to social comparisons and so to avoid a negative evaluation, being mastery goal oriented is a total commitment to excellence and mastery (Arslan, 2014). Mastery goal oriented students have a focus on acquiring knowledge and self-improvement (Park et al., 2018). With a mastery goal orientation indicators of success are self-designated and internalized rather than being based on external indicators. For students, it is a focus on learning and not just grades and improvement over appearances. Having a mastery goal orientation has been shown to lead to high levels of engagement and resiliency in the face of failure (Brooke, 2012). Finally, being mastery goal oriented relates to growth mindset which is frequently explored alongside grit.

### ***GROWTH MINDSET***

Having a growth mindset refers to an individual being in a state where they prioritize growth and believe that they are likely to succeed given enough time and effort (Dweck, 2018). Growth mindset requires that one has a belief in one's own self-efficacy, with self-efficacy referring to the confidence that one has the innate ability to achieve goals (Bandura, 1977, 1997). Findings have shown that self-efficacy beliefs and mindset have a major impact on GPA and persistence to graduation (Vuong et al., 2010).

An individual with a growth mindset looks at a new challenge as a marathon rather than as a sprint. It requires taking a long term approach and having a commitment to persisting through a long journey to success that requires hard work and dedication (Dweck, 2018). The opposite of a growth mindset is a fixed mindset, the belief that talent is set and unchanging and cannot be improved with practice and dedication. A person with a fixed mindset is easily discouraged and derailed.

A growth mindset, positive self-efficacy, and grit are all desirable traits that have been shown to lead to increased student success. But, how do we build these advantageous traits in students? The answer that has been proposed by, and which is currently being explored in, the literature is mindset interventions.

## ***MINDSET INTERVENTIONS***

Studies have found that mindset interventions are successful at increasing the grit, self-efficacy, and academic performance of students (Claro et al., 2016; DeBacker et al., 2016; Dweck, 2018). In particular, the literature posits that building the growth mindset of students who come from underserved areas is extremely important to add to the overall growth and production of a student (Claro et al., 2016).

In an effort to understand the research on mindset interventions, Sarrasin et al. (2018) conducted a meta-analysis of 10 peer-reviewed studies involving participants from age 7 to adulthood. According to their findings, attempts to build growth mindset by teaching neuroplasticity have an overall positive effect on motivation and achievement. Additionally, they found that mindset interventions are most beneficial for at-risk students.

Passarelli (2014) interviewed Stanford Professor Carol Dweck who reflected on her years of work and research on mindset interventions explaining that:

- Mindset interventions are more effective than study skills training,
- Students who have received mindset interventions have higher grades and measurable motivation than their peers,
- Kindergartners who received interventions read earlier than their peers,
- Poor performing high school students increased their GPA with growth mindset training.
- Entering freshmen who received a growth mindset intervention at the beginning of their college experience were more likely to complete a full load of courses with the effect strongest among at-risk students.

Perez (2015) introduced an intervention model, known as the Grit Effect (GE), for nurturing and strengthening grit in students on academic probation as a means of increasing their GPA. Based on the application of her intervention model, she concluded that grit as a personality characteristic can be built and strengthened and that it serves as a positive determinant of student academic success that is a better indicator than IQ.

Harackiewicz et al. (2014) conducted a mindset intervention that was focused around reducing the social-class achievement gap by using self-affirmation and affirming goals that students set and controlled. The subjects were students in Biology courses at the University of Wisconsin-Madison. The end result of the study was that the intervention narrowed the achievement gap between first-generation and continuing generation students for course grades by 50% and increased retention in a critical gateway course by 20%. They concluded that “educators can expand the pipeline for first-generation students to continue studying in the biosciences with psychological interventions.” (p. 375)

Andersen and Nielson (2016) conducted a mindset intervention with parents, finding significant positive impact on the reading and writing skills of socio-economically disadvantaged children whose parents received a few children’s books and information about the value of supporting children when learning to read. More specifically, they measured the biggest effect among those children whose parents stated before the intervention that they believed that reading abilities are relatively fixed

Burgoyne et al. (2018) researched the impact of a short duration online intervention on mindset of intelligence, self-efficacy, challenge-approach motivation, grit, and performance on cognitive ability tests. Following use of exploratory factor analysis and multi-level modeling, participants who received a mindset intervention reported more growth mindset, internal locus of control/self-efficacy, challenge-approach motivation, and self-determination. The mindset intervention however did not alter cognitive ability scores or grittiness.

