

## Bridging the intention-behaviour gap: Empirical evidence from the study of wiki use behaviour

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Among other technologies, wikis, as a Web 2.0 technology, have been found to support online collaborative behaviour of students in group work. Despite the intention-behaviour relationship expected in many relevant theories, studies have found that the relationship between students' intention to use wikis and their behaviour in using wikis was not strong. This discrepancy between expectation and actuality is referred to as the intention-behaviour gap. Researchers have explored mediators that can bridge the intention-behaviour gap. Given the study of behaviour across various disciplines, the variables that can bridge the intention-behaviour gap may be situational in nature. The present study therefore explored the effect of two mediators in a hypothesised model of the behaviour in using a wiki for students' group assignments. In a longitudinal study with a sample of university students in Hong Kong, factor-based partial least squares structural equation modelling was used to examine the measurement and structural models. The results indicate that goal commitment and wiki-based communication, while substantially increasing the combined explanatory power of the variance in wiki use behaviour, significantly mediated the path from intention to behaviour. Both practical and research implications have been provided in this paper.

### *Implications for practice or policy:*

- Teachers should increase their influence by providing students with more guidance on how to work with the wiki.
- Teachers should motivate students to have deeper online discussion by incorporating wiki-based communication as an assessment item.
- To remove the barriers to early implementation of a wiki system, teachers should remind students of the importance of group dynamic strategies and their role in supporting collective scaffolding for peers.

Keywords: wikis, intentions, behaviour, communication, goal commitment, group project

## Introduction

In higher education, web technologies have been increasingly adopted to improve university students' collaborative learning, which focuses on students' ability to engage in discussion, present and defend ideas and converse with others in a small group (Loes & Pascarella, 2017). Among other technologies, wikis, as a Web 2.0 technology, were found to support students' online collaborative behaviour for group work (e.g., X. Li et al., 2022; Stoddart et al., 2016; Woo et al., 2011). Compared to other information and communication technologies, wikis result in more relational commitment, independent learning, knowledge sharing behaviour and active participation (W.-T. Wang & Lin, 2022). Although wikis are useful for mutual scaffolding that sustains peer learning in what Vygotsky (1978) coined as "the zone of proximal development" (Cilliers, 2017; M. Li & Zhu, 2017), studies have found that the relationship between students' intention to use wikis and their behaviour in using wikis was not strong (e.g., Cheng, 2019). It is therefore essential to identify the reason behind this phenomenon.

Intentions are regarded as the major determinant of non-habitual behaviours (Ajzen, 1991). The intention-behaviour relationship has been proposed in many theories, including the theory of reasoned

actions (Ajzen & Fishbein, 1980), theory of planned behaviour (TPB; Ajzen, 1991), technology acceptance model (TAM; (Bagozzi et al., 1992) and unified theory of acceptance and use of technology (UTAUT; (Venkatesh et al., 2003). However, the strength of such a relationship is often not what researchers expect. For the intention-behaviour relationship, the discrepancy between one's expectation and the actuality is referred to as the intention-behaviour gap (Larsen et al., 2018; Sheeran, 2002). Several meta-analytic studies have attested to the validity of the intention-behaviour hypothesis. In a meta-analytic study by Sheeran (2002), findings from 422 studies involving 82,107 participants showed that 28% of the variance in behaviour on average was accounted for by intentions. In another meta-analysis with 2,035 participants from eight studies, Sandberg and Conner (2008) found that intentions accounted for only 16% of the variance in behaviour. Although intention has been found to be a consistent precursor of behaviour, the explanatory power was in the modest range of 19% to 38% (Norman et al., 2003).

Sutton (1998) outlined a number of methodological factors (e.g., violation of scale correspondence, random measurement error and restricted variance) that might attenuate the strength of the intention-behaviour relationship, although the effect due to these factors might not exceed 60%. In another meta-analysis of experimental design studies by Webb and Sheeran (2006), a medium to large change in intention caused a small to medium change in behaviour; the intention-behaviour gap was attributed to several conceptual factors, methodological features and intervention characteristics that influence intention-behaviour consistency. Schwarzer (2008, p. 9) argued that "good intentions are more likely to be translated into action when people develop success scenarios and preparatory strategies of approaching a difficult task". Therefore, he proposed that action and coping planning strategies may play as mediators between intentions and actions. When performing group behaviour, such as offline and online collaboration, individuals within a group may be influenced by constructs that are related to joint efforts and interactive actions (Cheng, 2019; T.-H. Chu & Chen, 2016). That is, it is important to explore what mediators can fill in the intention-behaviour gap. Researchers refer to this as "closing" or "bridging" the intention-behaviour gap (e.g., Hathaway & Gregg, 2021; Sniehotta et al., 2005).

