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### THE ROLE OF USER DEMOGRAPHICS, SELF-EFFICACY AND INTERPERSONAL COMPETENCE ON COMMUNICATION STYLE PREFERENCES OF RURAL UNIVERSITY STUDENTS

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#### Abstract

Despite the amount of information known about how people engage in offline social interactions, there is limited knowledge regarding how such interactions express themselves in the online environment. For social interactions to be consistently harmonious, a level of interpersonal competence and self-efficacy are required. The study aims to determine the relationships and the predictive capacity of user demographics, self-efficacy and interpersonal competence for online communication preferences using an online survey methodology. The sample consisted of 65 males and 158 females attending a rural Australian university whose ages ranged from 17 to 59 years ( $M=25.06$ ,  $SD=10.14$ ). Online communication preferences were operationalized as communication style preferences (synchronous versus asynchronous), context disclosure preferences (one-to-one/one-to-many), and platform preferences (social media involving family and friends versus emails involving colleagues). Age and interpersonal competence were significant predictors for communication style preferences in terms of the timing in conversations and platform preferences. None of the demographics, self-efficacy or the interpersonal competence were found to predict context disclosure preferences. The findings extend knowledge in the field of online social interaction research.

**Keywords:** online communication style preferences; context disclosure preferences; platform preferences, self-efficacy; interpersonal competence; emotional support

#### Introduction

The Good Universities Guide 2018 encourages regional and rural universities to be the leading independent providers of high-quality resources which empower generations of students to achieve their goals. They do this by providing accessible and innovative information and analysis that enables students and academics to guide and make informed decisions about education and allows education providers and policy makers to better assess and tailor their offerings and related services to the needs of students and interested parties. Partly for this reason, policy makers need to understand how people engage in social interactions in every day of their lives. The current study aims at filling the gaps in the field of online social interaction research with regional and rural students by examining interactions in online media.

#### *Theoretical Perspective*

The emergence of the technological advances and information explosion in the current age have changed the way that we acquire information. Technological advances have facilitated learning

and teaching for people separated by time and place. This applies especially to students living in rural areas who have far less opportunity for the face-to-face interactions and pedagogies of the modern metropolis. In these new technologies, learning is not under the control of the learners and they need to learn how to learn and evaluate the new information. In this regard, learning needs should be reflective of underlying social environments. In addressing the underlying social environments in education and learning contexts comes the importance of social interactions as noted by Vygotsky (1978), who shared many of Piaget's assumptions about how individuals learn. While Piaget concentrates on an individual's mental construction of knowledge, Vygotsky (1978) puts greater emphasis on the social context of the learning environment. He stresses the effect of constructed knowledge on the learners' active and reflective thinking (Minick, 2017). He placed more emphasis on the social environment as a facilitator of development and learning (Schunk, 2015). As such, he asserts that learners become actively involved with content through social interactions and manipulation of materials. According to Pritchard and Woollard (2013), Vygotsky emphasised "the role of others and all forms of social interaction in the process of constructing knowledge and understanding" (p. 8). Since learners take part in a wide "range of joint activities and internalize the effects of working together, they acquire new strategies and knowledge of the world and culture" (Palincsar, 2005, p. 290).

### **Literature Review**

Since social interactions are deeply embedded within peoples' lives, there has been a focus on understanding the nature of such interactions. Social interaction research consists of two overarching areas; offline social interaction research, and online social interaction research (Chung, 2013; Davies, Coleman, & Livingstone, 2014; Doring, Hodge, & Heo, 2014; Semrud-Clikeman, 2007). Most of the research to date has focused on social interactions that take place in offline contexts (Chung & Elias, 1996; Greene & Burlison, 2008). The field of online social interaction research is in its early stages of development.

More recently, research has investigated the relationship between certain personality characteristics and online social interactions. A study by Gosling, Augustine, Vazire, Holtzman, and Gaddis (2011) explored how personality traits may affect an individuals' online behaviour. The researchers found that individuals who were more extroverted tended to spend more time on social networking sites such as Facebook, and made more friends online than individuals with an introverted personality trait. Gosling et al.'s (2011) study is representative of the mainstream trend for online social interaction research, where researchers tend to report on only one aspect of online social interactions, namely, the amount of time a person spends online, despite perhaps having considered other aspects of online social interactions. This focus on time spent online has led to an absence in research relating to other aspects of online communication (Chung & Elias, 1996).

A study atypical of this trend is the research by Fioravanti, Déttore, and Casale (2012) investigating a person's preference for online social interactions. Fioravanti et al. (2012) investigated whether a relationship exists between self-esteem and preferences for online social interaction. They reported a negative correlation between self-esteem and online social interaction preferences. Another variable worthy of investigation but considered in the offline environment is self-efficacy. Chung and Elias's (1996) research focused on adolescent samples in an offline environment and found support for the link between social competence and self-efficacy. What is not known is whether self-efficacy would be instrumental in individuals having varied online communication preferences.