So, why is so much of the focus of mindset interventions concentrated on traditionally underserved populations? For today's youth, there are many different influences and dynamics. From parents to the increased number of outside factors such as peer pressure and social media, students are growing up in environments that can directly impact their trajectories (Yeager et al., 2018). Further, students' environments both within the home and school can impact the attitudes learners hold towards education (Lin-Siegler, Dweck, & Cohen, 2016). Individuals coming from diminished socioeconomic backgrounds do not have the same experiences as those who come from more middle class, or affluent backgrounds (Jury et al., 2017). As such, many students coming from low socio economic status environments walk into post-secondary environments with defeated mindsets, depression, and an inability to be able to talk about and share experiences with others who have the same experiences as they do (Jury et al., 2017). Without some form of positive influence or mindset change, many students will experience "imposter syndrome" where they feel as though they do not belong and it is only a matter of time before others around them will notice the same (Jury et al., 2017).

Since, mindset interventions have been shown to be particularly effective with underserved students, it stands to reason that they should be adopted widely and be effective at delivering positive outcomes at HBCUs (Buzzetto-Hollywood & Mitchell, 2019; Claro et al., 2016; Clay, 2016; Passarelli, 2014). Johnny C Taylor (Clay, 2016), President and CEO of the Thurgood Marshall College Fund, recommends using mindset interventions to build positive skills in HBCU students, suggesting the use of predictive self-assessment tests and analytics to build the knowledge and understanding of grit, resilience, and persistence.

The literature clearly shows the benefits of mindset interventions and the importance of building grit, growth mindset, and positive self-efficacy in students. The initiative being explored in this paper seeks to answer the call to action put forth by Taylor through the introduction of a mindset intervention in a freshmen professional development course at a HBCU. The following sections of the paper will explore how the project was developed as well as introduce the tools and procedures involved. Finally, a customizable plan for delivering the lesson is also offered.

## METHODOLOGY

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This is a qualitative paper that is focused on the preparation of a mindset intervention purposed to have a positive impact on the outlook, achievement, and persistence of first generation and under-prepared students. The initiative was inspired following two studies that examined, and found correlations between, grit and student success at the minority serving institution under consideration and where the authors postulated that, while building the grittiness of freshmen students leads to positive student outcomes, grit alone is not enough. In fact, it was hypothesized that grittiness without clarity of purpose, positive self-efficacy, and growth mindset might result in students who are gritty but may not be exerting their energies appropriately. This epiphany helped to inspire the group of authors in this paper to collaborate on the development of this mindset intervention.

This entire effort is theoretically grounded, more specifically, the initiative is influenced by Social Cognitive Theory (Bandura 1977, 1997) or the idea that learning has interpersonal and intrapersonal dimensions and involves the interplay and reciprocal determinism between personal factors of individuals, behavior, and the environment. Social Cognitive Theory posits that a person can be conditioned through consequences to expect positive and/or negative consequences and will adjust their expectations, interactions, and behaviors accordingly. Self-efficacy is at the center of Social Cognitive Theory and refers to the level of belief one has in their own abilities to exert the behaviors necessary to success in a particular endeavor. Grit and growth mindset subsequently represent an evolution of our understanding of self-efficacy.

For this project, it was decided that a series of custom models and self-assessments would be developed. This involved conducting an exhaustive review of the literature on the related topics of self-efficacy, grit, growth mindset, and goal setting. Additionally, any pre-existing self-assessments and/or

scales available on those topics were considered. It was decided early on that this iteration of the project would continue to use the 12 item grit assessment previously deployed in the two earlier studies. While a newer 8 item grit scale assessment is now available, it was decided that staying with the same scale assessment questionnaire would work best with established baselines. Both the 12 and 8 item grit scale questionnaires were created and validated by the University of Pennsylvania (UPENN) Character Lab.

Next, a series of self-assessments were prepared. The preparation began with the identification of indicators of positive self-efficacy, growth mindset, and goal setting. These indicators were turned into agreement statements and placed alongside a five point Likert scale. The instruments were reviewed by all authors before being presented for formal evaluation. An activity workbook was prepared that contained the self-assessments along with a series of reflective exercises. Finally, a lesson plan was created to inform educators how to pace and deliver instruction effectively.

In June of 2019, the models, self-assessments, reflective exercises, and lesson plan were presented to and reviewed by attendees at the UMES Innovations in Teaching and Learning Conference held in Princess Anne, Maryland. Attendees were a combination of faculty and student support experts from such institutions as the University of Maryland College Park, the University of Maryland Eastern Shore, Worwic Community College, Garrett Community College, and Harford Community College. During a three hour long session, participants experienced a truncated version of the lesson and also completed a questionnaire that focused on the efficacy of the instruments, activities, materials, and lesson. Additionally, a structured focus group was held with participants in order to gather more in-depth insights. The result of the feedback were subsequently evaluated and used to amend and improve the instruments.

The next iteration of the mindset intervention was presented in September of 2019 at the Annual Conference on Teaching and Learning Assessment in Philadelphia, Pennsylvania. Once again, meaningful feedback was elicited and used to engender additional further improvements.