In an intention-behaviour relationship, wiki user experience in the context of online collaborative learning is worth exploring (S. K. W. Chu et al., 2013; Cowan & Jack, 2014). The intention to use the wiki is defined as the extent to which a student plans to work with group members through the wiki for the group assignment, while the behaviour of using the wiki is defined as the extent to which a student uses the wiki to collaborate with group members for the group assignment (Cheng, 2019). Other than examining the direct effect of intention on behaviour, this study proposed two variables as potential mediators that enrich the intention-behaviour linkage. One is goal commitment, while the other is wiki-based communication. Goal commitment is generally defined as "one's determination to reach a goal" (Klein et al., 2001, p. 34). In this study, it refers to the extent to which group members were determined to achieve the goal of using the wiki to do the group assignment. On the other hand, wiki-based communication refers to the extent to which group members communicate with each other through the wiki for the group assignment. These two variables appear to fill a research gap on the relationship between intention and behaviour because both are considered to be essential for performing the wiki behaviour. Obviously, for group work using a wiki, it is critical that students commit to this goal and communicate through the wiki. As a result, the present study proposed that goal commitment and wiki-based communication mediate the relationship between intention and behaviour. The findings of this study provide evidence on which mediators are relevant to the behaviour and the role they play in influencing the behaviour. Insights would then be offered to guide future research agendas and provide practical recommendations for improving behavioural performance.

## **Purpose of the study**

This study aimed to examine the mediating role of two variables (goal commitment and wiki-based communication) in bridging the intention-behaviour gap. For this aim, we asked three research questions:

- To what extent would the effect of intentions on the behaviour change due to the addition of goal commitment and wiki-based communication?
- To what extent would goal commitment and wiki-based communication play a role as mediators of the relationship between intentions and the behaviour?
- To what extent would the addition of goal commitment and wiki-based communication change the explanatory power to the variance in the behaviour?

## **Research model and hypotheses**

### **The intention-behaviour gap**

When considering how to improve the intention-behaviour gap, researchers have focused on three major research approaches. First, researchers have explored mediators that fill in the intention-behaviour gap (e.g., Sniehotta et al., 2005). Second, researchers have also investigated the effect of moderators on the relationship between intentions and behaviours. For example, intention stability is a reliable moderator of intention-behaviour relations (Conner et al., 2000; Sheeran & Abraham, 2003). That is, due to the moderator (i.e., high or low intention stability), people might follow different intention-behaviour paths (Rodes et al., 2008). Third, researchers have identified factors that work with intention to directly affect behaviour. For example, Cheung and Vogel (2013), when using a sample of 136 university students to study user acceptance of collaborative technologies, found that behavioural intention to use a technology explained 18% of the variance in system usage. However, when incorporating knowledge sharing in virtual learning communities as an independent variable in line with intentions, the explanatory power increased to 39%.

In fact, different stages may be necessary to help initiate, adopt and maintain a specific behaviour. This has led to the development of models that specify the particular cognitive state that is crucial in the progression from one stage to another. A popular example is the separation of the motivational stage (i.e., intention formation) and the volitional stage (i.e., intention enactment) (Schwarzer, 2008). Although the motivational stage (e.g., intention) has usually been found to be a stronger determinant than the volitional stage (e.g., perceived behavioural control), it is evident that intention is not the only antecedent of behaviour (Bagozzi, 1993). Considering examinations of behaviour across various fields of study, the factors that can bridge the intention-behaviour gap may be situational in nature. Therefore, the theories and variables that address the cognitive mechanisms through which intentions are translated into actions should be carefully considered for individual behaviours. In the present study, two variables (goal commitment and wiki-based communication) are potential mediators of the intention-behaviour relationship. The reasons behind this are discussed below.