Caplan (2007) conducted research around online social interaction preferences, with the results identifying that people who were less socially competent tended to prefer social interactions that took place in an online context, rather than an offline context. This finding was attributed to the differences in cognitive load, with the theory being that online social interactions put less social demand on an individual's cognitive load compared to offline social interactions. However, besides these cognitive load differences less is known regarding other factors which may be linked with a person's preference for online social interactions.

A major factor of social interacting that has been hypothesized to affect cognitive load differences involves differences in communication styles between offline and online contexts (Wellman, 1999). Communication styles can differ in two major possibilities with the first relating to timing during communication (Chung & Elias, 1996). Timing dissimilarities can either be synchronous or asynchronous, with a synchronous communication style being representative of a more turn-by-turn form of communicating with minimal breaks in responses. An example of synchronous communication includes a face-to-face conversation, or communicating via instant messaging (Bagozzi, Dholakia, & Pearo, 2007; Sun, Lin, Wu, Zhou, & Luo, 2018). An asynchronous communication style is characterised by a slower pace with longer breaks in responses, and is not necessarily a turn-by-turn form of communication (Bagozzi et al., 2007). An example of asynchronous communication includes communicating via emails.

The second difference in communication styles includes target audience differences (Wellman, 1999). Target audiences can either take the form of a one-to-one form, or a one-to-many form (Ross & Nightingale, 2003). A one-to-one form of communication is typically between two parties such as a face-to-face conversation or private messaging someone online (Ross & Nightingale, 2003). A one-to-many communication style includes more parties such as group messaging (Bagozzi et al., 2007; Ross & Nightingale, 2003). The communication style concepts of timing in conversations, and target audience differences are both elements that have yet to receive adequate attention when it comes to online social interaction research.

Another aspect of online social interaction research includes investigations into context disclosure preferences (Caplan, 2005). This area of research pertains to peoples' preferences for disclosing information in either an offline or online context. According to Birnie and Horvath (2002) context disclosure preferences do exist. Specifically, Birnie and Horvath (2002) found that shy youth tended to disclose more personal information online rather than offline. These findings were attributed to online disinhibition effects. Furthermore, this finding of context disclosure preferences has typically been investigated in terms of the association it has with personality factors. This has resulted in an absence of other research investigating the relationship of context disclosure preferences and other factors.

Online platforms have also been of interest in this field. Researchers have identified different platforms used for different social purposes (Chung & Elias, 1996; Chung, 2013; Honeycutt, 2001). Facebook is an example of an online platform used for online communication. Social media, blogs, general search engines can help inform and facilitate interactions among users. Of particular interest would be whether there are demographic differences in the various preferred platforms.

Interpersonal competence has been neglected by online researchers who have rather opted for more mainstream factors such as personality traits (Chung & Elias, 1996). The difficulty in researching a factor such as interpersonal competence, rests on the fact that there is no universally agreed upon definition of what it actually is (Semrud-Clikeman, 2007). Another issue is inconsistency in terminology within the literature. For example, interpersonal competence is

sometimes referred to by other names such as social competence (Buhrmester et al., 1988; cited in Pritchard & Woollard, 2013). When social competence is explained using an evolutionary perspective, then it ultimately pertains to the level of adaptability an individual possesses, in order for them to be able to adjust their own social behaviour, depending on available social information (Taborsky & Oliveira, 2012).

Where the confusion in defining the concept lies is with regard to what elements are needed to be able to adapt effectively during social interactions (Gadecka, Piskorz-Ogórek, Regin, & Kowalski, 2015). While these elements may be different for each definition, the most common elements needed for effective adaptability include empathy, emotional awareness and regulation, social-skills, adaptability, and perspective taking (Coroiu et al., 2015). In short, the research pertaining to interpersonal competence is primarily in relation to social competence in offline contexts, with studies investigating interpersonal competence for the online context being fewer in number (Caplan, 2007).

It could be suggested that interpersonal competence and communication styles are just an extension or another version of accommodation processes. The similarities between communication styles and interpersonal competence with the accommodation processes discussed in Communication Accommodation Theory rests with how all three are heavily related to adaptability and cognitive load differences. Similarities that include having a high interpersonal competence also involve having effective adaptability skills. These are also needed if someone was to consistently engage in synchronous communication, and if someone was to also consistently adopt a convergence accommodation process during social interactions.