The mindset intervention, as presented in this qualitative paper, was used during the pilot implementation with students enrolled in a freshmen professional development course at a Mid-Atlantic HBCU in the Fall of 2019. The results of the pilot in the form of student satisfaction surveys and student performance data are being collected and will be reported in a future paper. While this section explored the methodology involved with the development of the initiative under exploration, the next section will discuss the actual deliverables.

## MINDSET INTERVENTION DISCUSSION

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In this section of the paper the models and accompanying self-assessment scales will be shared and discussed, and readers will be walked through the procedures of the lesson plan. The lesson procedures include the following topics and tasks: warm up activity, grit, self-efficacy, growth mindset, self-growth, goal setting and goal attainment, reflective meta-cognitive take home assignment, and closure. Following discussion of the various lesson procedures additional information about delivering the lesson is offered.

### ***WARM UP***

The intervention begins with a warm up. Warm up activities, or icebreakers, are used to help focus students on a new topic. During the warm-up activity students start by reflecting/imagining the topic. Since the topic will be first introduced during this section, it is important to set the foundation. The foundation calls for an opening activity to ask the following questions:

Thinking back over your life, what motivates you to do what you do? What was the driving force behind your decision making during your 12 years of preparatory education that prepared you for college? Describe and explain in 230 words your response.

## GRIT

As explained in the literature review, grit and mindset go hand in hand (Burgoyne, et al., 2018) and grit can be a predictor of success (Buzzetto-Hollywood & Mitchell, 2019). As such, this intervention introduces grit early. Students will complete the **12 Item Grit Scale** Questionnaire developed, introduced, and delivered by the UPENN Character Lab. The 12 Item Grit Scale Questionnaire is one of two instruments available from the character lab, the other is an 8-item version. Both versions are successfully used to generate a grit score/index and are accessible online at <http://angeladuckworth.com/research>.

Completion of the 12 Item Grit Scale Questionnaire should take no more than 5 minutes to complete. After the grit scale is completed, the faculty member will call around the room and engage students in a dialogue. Some of the “pre-identified” questions that can serve as discussion prompts could be statements on the grit questionnaire such as #2 “Setbacks discourage me.” And #6 “I have a difficulty maintaining my focus on projects that take more than a few months to complete.” The reason these two may be identified as discussion prompts is because they are skills that are particularly necessary for success in college.

Following the discussion, the faculty member introduces and discusses the *Six Personality Attributes of Grit Model*, created as part of this initiative and originally introduced in Buzzetto-Hollywood and Mitchell (2019). According to the Six Personality Attributes of Grit Model, the personality traits most commonly associated with grit include self-regulation, self-discipline, resilience, dutifulness, conscientiousness, and low impulsivity (Buzzetto-Hollywood et al., 2019; Buzzetto-More, 2015; Eskreis-Winkler et al., 2014; Goodwin & Miller, 2013).

Figure 1 presents the model where self-regulation is the ability to guide one’s behaviors in order to achieve goals, self-discipline is the ability to control weaknesses and apply one’s self towards the achievement of goals, resilience is the ability to recover from setbacks, dutifulness is having the sense of obligation to complete goals, conscientiousness is the vigilant desire to complete obligations, and low-impulsivity is the ability to resist temptation and be thoughtful before taking action.