### **The relationship between intention, goal commitment and behaviour**

According to Locke et al. (1988), motivational factors, such as self-efficacy and expectancy of success, affect goal commitment. In addition, intentions are important for achieving a goal because they link to a person's level of commitment to goals (Sheeran & Webb, 2016). The impact of implementation intent (i.e., planning to pursue a goal) on goal commitment has long been studied and found to be significant. For example, Abdulla and Woods (2021), when students were assigned to initially set goals for their personal projects, found that initial planning to achieve the goals, whether or not the approach to planning was well structured, enhanced goal commitment. Dalton and Spiller (2012) further found that implementation intention could explain goal commitment when there was only one goal rather than multiple goals. However, the assumption behind this significant relationship is that goal desirability and attainment expectancy must be reasonably high (Cross & Sheffield, 2019; Oettingen et al., 2010). Likewise, the intention should be high enough to drive one's commitment to using the wiki for a group assignment. Therefore, we proposed the following hypothesis:

- H1. One's intention to use a wiki for a group assignment is positively related to one's commitment to using the wiki for the group assignment.

Locke et al. (1988) commented in their analysis of empirical research that goal commitment is related to performance when the measures are appropriate. Goal-setting theory has long been used to explain how the setting of goals can help achieve behavioural change because a goal is set to stimulate people to take actions (Latham, 2003). People who are committed to goals are eager to achieve them through a variety of activities (Gollwitzer et al., 2009). Goal setting and striving, as the major components of self-regulation for implementing a goal-directed behaviour (Nielsen, 2017), are particularly important for group behaviour because goals provide the feeling of accomplishment when progress is made towards the target behaviour (Latham, 2003; Thürmer et al., 2017). Goal commitment implies the extension of effort for achieving the original goal (Hollenbeck & Klein, 1987) and the prevention of a goal change (Su et al., 2022). The findings from the meta-analytic study reported by Kleingeld et al. (2011) indicated that goals set by a group had a robust effect on performance reflecting the group's behaviour, especially for specific and interdependent goals. Recent studies have extended the findings of the significant relationship between goal commitment and performance (e.g., Klein et al., 2020). Su et al. (2022) further found that goal commitment is positively related to goal-directed behaviours. Therefore, commitment to relevant group goals may strengthen the emergence of the behaviour in using the wiki for group work. As such, we proposed the following hypothesis:

- H2. One's commitment to using a wiki for a group assignment is positively related to one's behaviour in using the wiki for the group assignment.

In line with the above discussion, goal commitment may undermine the common belief that intention is directly related to behaviour. To investigate the mediating effect of goal commitment in the relationship between intention and behaviour, we proposed the following hypothesis:

- H3. Goal commitment mediates the relationship between intention and behaviour.

### **The relationship between intention, wiki-based communication and behaviour**

Communication is a process that allows people to share and exchange ideas, information and feelings (Ku et al., 2013), while online communication, also known as electronic communication (e-communication), refers to computer-mediated communication on the Internet (Eckert, 2018). There is no shortage of research on the relationship between intention and online communication. For example, Alalwan et al. (2019), using three theories to examine the factors affecting the academic performance of Malaysian university students, proposed that online communication (derived from the communication theory) and collaborative behaviour for learning (derived from the constructivism theory) were two independent variables and could be influenced by students' intention to use social media, according to TAM, whereas these three variables could have an impact on students' academic performance. They found that students' intention to use social media influenced both online communication and collaborative behaviour for learning. In a similar way, this can also be applied to the use of a wiki for group work. Therefore, we proposed the following hypothesis:

- H4. One's intention to use a wiki for a group assignment is positively related to one's use of the wiki for communication.

As stated in last paragraph, online communication and collaborative behaviour of using social media are two independent concepts (Alalwan et al., 2019). In a small group work environment, high quality communication can improve collaboration and interaction among group members (Hambley et al., 2007). In a recent study on the influencing factors of self-directed learning among Turkish college students, Sumuer (2018) found that online communication is positively related to the use of Web 2.0 tools for learning. According to the media synchronicity theory, a medium that supports synchronous communication strengthens collaborative team performance through improved information transmission and processing (Dennis et al., 2008). In He and Yang (2016), students admitted that they tended to have more favorable collaboration if they reprocessed their information. For computer-supported collaborative learning, wikis allow electronic communication between students (Stoddart et al., 2016). However, wikis are not the only web tool for online communication. In the past few years, social media

has become a primary mean of online communication (Cardon & Marshall, 2015; Issa et al., 2021). Popular social media platforms, also referred to as social networking sites (Morley, 2014), include Facebook, MySpace and WhatsApp. It is possible that if students choose other communication tools for group discussion, they may reduce the use of wiki for doing their group assignment. In the present study, we therefore posited that peer communication using a wiki would facilitate online collaboration, also known as electronic collaboration (e-collaboration) through the wiki. In other words, we expected that group members with poor wiki-based communication would not exhibit the collaborative behaviour of using the wiki for group work. We therefore proposed the following hypothesis:

- H5. One’s use of a wiki for communication is positively related to one’s behaviour in using the wiki for the group assignment.