Along with growing interest in rural contexts and rural education, there has been a body of controversy and criticism lodged against the lack of a consistent definition of “rural” and capturing a unified definition of rurality throughout discussions (Green & Corbett, 2013; Hill, 2014; Isserman, 2005; Nugent, Kunz, Sheridan, Glover, & Knoche, 2017; Roberts & Cuervo, 2015; Roberts & Green, 2013). Hill (2014) lists traditional definitions of rural in two ways, “objectively, in terms of size of place and distance from major cities, and subjectively, in terms of community feeling, intimacy, and interdependency among individuals and families. These two definitions can, but don’t always, identify the same places as rural” (p. 5). Most factors that might impact on definitions as listed by Nugent et al. (2017) as “cultural diversity, distance travelled to school, increase in commuter residents, access to technology, and economic affluence and stability” (p. 19). Along with these factors, Isserman (2005), a regional economist at the University of Illinois, notes that ‘rural’ is used in “overlapping and often contradictory ways, always defined by what it is not - not urban, not metropolitan” (p. 466).

According to Nugent et al. (2017) it is unlikely that urban-based definitions of rural regions capture those characteristics and education systems relevant to such communities. For this purpose, Isserman (2005) claims that,

we presently have no satisfactory way to measure rural for the study of rural economies or the assessment of rural conditions. Key economic and demographic data are not available for urban and rural areas, and metropolitan and nonmetropolitan commingle urban and rural, leaving us unable to separate them. Yet getting rural right is in the national interest. When we get rural wrong, we reach incorrect research conclusions and fail to reach the people, places, and businesses our governmental programs are meant to serve. (p. 466)

Despite the long-standing debate on what constitutes rurality, it nevertheless is a variable that is worthy of consideration given the specific region in which this study takes place. Therefore, in

agreement with Donehower, Hogg, and Schell (2012) ‘the rural’ must be defined “not only demographically and geographically but culturally as well” (p. 7). This university campus, as the research site of this study, is located in the tropics and is one of the three main campuses of the university which has higher access rates for students from low socio-economic status backgrounds and for indigenous students who come from regional and remote areas. Chen, Wang and Wang (2009) identified rural-urban differences related to interpersonal competence, in that participants who were from an urban background tended to have higher interpersonal competence than rural participants. Accordingly, rurality in this study will be operationalised as ‘residence’.

A number of other demographic items have been considered in relation to social interaction research. When it comes to online social interactions, age was identified to be a factor in Thayer and Ray’s (2016) study which reported that young adults preferred using online communication with friends and others than the later life stages. Yudron and Jones (2016) identified increases in social competence with age. It is important to note however that Yudron and Jones (2016) only looked at social competence for early childhood, and thus it is unknown whether other stages of the lifespan are also associated with increases in interpersonal competence. Researchers working in the online education arena investigating the self-disclosure preferences of online learners, report that graduate students tend to share information with many different groups (Schunk, 2015). In relation to the context disclosure preferences being considered in this study, it would be expected that participants having completed a degree would be more likely to prefer the one-to-many disclosure preference.

Given society’s rapid technological advances, this research paper will focus on understanding the role user characteristics, self-efficacy, and interpersonal competence variables have on online communication preferences affecting social interactions. The following proposed hypotheses will be investigated:

1. That age and general self-efficacy will be positively correlated with total interpersonal competence and the individual sub-scales.
2. That there will be gender, residence and education differences for communication style preferences, content disclosure, and platform preferences.
3. That gender, age, residence, education, general self-efficacy, interpersonal competence will be significant predictors of communication preferences, context disclosure preferences, and platform preferences.

## **Method**

### **Participants**

The participants consisted of 223 people, made up mainly of undergraduates and graduate students enrolled in an Australian rural university. Some 120 (53.8%) participants reported having completed a secondary level of education and working towards their degree qualification (i.e.; undergraduates), and 103 (46.2%) had completed a degree (i.e.; graduates). The sample contained 65 males and 158 females with the age range for the participants being 17-59 years ( $M=25.06$  years,  $SD=10.14$  years). While 85.2% of the sample self-reported as living within a town environment, only 14.8% reported residing in a rural environment.

### **Materials**

The online survey items covered demographics, interpersonal competence, self-efficacy and online behavioural preferences. The demographic information included gender, age, residence,