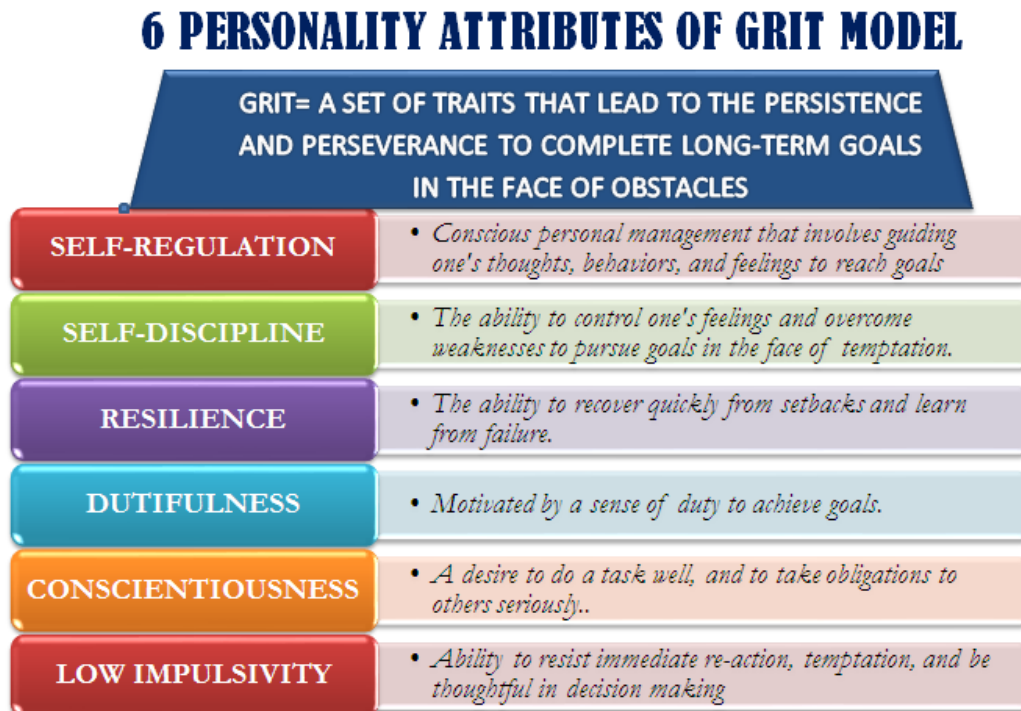


Figure 1: 6 Personality Attributes of Grit Model

## ***SELF-EFFICACY***

Self-efficacy refers to a person's positive belief that they have the capability to achieve goals. Self-efficacy is a concept that has been shown in the literature to have a major impact on student success (Vuong et al., 2010). During this portion of the lesson, students first complete the Academic Self-Efficacy Assessment that was created as part of the preparation of this intervention. It is based on five academic self-efficacy questions that were custom developed and that were influenced by both the literature and research on self-efficacy.

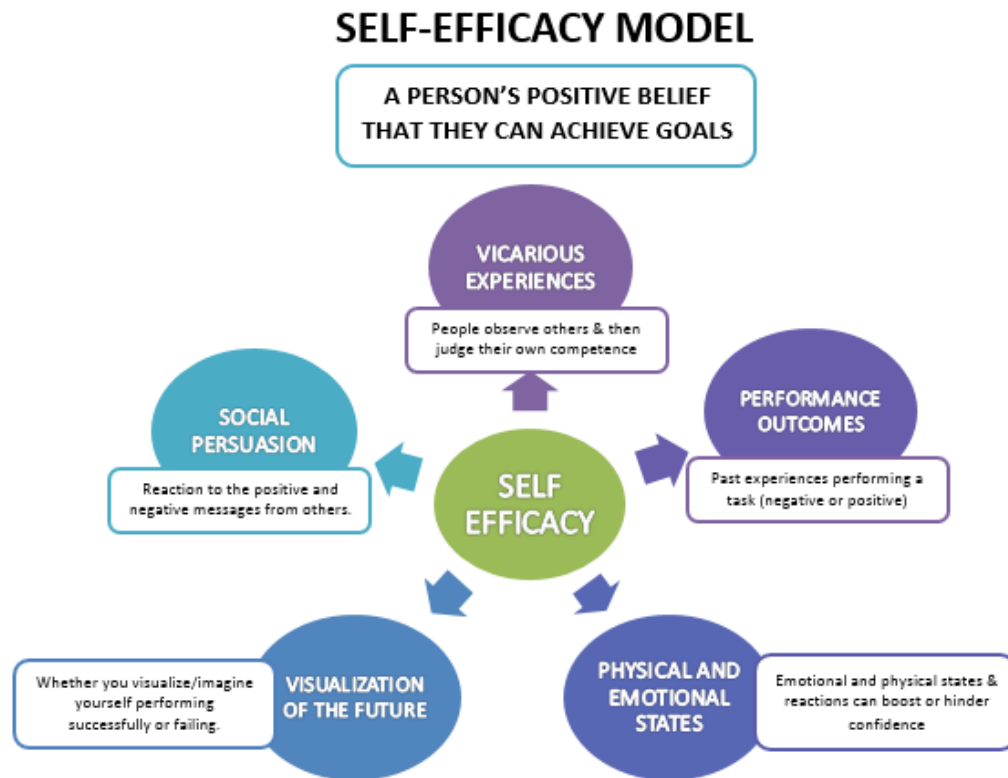
The Flesch Kincaid formula was used to consider the readability of the questions which provides the Flesch-Kincaid Grade Level score. Following the analyses, the score achieved was a 69.8 making this readable for participants with a U.S. 8th to 9th grade reading level. The questions were subsequently reviewed by two panels of educators. They are being piloted in the 2019-2020 academic year and are included in Table 1: Academic Self-Efficacy Assessment

**Table 1: Academic Self-Efficacy Assessment**

Please, rate your degree of confidence from very unconfident to very confident.