As with goal commitment, to examine the mediating role of wiki-based communication in the relationship between intention and behaviour, we formulated the following hypothesis (a further test of mediating effects will be described in the Methods section):

- H6. Wiki-based communication mediates the relationship between intention and behaviour.

Figure 1 illustrates a model with the six hypotheses described above.

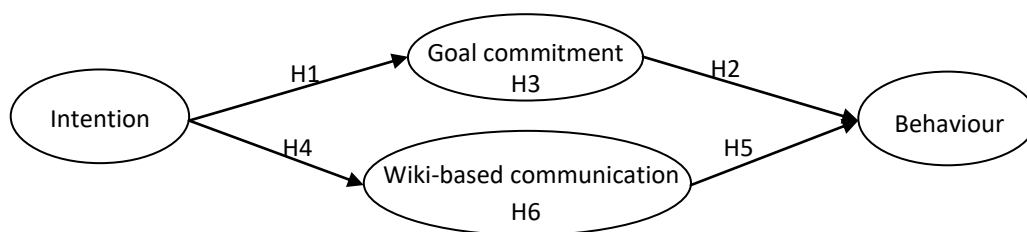


Figure 1. The model with the six hypotheses

## Methods

### Participants and procedure

To examine all relationships proposed in this study, we conducted a questionnaire-based survey. This quantitative study involved students from a government-funded university in Hong Kong. They enrolled in one of six undergraduate and postgraduate courses and were given an essay-type group assignment that required them to address a question on a topic. Each group was composed of three or four members. Consideration, in terms of the size of workload and the amount of time for completing the assignment, was given to minimising the contextual differences across the six assignments. We obtained ethical clearance from the university in which I (E. W. L. C.) was working.

A research assistant in the research team delivered a short wiki course to students, but use of the wiki was completely voluntary. Students completed a questionnaire at each of three time points separated by approximately four weeks before and after the group assignment. In Time 1, we collected the demographic, mainly gender and student status and contact information of participants. In Time 2, participants, after finishing the wiki training, filled in a questionnaire that probed the strength of their intention regarding use of the wiki. In Time 3, participants, after finishing their group assignments, reported their perception of their level of goal commitment, wiki-based communication and wiki use behaviour. Initially, there were 181 participants at Time 1. Since seven students were absent from either Time 2 or Time 3, the study ended up using data from 174 participants. Of these participants, 136 were female, while 38 were male; 123 were local students, while 51 were non-local students.

## Measures

For intention and behaviour, we adapted the measures used by Cheng et al. (2016), who studied tertiary students' intention to collaborate for group projects through the Internet. The measures of goal commitment and wiki-based communication stemmed from Ku et al. (2013), who revealed that team commitment and clear communication were important components for an online collaborative setting. To measure students' attitudes towards the course and online collaboration, they used 20 items, including the items for assessing team commitment and clear communication, which were adopted in this study with modification. We rated all items on a 7-point Likert scale from 1 (*extremely disagree*) to 7 (*extremely agree*). To assess the internal consistency (i.e., reliability) of these measures, we employed Cronbach's alpha and composite reliability. Additionally, we assessed construct validity by tests of convergent and discriminant validity. The results of these assessments were shown in the Results section. The sources of the measures and the items used in this study are listed below:

- The intention to use the wiki (four items): "I will try to use the wiki to do the group assignment", "I plan to use the wiki to do the group assignment", "I am willing to use the wiki to do the group assignment" and "I intend to use the wiki to do the group assignment". These items measured the extent to which students intended to use the wiki for doing their group assignment.
- Goal commitment (three items): "My group worked towards the same goal, which was to use the wiki to do the group assignment", "In my group, members clearly knew their roles when using the wiki to do the group assignment" and "My group set clear goals for using the wiki to do the group assignment". These items measured the extent to which students were committed to the goal of using the wiki to do the group assignment.
- Wiki-based communication (four items): "In my group, members used the wiki to communicate with each other frequently", "In my group, members used the wiki to send and receive feedback from each other", "In my group, members used the wiki to communicate with each other frequently" and "In my group, members encouraged open communication with each other through the wiki". These items measured the extent to which students used the wiki to communicate for their group assignment.
- The behaviour in using the wiki (six self-reported behavioural items): "In the wiki, I shared information with group members for the group assignment", "In the wiki, I shared my views and opinions with group members for the group assignment", "I used the wiki to do the group assignment with group members", "In the wiki, I raised discussion with group members on how to do the group assignment", "In the wiki, I learnt new knowledge from group members when doing the group assignment with them" and "In the wiki, group members and I corrected each other works when doing the group assignment". These items measured the extent to which students exhibited e-collaborative behaviour through the wiki for their group assignment.

## Data analysis for the hypothesised model

Given a small sample with non-normal data, partial least squares structural equation modelling (PLS-SEM), this study adopted a variance-based SEM (Kock, 2015). We employed factor-based PLS-SEM, similar to consistent PLS-SEM (Dijkstra & Henseler, 2015; Hair et al., 2016), which is more robust than regression-based PLS-SEM due to its ability to account for measurement errors, with bootstrap samples set at 100 to examine the measurement and structural models and estimate a set of model quality indices. The software tool was WarpPLS version 5.0 (Kock, 2015). Moreover, we tested the mediating roles of wiki-based communication and goal commitment by means of a two-step approach suggested by Kock (2014). The first step was to satisfy three conditions of mediation. The second step was to perform a more stringent mediation test, given the satisfaction of the three conditions. This approach is elaborated more in the Results section.

## Results

Prior to the assessment of the measurement and structural models, we conducted the test of the influence of extraneous variables. In this study, we examined the effect of the sample’s background, in terms of gender (male or female) and student status (local or non-local), on the dependent variables using independent samples *t* test. For this purpose, we created a composite variable by averaging participants’ ratings of all items for each dependent variable, where the *t*-test analysis involves the mean scores of the three composite variables (i.e., goal commitment, wiki-based communication and behaviour). As shown in Table 1, the results indicate that the two background variables did not affect the three dependent variables. Therefore, the impact of extraneous variables was trivial.

Table 1  
*Impacts of extraneous variables on the dependent variables*

	<b>M (SD)</b>	<b>t(172)</b>	<b>p</b>	<b>diff</b>	<b>95% CI</b>
Gender → Goal commitment	Male: 4.851 (1.202)	-.043	.996	-.009	-.443, .424
	Female: 4.860 (1.196)				
Gender → Wiki-based communication	Male: 4.724 (1.11)	1.035	.302	.233	-.211, .677
	Female: 4.491 (1.257)				
Gender → Behaviour	Male: 4.921 (1.099)	.292	.771	.066	-.379, .510
	Female: 4.855 (1.260)				
Student status → Goal commitment	Local: 4.821 (1.097)	-.636	.526	-.127	-.520, .267
	Non-local: 4.948 (1.409)				
Student status → Wiki-based communication	Local: 4.533 (1.182)	-.152	.879	-.031	-.436, .373
	Non-local: 4.564 (1.341)				
Student status → Behaviour	Local: 4.893 (1.11)	.388	.699	.079	-.324, .482
	Non-local: 4.814 (1.473)				

### Test of the measurement model

We used several criteria to evaluate measurement biases (Hair et al., 2011; Kock, 2015). The results are shown in Tables 2 and 3. First, the measures of the latent variables were deemed reliable because the values of their Cronbach’s alpha and composite reliability exceeded 0.70. Second, the convergent validity of measurement items of each latent variable met the requirement because all item loadings and the average variances extracted (AVE) value for each latent variable exceeded 0.70 and 0.50 respectively. Third, each latent variable had adequate discriminant validity because the correlation coefficients of each latent variable with other latent variables were smaller than the square root of the AVE (as shown in parentheses of Table 2) of that latent variable. Overall, it was found that the four latent variables had sufficient construct validity; in other words, they belonged to different theoretical concepts (Cronbach & Meehl, 1955).

### Test of the structural model

We used four criteria to evaluate the structural model (Kock, 2015). First, as shown in Table 3, the full collinearity variance inflation factor (FVIF) of each latent variable computed for assessing multicollinearity among the latent variables was less than 5; thus, multicollinearity and method biases were trivial in the structural model.