and level of education completed. Interpersonal competence was measured using Coroiu et al.'s (2015) Interpersonal Competence Questionnaire 15 (ICQ-15). The ICQ-15 is a brief version of Buhrmester et al.'s (1988; cited in Pritchard & Woollard, 2013) original Interpersonal Competence Questionnaire. Coroiu et al.'s (2015) ICQ-15 is a 15-item five-point Likert-type response questionnaire. A sample item from the ICQ-15 includes "Being able to take a companion's perspective in a fight". Responses to questions on the ICQ-15 range from zero meaning "I'm poor at this" to five "I'd feel very comfortable and could handle this situation very well" (Nangle, Hansen, Erdley, & Norton, 2010). The ICQ-15 measures interpersonal competence based on the five factors originally proposed by Buhrmester et al. The five factors include initiation, negative assertion, emotional support, disclosure, and conflict management. Coroiu et al. (2015) ran confirmatory factor analyses to see how well the 15-items of the ICQ-15 match Buhrmester et al.'s five-factor model, with the results indicating that the ICQ-15 is very comparable with Buhrmester et al. (1988) original measure. Previous research has reported Cronbach alphas of .87 for the ICQ-15 (Coroiu et al., 2015). The reliability coefficients for each respective subscale of the ICQ-15, for Coroiu et al.'s (2015) sample included: Initiation,  $\alpha=.73$ ; Negative Assertion,  $\alpha=.75$ ; Emotional Support,  $\alpha=.70$ ; Disclosure,  $\alpha=.61$ ; and Conflict management,  $\alpha=.62$ . Scoring for the ICQ-15 involves averaging the scores on the three items composing each of the five factors (Nangle et al., 2010). The current study was able to replicate the factor structure of the ICQ-15, with the Cronbach alphas for each of the subscales being: Initiation,  $\alpha=.74$ ; Negative Assertion,  $\alpha=.74$ ; Emotional Support,  $\alpha=.72$ ; Disclosure,  $\alpha=.72$ ; and Conflict management,  $\alpha=.56$ , and for the total scale score for Interpersonal Competence being 0.82.

Self-efficacy was measured using Schwarzer and Jerusalem's (1978) General-Self Efficacy Scale (GSE). The GSE consists of 10-items with a sample item being "I can always manage to solve difficult problems if I try hard enough". The GSE uses a Likert-style response format, ranging from zero being "Not at all true", to four "Exactly true". The GSE is scored by averaging the items to produce a total GSE score. The measure has been demonstrated to possess high reliability, based on previously reported Cronbach's alpha of .91 (Scholz, Doña, Sud, & Schwarzer, 2002). The Cronbach's alpha for the current study is 0.88.

Communication style preferences of synchronous/asynchronous were measured using the following item: Do you prefer to communicate online via emails or instant messaging? Context disclosure preferences were measured using the following item: Do you prefer group conversations online (e.g., group inboxes on Facebook) or one-to-one conversations online (e.g., inboxing someone privately)? Do you prefer communicating through social media or through emails was used to measure platform preferences. These were all categorical variables.

## **Procedure**

Prior to undertaking the study, ethics approval was sought from the authors' institution's ethics committee. Upon approval, the survey was made accessible online via SurveyMonkey, along with a direct link on Facebook. From there, participants were able to access the survey through the use of their own personal electronic devices. When participants accessed the link they were presented with an information sheet, which outlined the details of the study. Informed consent was obtained from participants as a function of them choosing to continue with the survey. An incentive of one credit point was made available for undergraduate participants enrolled in first year Psychology and a second year statistics subject.

## **Results**

Table 1 presents the correlations between interpersonal competence and each of the subscales for age and general self-efficacy. Given these were continuous variables Pearson's Correlation

coefficients were used. A weak positive correlation was found between total interpersonal competence and age ( $r(223)=0.14, p<.05$ ). Emotional support showed a significant weak, positive correlation with age ( $r(223)=0.17, p=.01$ ). A significant moderate positive correlation was obtained between interpersonal competence and general self-efficacy ( $r(223)=0.46, p<.001$ ). Significant moderate positive correlations were obtained with each of the subscales of the ICQ-15 and general self-efficacy (Table 1).

**Table 1: Pearson correlation coefficients for interpersonal competence and each of the subscales for age and general self-efficacy**

Variable	Age	General Self-Efficacy
Interpersonal Competence (Total ICQ-15 score)	0.14*	0.46***
Initiation	0.07	0.38***
Negative Assertion	0.12	0.21***
Emotional Support	0.17**	0.35***
Disclosure	0.04	0.28***
Conflict Management	0.12	0.36***

\* $p<.05$ ; \*\* $p<.01$ ; \*\*\* $p<.001$

Table 2 presents the contingency tables for communication style preferences, context disclosure preferences, and platform preferences by the socio-demographic characteristics of the sample. Given the categorical nature of the variables under investigation the Chi-square test of contingencies was used to determine the relationship between the variables. There was a statistically significant relationship between communication style preferences of synchronous versus asynchronous and education level ( $\chi^2(1)=18.74, p=.001$ ). This association can be considered to be small ( $\Phi=.29, p<.001$ ). A significant association was also found for platform preferences and education ( $\chi^2(1)=10.09, p=.002, \Phi=.21, p=.002$ ). No significant associations were found for context disclosure preferences (that is, one-to-one and one-to-many) and gender or education.