	Very Confident	Confident	Neutral/ Undecided	Not Confident	Very Unconfident	
I am confident in my ability to excel in my courses	5	4	3	2	1	
I am confident in my ability to pass challenging classes	5	4	3	2	1	
I am confident that I will graduate from college	5	4	3	2	1	
I am self-disciplined when it comes to my studies.	5	4	3	2	1	
I can overcome any obstacle I may face in a class	5	4	3	2	1	
To calculate, add your score for each question and divide by 5. The maximum score on this scale is 5 (strong self-efficacy), and the lowest score on this scale is 1 (no self-efficacy).						
Your Self-Efficacy Score _____						

Once students have completed their scores, the instructor will engage students in a brief discussion before introducing the UMES Self-Efficacy Model shown in Figure 2. The model is based on the work of Albert Bandura (1997) and is designed to illustrate the factors that impact self-efficacy which includes vicarious experiences or the way in which people observe others and then judge their own competence; performance outcomes, referring to past experiences performing a particular task and whether they were positive and/or negative; physical and emotional states, because emotional and physical states and reactions can boost or hinder confidence; visualization of the future, whether one imagines themselves succeeding or failing; and social persuasion, reactions to the positive and negative messages of others.



**Figure 2: UMES Self-Efficacy Model**

### **Growth Mindset**

Growth mindset is the belief that cognitive capabilities are not fixed but rather can be developed through hard work and dedication (Dweck, 2018), and positive growth mindset is linked to student achievement (Vuong et al., 2010). During this activity, the faculty member begins by having students complete the four self-assessment questions designed to engage student's thought about their mindset.

The Flesch Kincaid formula was used to consider the readability of the questions which provides the Flesch-Kincaid Grade Level score. Following the analyses the score achieved was a 66 making this readable for individuals with an 8th to 9th grade reading level. The questions were reviewed by multiple panels of educators. They are being piloted in the 2019-2020 285 academic year and are included in Table 2: Academic Self-Efficacy Assessment

**Table 2: Growth Mindset Self-Assessment**

	Strongly Agree	Agree	Neutral/ Undecided	Disagree	Strongly Disagree	
You can learn new things, but you can't really change your basic intelligence.	1	2	3	4	5	
Your intelligence is something about you that you can't change very much.	1	2	3	4	5	
You have a certain amount of talent and intelligence and you really can't do much to change it.	1	2	3	4	5	
If you keep failing at something it is better to switch to something else where you have a better chance of succeeding	1	2	3	4	5	
To calculate add your score for each question and divide by 4. The maximum score on this scale is 5 (growth mindset), and the lowest score on this scale is 1 (fixed mindset).						
Your Mindset Score _____						

After completion of the self-assessment, the faculty member will lead students in a reflective discussion about fixed versus growth mindset and how, if at all, their mindset may have impacted their lives. Once the meaningful discussion has concluded, the faculty member will review the Fixed vs. Growth Mindset Model represented in Figure 3 which compares the qualities of a fixed versus a growth mindset explaining that individuals with a fixed mindset prioritize success and risk of failure at all costs, reject criticism and are hurt by negative feedback, avoid challenges, are easily derailed by setbacks, view those who are more successful as a threat, want reward without effort, and spend much of their time frontin'. Conversely, individuals with a growth mindset: prioritize growth and believe that they are likely to succeed given enough time and effort, accept criticism and negative feedback as constructive, embrace challenges, are resilient and persistent when faced with setbacks, view those who are successful as potential role models and mentors, embrace effort, and are honest with themselves and others without excuses or frontin'. The term "frontin" is a mainstay in the UMES Department of Business, Management, and Accounting. Introduced by longstanding associate professor, Dr. Bryant Mitchell, frontin' refers to how much time a student spends wasting their time and making excuses.