Second, we used the average path coefficient (APC), average adjusted coefficient of determination (AARS) and average FVIF (AFVIF) to check for the model quality (Kock, 2015). The value for APC and AARS should be at least significant at the 0.05 level (i.e.,  $p < 0.05$ ), while the value for AFVIF should not be more than 5 (Kock, 2015). The structural model demonstrated a very good fit to the data, where APC, AARS and AFVIF were 0.348 ( $p < 0.001$ ), 0.350 ( $p < 0.001$ ) and 3.375 respectively.

Table 2  
Inter-correlations of the latent variables in the hypothesised model

Variable	Mean	SD	1	2	3	4
1. Intention	4.861	1.238	(0.865)			
2. Goal commitment	4.858	1.194	0.442**	(0.866)		
3. Wiki-based communication	4.542	1.227	0.289**	0.822**	(0.868)	
4. Behaviour	4.870	1.223	0.386**	0.821**	0.823**	(0.847)

\*\* $p < .01$ .

Table 3  
Results for evaluating the measurement model

Variable	AVE	Composite reliability	Cronbach's alpha	Full collinearity VIF	Structure loadings
Intention	0.748	0.922	0.923	1.291	0.827 ↔ 0.930
Goal commitment	0.751	0.900	0.900	4.226	0.815 ↔ 0.897
Wiki-based communication	0.753	0.924	0.924	4.039	0.808 ↔ 0.904
Behaviour	0.717	0.938	0.938	3.943	0.804 ↔ 0.883

Third, we used adjusted coefficient of determination ( $R^2$ ) to check for the combined explanatory power of the independent variables for the dependent variable. Table 4 presents the results showing that, for each dependent variable, there was at least one significant independent variable (as indicated by their adjusted  $R^2$  values). Therefore, this study empirically supported the structural model. Moreover, the bias caused by the non-significant independent variables in the structural model was very small because the values of the adjusted  $R^2$  only deviated slightly from those of their corresponding  $R^2$ .

Fourth, in the case of more than one independent variable, we computed the standardised beta coefficient ( $\beta$ ) values. As shown in Table 4, the independent variables were significantly related to the dependent variables.

Figure 2 also illustrates the results for the two models for testing mediating effects. With the two-step approach to testing mediators (Kock, 2014), the results indicate that the three conditions of mediation in the first step were satisfied. First, intention was significantly related to behaviour in the absence of other variables. Second, intention was significantly related to goal commitment and wiki-based communication, leading to support for H1 and H4 respectively. Third, goal commitment and wiki-based communication were significantly related to behaviour, supporting H2 and H5 respectively. The second step is to perform Sobel's product of coefficients test. We computed Sobel's  $z$  value and the significance level for each mediating effect (Preacher & Hayes, 2004). The results indicate that goal commitment ( $z = 2.16$ ;  $p < 0.05$ ) and wiki-based communication ( $z = 2.61$ ;  $p < 0.01$ ) mediated the path from intention to behaviour. Such mediating effects were partial because the relationship between intention and behaviour, although somewhat reduced, remained significant ( $p < 0.05$ ) after controlling for the mediators (Kenny et al., 1998), resulting in partially supporting H3 and H6 respectively.

Table 4  
Results for evaluating the structural model

Dependent variable	Independent variable			$R^2$ (Adjusted $R^2$ )
	Intention	Goal commitment	Wiki-based communication	
Goal commitment	$\beta$ 0.459**	-----	-----	0.211 (0.206)
Wiki-based communication	0.299**	-----	-----	0.090 (0.084)
Behaviour	0.122*	0.349*	0.510**	0.765 (0.760)