**Table 2: Contingency tables for communication style preferences, context disclosure preferences, and platform preferences by the socio-demographic characteristics of the sample**

Variable	Communication Style Preferences n (%)		n (%)	$\chi^2$	p
	Synchronous (instant messaging)	Asynchronous (emails)			
Overall	208 (93.3)	15 (6.7)	223	-	-
<b>Gender</b>					
Male	62 (95.4)	3 (4.6)	65 (29.1)	0.65	.42
Female	146 (92.4)	12 (7.6)	158 (70.9)		
<b>Residence</b>					
Rural	33 (100)	0 (0.0)	33(14.8)	2.79	.09
Town	175 (92.1)	15 (7.9)	190 (85.2)		
<b>Education</b>					
Undergraduate	120 (100)	0 (0.0)	120 (53.8)	18.74	.001
Graduate	88 (85.4)	15 (14.6)	103 (46.2)		

Variable	Context Disclosure Preferences n (%)		n (%)	$\chi^2$	p
	One-to-one	One-to-many			

Overall	191 (85.7)	32 (14.3)	223	-	-
<b>Gender</b>					
Male	52 (80.0)	13 (20.0)	65 (29.1)	2.38	.12
Female	139 (88.0)	19 (12.0)	158 (70.9)		
<b>Residence</b>					
Rural	25 (75.8)	8 (24.2)	33 (14.8)	3.08	.08
Town	166 (87.4)	24 (12.6)	190 (85.2)		
<b>Education</b>					
Undergraduate	100 (83.3)	20 (16.7)	120 (53.8)	1.14	.28
Graduate	91 (88.3)	12 (11.7)	103 (46.2)		

Variable	Platform Preferences n (%)		n (%)	$\chi^2$	p
	Social Media (family friends)	Emails (Colleagues)			
Overall	198 (88.8)	25 (11.2)	223	-	-
<b>Gender</b>					
Male	58 (89.2)	7 (10.8)	65 (29.1)	0.02	.89
Female	140 (88.6)	18 (11.4)	158 (70.9)		
<b>Residence</b>					
Rural	31 (93.9)	2 (6.1)	33 (14.8)	1.03	.31
Town	167 (87.9)	23 (12.1)	190 (85.2)		
<b>Education</b>					
Undergraduate	114 (95.0)	6 (5.0)	120 (53.8)	10.09	.002
Graduate	84 (81.6)	19 (18.4)	103 (46.2)		

Logistic regressions were conducted to ascertain the predictive effects of gender, age, education, residence, general self-efficacy, and interpersonal competence on communication style preferences (synchronous versus asynchronous), context disclosure preferences (one-to-one versus one-to-many), and platform preferences (emails versus social media). Synchronous, one-to-one and emails were coded as 1 in the respective logistic regressions.

As the Hosmer and Lemeshow Test did not support the model for investigating communication style preferences, two variables, namely education and residence were removed from the subsequent analysis. This modified model was found to be worthwhile and was found to be statistically significant  $\chi^2(4) = 28.3, p < .005$ . The full model explained between 12.0% (Cox & Snell  $R^2$ ) and 30.6% (Nagelkerke  $R^2$ ) of the variance for synchronous/asynchronous communication preferences and correctly classified 93.7% of cases. Age ( $B = -0.11$ , Wald=18.84,  $\text{Exp}(B) = 0.90$ ,  $df = 1$ ,  $p < .005$ , 95% CI for  $\text{Exp}(B) = 0.85 - 0.94$ ) and interpersonal competence ( $B = 0.11$ , Wald=9.47,  $\text{Exp}(B) = 1.11$ ,  $df = 1$ ,  $p = .002$ , CI for  $\text{Exp}(B) = 1.04 - 1.19$ ) were significant predictors of synchronous communication preference. The strongest predictor was interpersonal competence indicating that those using the synchronous communication preference of instant messaging were over 1.11 times more likely to be socially competent in using the synchronous communication style or instant messaging, controlling for all the other factors in the model. The odds for the age predictor indicates that the older participants were 0.90 times less likely to report preferring instant messaging controlling for all the other factors in the model.

When context disclosure preference was the dependent variable for the same set of independent variables, the logistic regression resulted in a non-significant finding. Only 85.7% of cases could be correctly classified with the model explaining between 2.4% (Cox & Snell  $R^2$ ) and 4.2% (Nagelkerke  $R^2$ ) of the variance.