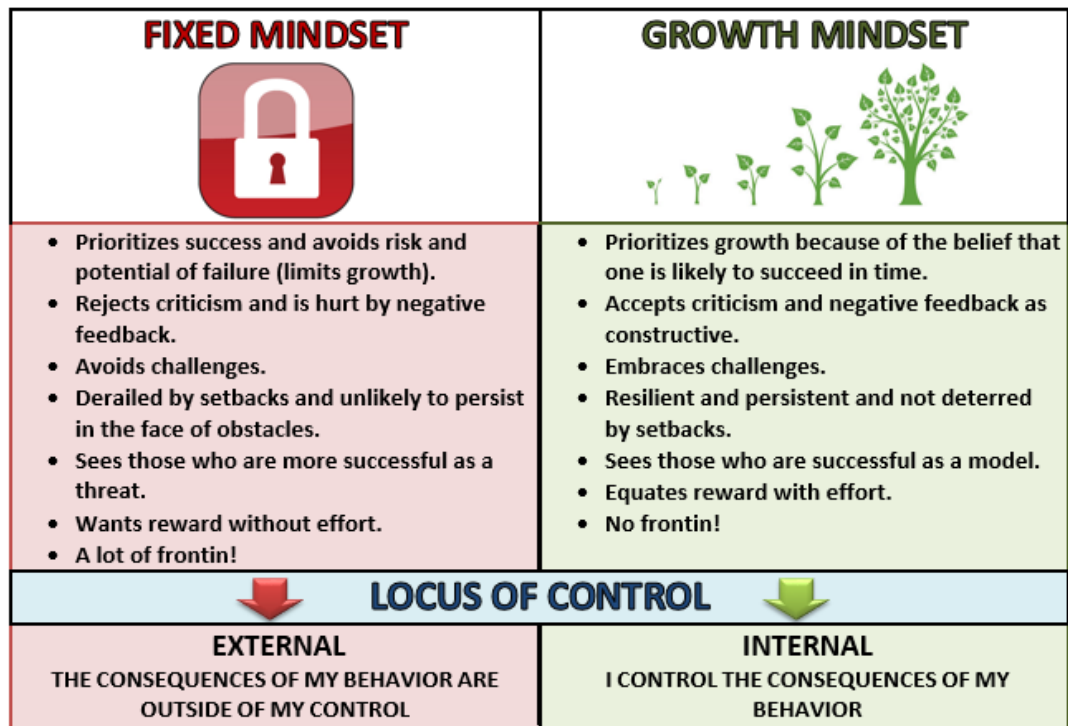


Figure 3: Fixed Verses Growth Mindset Model

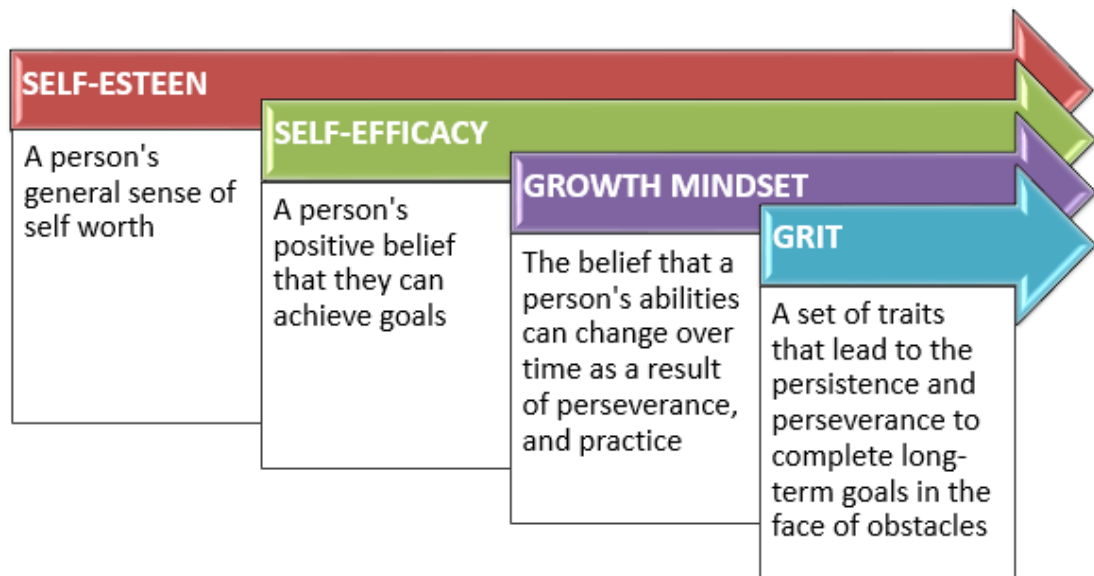


Figure 4: UMES Self-Growth Model

### UMES Self Growth Model

In this next stage of the lesson, the faculty member will present and discuss a model specifically prepared for this lesson which is focused on self-growth. According to the model, self-growth encompasses self-esteem, self-efficacy, growth mindset, and grit. Self-esteem is defined as an individual's general sense of self-worth which is imperative to student achievement as one cannot have positive

self-efficacy without positive self-esteem. Self-efficacy is the positive believe that one can achieve goals, and growth mindset is the belief that abilities can change over time as a result of hard work. Finally, grit refers to a set of traits that lead to the persistence and perseverance in the face of obstacles. Figure 4 depicts the UMES Self-Growth Model.

### Goal Setting

Successful individuals practice goal setting. Mastery goal orientation is a term that refers to having the goal of learning and mastering the tasks according to self-set standards so that a learner is focused on developing, improving, and acquiring additional skills and knowledge as opposed to simply meeting adequate performance standards necessary for satisfactory feedback (Hsieh, 2011). As such, mastery goal oriented students have a focus on acquiring new knowledge and continuous self-improvement (Park et al., 2018).