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



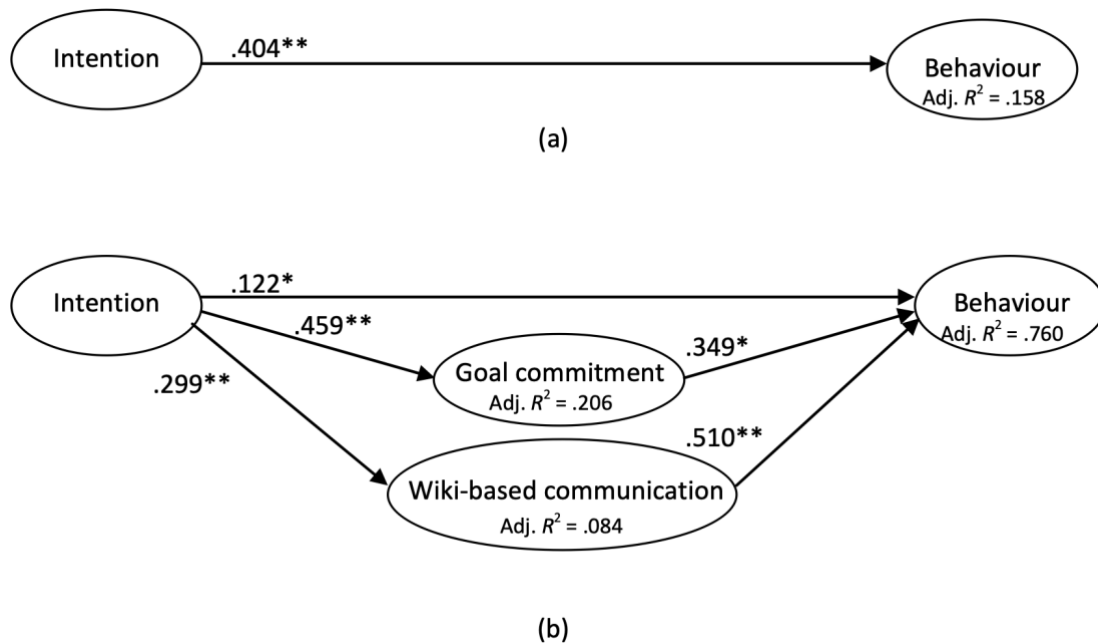


Figure 2. Results of the relationships in the two models for testing mediating effects  
 Note. A solid line indicates a significant relationship; \* $p < .05$ ; \*\* $p < .01$ .

## Discussion

In this study, the results indicate that goal commitment and wiki-based communication bridged the gap between intention and behaviour. Figure 2(a) indicates that the intention to use the wiki could explain approximately 16% of the variance in behaviour when no other independent variables were present. Yet, this observed intention-behaviour relation was greatly attenuated by the presence of goal commitment and wiki-based communication. As shown in Figure 2(b), the  $\beta$  value of the relationship between intention and behaviour dropped from 0.404 to 0.122. Moreover, the addition of goal commitment and wiki-based communication improved the understanding of the intention-behaviour mechanism of the current context. Specifically, behavioural intention explained 21% and 9% of the variance in goal commitment and wiki-based communication, respectively; however, intention, wiki-based communication and goal commitment explained 76% of the total variance in behaviour.

We encourage further research to improve our understanding of the role of intention in the study of behaviours that may involve a shorter or longer period of planning. For behaviours that are performed with substantial planning and arrangement, the gap between intention and behaviour can be explained by a variety of mediators (Praskova et al., 2015; Webb & Sheeran, 2006). In the present study, the results indicate that goal commitment and wiki-based communication were the potential mediators. In contrast to extensively planned behaviours, other behaviours may follow one's intention in a more immediate manner without the necessity of passing through a mechanism that involves the development of conditions supporting the behaviour.

Moreover, the intention-behaviour discordance may be caused by the fact that people change their initial intention prior to behavioural engagement (Larsen et al., 2018; Rhodes et al., 2008; Schumacher et al., 2021), not to mention the possibility that students mix up different kinds of intention, such as behavioural intention, goal intention (Sheeran & Webb, 2016) and knowledge sharing intention (Wang & Wei, 2011), resulting in altering the intention-behaviour relationship. The present study measured students' intention and behaviour before and after the assignment respectively. In other words, after the measurement of their intention, students had a certain period of time to plan for and implement their behaviour. However, besides the assumption that intention is directly related to the behaviour of interest, there is another possible explanation, which is that the intention changes during the process prior to the commencement

of the behaviour. Ajzen and Fishbein (1980) emphasised the importance of the time interval between the measures of intention and behaviour and argued that the original measure of intention may no longer predict the behaviour if the intention changes before the behaviour is measured. Therefore, measuring the change in intention may have offered more data to explain the reported relationship. As noted by Webb and Sheeran (2006), an experimental design that records changes in intention as well as changes in behaviour may be able to test the accurate impact of intention on behaviour. Additionally, it is worth investigating into the circumstances under which this change of intention is most likely to occur. Future studies may follow this approach.