The logistic regression investigating platform preferences was statistically significant  $\chi^2(4) = 29.35, p < .005$ . The model explained between 12.3% (Cox & Snell  $R^2$ ) and 24.5% (Nagelkerke  $R^2$ ) of the variance for emails versus social media forms of communication preferences and correctly classified 88.8% of cases. Age ( $B=0.09$ , Wald=23.76,  $\text{Exp}(B)=1.10$ ,  $df=1$ ,  $p<.005$ , 95% CI for  $\text{Exp}(B) = 1.06 - 1.14$ ) and interpersonal competence ( $B=-0.07$ , Wald=6.13,  $\text{Exp}(B)=0.93$ ,  $df=1$ ,  $p=.01$ , CI for  $\text{Exp}(B)=0.89 - 0.99$ ) were significant predictors of colleagues platform preference. Preference for email communication was 1.10 time more likely for every 1-unit increase in age. For every 1-unit increase on interpersonal competence, preference for email communication was 0.93 times less likely. Thus, it appears that the more socially competent participants relied on other social media platforms for their communication.

## Discussion

There was some support for the first hypothesis in that the older the participants, the higher they scored on interpersonal competence. According to Yudron and Jones (2016) social competence increases with age within the early childhood period. The current finding extends this to later stages of the lifespan. Higher self-efficacy scores were found to be related to higher scores on interpersonal competence. In the offline environment with adolescent samples there is support for the link between social competence and self-efficacy (see Chung & Elias, 1996). The current study provides evidence that within this mainly young adult sample, self-efficacy is related to interpersonal competence for online users. When considering the interpersonal competence subscales for this sample, general self-efficacy showed significant positive relationships with all subscales of the ICQ-15. In the online context, only the emotional subscale showed a significant positive relationship with age, with older participants reporting more emotional support. This finding is at odds with research on offline contexts where it has been reported that the “hours of emotional support given and received decreased as chronological age increased” (Thayer & Ray, 2006, p. 518).

There was limited support for the second hypothesis that considered gender, residence and education differences for communication style preferences, content disclosure and platform preferences. There was a significant difference in education level for communication style preferences with all those enrolled in an undergraduate degree using the synchronous style of instant messaging. While the majority of participants involved in graduate study also favoured the synchronous style of communication, asynchronous was preferred by about 15 percent of the sample. No differences for any of the socio-demographic variables were found for the context disclosure preference. The lack of a level of education difference for the context disclosure preference is at odds with an American study that found graduates tended to share information with many different groups, that being a one-to-many preference (Schunk, 2015). This difference may be due to cultural differences in the samples, however further research would be needed to explain this difference definitively. Education differences were found for platform preferences with social media being the preferred platform for online communication.

The final hypothesis was partially supported. Individuals with a higher level of interpersonal competence did in fact prefer synchronous online social interactions, compared to individuals with a lower interpersonal competence who tended to prefer more asynchronous online social interactions. This finding is also consistent with the literature, where Caplan’s (2007) study identified a similar relationship between interpersonal competence and preference for online social interactions. However this study identified interpersonal competence as being related to online social interactions in regards to preference for a synchronous communication style, over a asynchronous communication style. This finding is also in line with findings that have suggested that people with lower levels of interpersonal competence tend to prefer asynchronous

communication styles (e.g., emailing), as it is less socially demanding, due to being able to have more time to plan responses (Chung & Elias, 1996) .

The finding not only strengthens support for the notion that cognitive load differences are important in the preference for synchronous communication, but also supports the argument that adaptability plays a major part in preferences for online communication (Taborsky & Oliveira, 2012). This is evident in that effective adaptability skills are needed in order to deal with synchronous social interactions harmoniously. Effective adaptability skills are also a crucial characteristic for having a high interpersonal competence level (Gadecka et al., 2015; Taborsky & Oliveira, 2012). In short, this significant finding supports the possibility that having a higher interpersonal competence level, preferring to engage in synchronous communication, and having a high cognitive load capacity, are all ultimately associated with having a potential shared reliance for effective adaptability.

While this study does not provide evidence for predicting context disclosure from the user characteristics, self-efficacy and the subscales of the interpersonal competence measure, it does reveal the predictive capacity of age and interpersonal competence for platform preferences. These findings could be attributed to how communication with colleagues tends to be more formal compared to family and friends, and thus requires more thought out responses, which asynchronous communication platforms such as emails provide (Chung & Elias, 1996; Chung, 2013; Honeycutt, 2001).

Age was found to be a significant predictor of both communication style preferences and platform preferences. Specifically, younger participants were more likely to favour synchronous communication, that is, instant messaging as their preferred style. This finding is congruent with Thayer and Ray (2016) that young adults spend more time communicating online. Older participants preferred emails as the platform of choice with colleagues.