Students begin the goal setting portion of the lesson by completing the 19 question goal setting self-assessment. These 19 questions were reviewed by multiple panels of educators and revised over several rounds accordingly. The Flesch Kincaid formula was used to consider the readability of the questions and a score of 90.1 was achieved making the instrument readable for individuals with a 5th grade reading level. The instrument is being piloted throughout the 2019-2020 academic year and is included in Table 3: Goal Setting Self-Assessment

**Table 3: Goal Setting Self-Assessment**

	Not Very Like Me	Unlike Me	Neutral/ Undecided	Like Me	Very Like Me	
1. I set short-term goals for myself (like finishing all my homework or exercising for an hour).	1	2	3	4	5	
2. I set long-term goals for myself such as earning a college degree or entering a career.	1	2	3	4	5	
3. I set goals to achieve what I think is important.	1	2	3	4	5	
4. I imagine what life will be like when I reach my goal.	1	2	3	4	5	
5. My goals are meaningful to me.	1	2	3	4	5	
6. My goals are based on my own interests and plans for the future.	1	2	3	4	5	
7. I set goals to help me improve myself.	1	2	3	4	5	
8. I set goals to help me be more successful in school.	1	2	3	4	5	
9. I set goals to help me do my personal best.	1	2	3	4	5	
10. When I want to learn something, I make small goals to track my progress.	1	2	3	4	5	

	Not Very Like Me	Unlike Me	Neutral/ Undecided	Like Me	Very Like Me	
11. I focus on my own improvement instead of worrying about whether other people are doing better than me.	1	2	3	4	5	
12. Even if I lose a competition, I'm pleased if I have improved.	1	2	3	4	5	
13. Based on everything I know about myself, I believe I can achieve my goals.	1	2	3	4	5	
14. When I set goals, I think about barriers that might get in my way.	1	2	3	4	5	
15. When I'm struggling, I set goals to help me improve.	1	2	3	4	5	
16. I set goals that are challenging but achievable.	1	2	3	4	5	
17. I set short-term goals to help me achieve my long-term goals.	1	2	3	4	5	
18. When setting a goal, I think about my past successes and failures.	1	2	3	4	5	
19. When I set a goal, I am confident that I can meet it.	1	2	3	4	5	
To calculate your goal setting score add up all points and divide by 19. You can interpret your score like you would grades.						
Interpreting your results: 1.0-1.9= D, 2.0-2.9= C, 3.0-3.9= B, 4.0-5.0=A						

Once the self-assessment is completed, the faculty member will discuss the Goal Attainment Model that was developed to compliment this lesson. Depicted in Figure 5, the Goal Attainment Model assumes that an individual has goals, is committed to each goal, and that the commitment is most likely when goals are made public, when the individual has an internal locus of control, and when the goals are self-set rather than assigned. The goals themselves should be challenging, specific, and attainable. Additionally, the individual must possess positive self-efficacy, a growth mindset, grit, clarity of purpose (knowing what exactly you want and how to get there), and have an absence of frontin'.

Following the presentation of the model, the instructor will lead a class discussion with students where students will be asked about their goal setting behaviors.

## GOAL ATTAINMENT MODEL



Figure 5: Goal Attainment Model

### Reflective Take Home Meta Cognitive Assignment

Students will be provided a take home packet. It asks students to report and reflect on their scores for grit, self-efficacy, growth mindset, and goal setting. It includes question prompts and spaces where they can enter short essay reactions. The reflective prompts include:

- *What does your grit score say about you? Are you gritty? How is your grit score reflective of your performance in life? Are you satisfied with your level of grittiness?*
- *Self-efficacy refers to a person's positive belief that they can achieve goals. Please, reflect on your self-efficacy. Do you have positive self-efficacy? How has your self-efficacy impacted your life? What factors have negatively influenced your self-efficacy and how can they be addressed moving forward?*
- *Is your mindset a growth mindset or a fixed mindset? How has your mindset helped or hurt you in life? What steps are you going to take moving forward to have a more growth oriented mindset?*
- *Reflecting on your goal setting score, what does your score say about you? How is your score reflective of your performance in life? Are you satisfied with your score? How do you intend to improve your ability to achieve goals?*

In addition to answering the reflective questions students are asked to complete a goal setting/day/week mapping and prioritization activity in order to get a full understanding on how to best utilize their time towards more effective goal achievement each day and week.

### Closure

The students will return the following week and submit their completed packet as well as two exit ticket activities that will be used to gauge the effectiveness of the material covered. The first is a sheet of paper asking the following questions: "What are your take aways from this lesson? Do you feel it was helpful in understanding how you improve your mindset? Will you change anything since participating in these activities?" The second is an anonymous online perception survey designed to further gauge the effectiveness and impact of the lesson. The survey is comprised of questions designed to gather basic demographic and socio economic information as well as a series of five point Likert scaled agreement statements. One

series of Likert scaled statements looks at each of the goals of the lesson and asks students whether as a result of the lesson they now have a better understanding of the particular concept such as “*As a result of this mindset intervention, I now have a better understanding of the self-efficacy.*” Another series of questions looks at anticipated change in behaviors such as “*As a result of what I have learned in this course, I will now engage in more goal setting.*” Finally, a series of questions explore overall student satisfaction such as “*The mindset intervention presented in this course will help me as a student.*”

## Lesson Procedures

The authors assert that the mindset intervention lesson presented in this paper is easily replicable across institutions and that it may yield positive results with a wide range of learners. The lesson is designed to be delivered over 2-3 weeks of instruction in a course following a fifteen week three meeting hours a week format. The lesson can easily be modified and can be both lengthened and/or shortened as needed. The mindset intervention lesson procedures are represented in Table 4: Mindset Intervention Lesson.

All lessons have goals as without goals the purpose of a particular lesson is unclear. Learning goals represent broad statements that indicate the overall purpose of a learning endeavor. The learning goals for the mindset intervention lesson presented in this paper are as follows:

- Upon completion of this lesson, students will be able to describe and discuss the concepts of grit, self-efficacy, growth mindset, self-growth, and goal setting.
- Upon completion of this lesson, students will be able to discuss the importance of grit, self-efficacy, growth mindset, and goal setting on educational attainment and achievement.
- Upon completion of this lesson, students will have completed a set of activities where they will have reflected on their own grit, self-efficacy, growth mindset, and goal setting.
- Upon completion of this lesson, students will be able to engage in effective goal setting using the proscribed techniques.

**Table 4: Lesson Procedures**

MINDSET INTERVENTION LESSON		
WARM UP	Students write responses to question prompts followed by a live in-class discussion led by the instructor.	WEEK ONE
GRIT	Students complete the 12-item Grit Scale Assessment. Live class discussion about the results of the assessment. Overview and discussion of the 6 Attributes of Grit Model.	
SELF-EFFICACY	Students complete the Self Efficacy Self-Assessment. Live class discussion about the results of the assessment. Overview and discussion of the Self Efficacy Model.	
GROWTH MINDSET	Students complete the Growth Mindset Self-Assessment. Live class discussion about the results of the assessment. Overview and discussion of the Growth Verses Fixed Mindset Model.	WEEK TWO

<b>SELF-GROWTH</b>	Overview of the UMES Self Growth Model Instructor led class discussion,	
<b>GOAL SETTING</b>	Students complete the Goal Setting Self-Assessment. Live class discussion about the results of the assessment. Overview and discussion of the Goal Setting Model.	
<b>REFLECTIVE PACKET</b>	Students complete Reflective Homework Packet	
<b>CLOSURE</b>	Review of take away points Class discussion Reflection on Efficacy Completion of Perception Survey	<b>WEEK THREE</b>

### ***LIMITATIONS***

This paper is limited at this time in that it presented a mindset intervention lesson without any data that substantiates the efficacy of the lesson. This shortcoming is currently being remedied as the project is implemented with a pilot in the 2019-2020 academic year. Data from surveys will be collected, analyzed, and reported in a future paper.

### **CONCLUSION AND FUTURE RESEARCH**

Prior research conducted by the authors, as well as many others, has shed light on the need to explore non-cognitive factors that may affect student performance such as grit, mindset, self-efficacy, and goal setting. This paper has presented a Mindset Intervention that has been informed by the literature, research, and input of experienced educators. Models and activities were created and the intervention has been implemented with students beginning in the fall of 2019

This paper asserts that a carefully crafted mindset intervention delivered to freshmen students from traditionally underserved populations will yield positive outcomes in terms of student success. Further, it moves forward the notion that mindset interventions have potentially broad implications with learners of all ages and skills levels and more initiatives such as the one highlighted in this paper series need to be introduced. As such, a goal of this paper is to encourage additional individuals within the educational community to undertake similar endeavors.

In order to measure the efficacy of the mindset intervention introduced in this paper, a two phased research study is being conducted. The first phase will report the results of the pilot year which will include student scores, feedback elicited from short essay questions, and the results of the student perception and satisfaction survey. The survey is specifically designed to measure students' perceived efficacy of the mindset intervention under consideration. The second phase will be longitudinal in nature and track freshmen retention and graduation rates over time and postulate as to the impact of the intervention on student success. Additionally, a set of questions will be added to the Department of Business, Management, and Accounting's senior exit survey. These questions will ask student to reflect back on what impact, if any, the freshmen mindset intervention had on them and their academic success.

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