Limitations associated with this study include the sample being a non-probability sample of volunteers, and thus not representative of the student population of the current setting. Generalizability beyond the current sample would also be problematic. It would be worth trying to replicate these findings in other rural universities. One non-representative aspect of the sample includes the majority of participants self-reporting that they live in a suburban environment. This affects the data in that it has been previously identified that environmental residence (rural versus urban) may have an effect on differences in levels of interpersonal competence (Chen et al., 2009). Ideally an equal ratio of residents from both rural and urban environments would assist in determining differences in online communication preferences. Another issue regarding the uneven number of respondents from rural areas may be due to the issue regarding access to the National Broadband Network in geographically remote areas. Online surveys rely on self-report measures which have associated issues of respondent understanding and interpretation of the items being used.

Possible implications of the findings of this research study include that it has further extended the knowledge base for the field of online social interaction research. Future real-world implications can include research into understanding why certain individuals are less responsive to one form of communication over another. This work can be further extended by adopting a cross-cultural perspective in exploring the interrelationships considered here. To Vygotsky, knowledge is a human creation that is constructed socially and culturally. Accordingly he asserts that learning environments should contain guided interactions allowing learners to reflect on inconsistencies and change their ideas through communication.

In summary, this research paper has addressed some of the research gaps in relating the role that user characteristics, self-efficacy and interpersonal competence have with online communication preferences. Specifically, this paper has identified (1) both increases in age and more general self-efficacy are related to total interpersonal competence; (2) level of education differences were observed for communication style preferences and platform preferences; and (3) age and interpersonal competence were the only predictors for both communication style preferences and platform preferences. These limited findings attest to the fact that little is known regarding this burgeoning field. The findings extend knowledge in the field of online social interaction research of students in a rural university. Comparative research is recommended for metro universities.

## References

- Bagozzi, R. P., Dholakia, U. M., & Pearo, L. R. K. (2007). Antecedents and Consequences of Online Social Interactions. *Media Psychology*, 9(1), 77-114. doi: 10.1080/15213260709336804
- Birnie, S. A., & Horvath, P. (2002). Psychological Predictors of Internet Social Communication. *Journal of computer-mediated communication*, 7(4). doi: 10.1111/j.1083-6101.2002.tb00154.x
- Caplan, S. E. (2005). A Social Skill Account of Problematic Internet Use. *Journal of Communication*, 55(4), 721-736. doi: 10.1111/j.1460-2466.2005.tb03019.x
- Caplan, S. E. (2007). Relations Among Loneliness, Social Anxiety, and Problematic Internet Use. *Cyberpsychology & Behavior*, 10(2), 234-242. doi: 10.1089/cpb.2006.9963
- Chen, X., Wang, L., & Wang, Z. (2009). Shyness-Sensitivity and Social, School, and Psychological Adjustment in Rural Migrant and Urban Children in China. *Child Development*, 80(5), 1499-1513.
- Chung, H., & Elias, M. (1996). Patterns of adolescent involvement in problem behaviors: Relationship to self-efficacy, social competence, and life events. *American Journal of Community Psychology*, 24(6), 771-784.
- Chung, J. E. (2013). Social interaction in online support groups: Preference for online social interaction over offline social interaction. *Computers in Human Behavior*, 29(4), 1408-1414.
- Coroiu, A., Meyer, A., Gomez-Garibello, C. A., Brähler, E., Hessel, A., & Körner, A. (2015). Brief form of the Interpersonal Competence Questionnaire (ICQ-15): Development and preliminary validation with a German population sample. *European Journal of Psychological Assessment*, 31(4), 272-279. doi: 10.1027/1015-5759/a000234
- Davies, C., Coleman, J., & Livingstone, S. (Eds.). (2014). *Digital technologies in the lives of young people*. Oxon, UK: Routledge.
- Donehower, K., Hogg, C., & Schell, E. E. (Eds.). (2012). *Reclaiming the Rural: Essays on Literacy, Rhetoric, and Pedagogy*. Carbondale and Edwardsville: Southern Illinois University Press.
- Doring, A., Hodge, A., & Heo, M. (2014). Online learners and their self-disclosure preferences. *Journal of Information Technology Education: Research*, 13, 163-175.
- Fioravanti, G., Dèttore, D., & Casale, S. (2012). Adolescent Internet Addiction: Testing the Association Between Self-Esteem, the Perception of Internet Attributes, and Preference for Online Social Interactions. *Cyberpsychology, Behavior, and Social Networking*, 15(6), 318-323. doi: 10.1089/cyber.2011.0358
- Gadecka, W., Piskorz-Ogórek, K., Regin, K. J., & Kowalski, I. M. (2015). Social competence of mental health nurses. *Polish Annals of Medicine*, 22(2), 105-109. doi: 10.1016/j.poamed.2015.03.014
- Gosling, S. D., Augustine, A. A., Vazire, S., Holtzman, N., & Gaddis, S. (2011). Manifestations of Personality in Online Social Networks: Self-Reported Facebook-Related Behaviors and Observable Profile Information. *Cyberpsychology, Behavior, and Social Networking*, 14(9), 483-488. doi: 10.1089/cyber.2010.0087

- Green, B., & Corbett, M. (Eds.). (2013). *Rethinking Rural Literacies: Transnational Perspectives*. US: Palgrave Macmillan.
- Greene, J. O., & Burlison, B. R. (Eds.). (2008). *Handbook of Communication and Social Interaction Skills*. New Jersey & London: Lawrence Erlbaum Associates, Publishers.
- Hill, P. T. (2014). Breaking new ground in rural education. The Rural Opportunities Consortium of Idaho (ROCI).
- Honeycutt, L. (2001). Comparing E-Mail and Synchronous Conferencing in Online Peer Response. *Written Communication*, 18(1), 26-60. doi: doi:10.1177/0741088301018001002
- Isserman, A. M. (2005). In the national interest: Defining rural and urban correctly in research and public policy. *International Regional Science Review*, 28(4), 465-499.
- Minick, N. (2017). The development of Vygotsky's thought: An introduction to thinking and speech. In H. Daniels (Ed.), *Introduction to Vygotsky* (3rd ed.). London: Taylor and Francis.
- Nangle, D. W., Hansen, D. J., Erdley, C. A., & Norton, P. J. (Eds.). (2010). *Practitioner's guide to empirically based measures of social skills*. New York: Springer.
- Nugent, G. C., Kunz, G. M., Sheridan, S. M., Glover, T. A., & Knoche, L. L. (Eds.). (2017). *Rural Education Research in the United States: State of the Science and Emerging Directions*. Switzerland: Springer.
- Palincsar, A. S. (2005). Social constructivist perspectives on teaching and learning. In H. Daniels (Ed.), *An introduction to Vygotsky* (2<sup>nd</sup> ed., pp. 285-314). London and New York: Routledge
- Pritchard, A., & Woollard, J. (2013). *Psychology for the classroom: Constructivism and social learning*. London and New York: Routledge.
- Roberts, P., & Cuervo, H. (2015). What next for rural education research? *Australian and International Journal of Rural Education*, 25(3), 1-8.
- Roberts, P., & Green, B. (2013). Researching Rural Places: On Social Justice and Rural Education. *Qualitative Inquiry*, 19(10), 765-774. doi: 10.1177/1077800413503795
- Roberts, S., Snee, H., Hine, C., Morey, Y., & Watson, H. (Eds.). (2016). *Digital methods for social science: An interdisciplinary guide to research innovation*. UK: Palgrave Macmillan.
- Ross, K., & Nightingale, V. (2003). *Media and audiences: New perspectives*. UK: McGraw-Hill Education.
- Scholz, U., Doña, B. G., Sud, S., & Schwarzer, R. (2002). Is general self-efficacy a universal construct? Psychometric findings from 25 countries. *European Journal of Psychological Assessment*, 18(3), 242-251. doi: 10.1027//1015-5759.18.3.242
- Schunk, D. H. (2015). *Learning theories: An educational perspective* (7th ed.). Upper Saddle River, NJ: Pearson.
- Semrud-Clikeman, M. (2007). *Social competence in children*. New York: Springer.
- Sun, Z., Lin, C.-H., Wu, M., Zhou, J., & Luo, L. (2018). A tale of two communication tools: Discussion-forum and mobile instant-messaging apps in collaborative learning. *British Journal of Educational Technology*, 49(2), 248-261. doi: doi:10.1111/bjet.12571
- Taborsky, B., & Oliveira, R. F. (2012). Social competence: an evolutionary approach. *Trends in Ecology & Evolution*, 27(12), 679-688. doi: 10.1016/j.tree.2012.09.003
- Thayer, S. E., & Ray, S. (2006). Online communication preferences across age, gender, and duration of internet use. *Cyberpsychology & Behavior*, 9(4), 432-440. doi: 10.1089/cpb.2006.9.432
- Vygotsky, L. S. (1978). *Mind and society: The development of higher mental processes*. Cambridge, MA: Harvard University Press.
- Wellman, B. (1999). The social affordances of e-mail. *SIGGROUP bulletin: A publication of the Special Interest Group on Supporting Group Work*, 20(2), 63. doi: 10.1145/331982.332011
- Yudron, M., & Jones, S. M. (2016). Developmental Trajectories of Children's Social Competence in Early Childhood: The Role of the Externalizing Behaviors of Their Preschool Peers. *Journal of Cognitive Education and Psychology*, 15(2), 268-292. doi: 10.1891/1945-8959.15.2.268