## **Recommendations for improving the use of wikis for group projects**

The present study found that intention was significantly related to goal commitment, wiki-based communication and the e-collaborative behaviour. This implies that teachers should not overlook the importance of increasing students' intention to e-collaborate. This involves the identification of what factors affect students' intention to e-collaborate. Among the theories used to develop intention-behaviour models, popular theories such as the TPB, TAM, UTAUT and UTAUT2, explain technology acceptance intention, where common factors include perceived ease of use, perceived usefulness, attitudes towards use of the technology, subjective norm, perceived behavioural control, performance expectancy, effort expectancy, social influence, facilitating conditions and hedonic motivation (Ain et al., 2016; Cheng, 2019; Ismail, 2020; Tan, 2013; Venkatesh et al., 2003; Venkatesh & Zhang, 2010; Webb & Sheeran, 2006), not to mention other situational factors for specific contexts (e.g., Liu et al., 2010; Masood et al., 2020; Schwarzer, 2008). As noted by T.-H. Chu and Chen (2016), the TPB might be powerful in explaining group behaviour because a collaborative learning environment emphasises social connectedness. Among other variables, subjective norm and perceived behavioural control are more related to the e-collaborative behaviour (Cheng, 2019). Therefore, teachers should increase their influences, as a tool provider and a salient referent, by providing students with more guidance on how to work with the wiki and familiarising them with the use of the wiki for group work. One possible approach to motivating students to use the wiki is to offer tutorials on its use and include wiki competency as part of the course assessment.

With goal commitment and wiki-based communication as mediators, the strength of the direct relationship between intention and behaviour dropped sharply. This study found that goal commitment and wiki-based communication were significant mediators of the intention-behaviour relationship. Computer-mediated communication helps achieve useful group-level outcomes despite possibly dampening face-to-face communication (Walther, 1996). The present study suggests that using a wiki to communicate enables peers to perform online group discussion behaviour, including sharing and clarifying ideas and information (Ku et al., 2013). Du et al. (2016) added that students at different levels (primary, secondary and university) demonstrated varying degrees of frequency of collaborative activities to co-construct their group work. Oliveira et al. (2011) further found that teams' collaborative performance was enhanced through fewer but longer discussion threads, especially when their ideas were respected and carefully considered. Teachers should therefore encourage students not only to communicate using wikis but also have deeper online discussion by incorporating wiki-based communication as an assessment item.

On the other hand, goal commitment involves setting shared goals for conducting group work via the wiki. The higher the quality of the goal-setting strategy, the more would students be committed to the goals. Since group work is regarded as a goal-directed activity, collaborative wiki tasks are important for facilitating students' online interaction (Ismail, 2020; M. Li & Kim, 2016), in addition to the importance of keeping goal pursuit on track (Sheeran & Webb, 2016). According to M. Li and Zhu (2017, p. 98), goals have long been classified as "performance goals (i.e., simply performing and completing a task), mastery goals (i.e., mastering new knowledge and extending one's abilities) and intentional learning goals (i.e., gaining greater control over one's learning, mirrored in self-regulation)". Yet, individual members of a group may show different levels of commitment to the shared goals and may "position themselves

differently in relation to those goals” (Nolen et al., 2011, p. 114). Hence, advising students regarding positive and proper goal awareness should be the teacher’s main duty.

Additionally, teachers should pay adequate attention to goal setting in terms of division of labour. Students tend to believe that the division-of-labour approach is an efficient way to peer collaboration (Limbu & Markauskaite, 2015). In general, there are two major forms of division of labour: a stratified labour division in terms of different roles (e.g., composing, revising) and a horizontal labour division in terms of composing different sections of the assignment (Lai et al., 2016). The former might not be acceptable to those who, as noted by Cilliers (2017), are reserved about peer language revisions, while the latter might restrict students to learn from each other. As each form of the division-of-labour approach offers limited learning opportunity for learners, combining the two forms is preferable in wiki-based collaborative writing (Lai et al., 2016). This would enhance students’ interaction during their online group discussion.

In peer collaboration, communication should work hand in hand with goal achievement, where communication functions, such as suggesting, stating, encouraging, questioning and negotiating, work to achieve writing goals for the group assignment (M. Li & Zhu, 2017). Similar situations would occur in an e-learning environment. However, students are afraid of exposing their “imperfect” work to peers and are reluctant to criticise and edit peers’ work (Cilliers, 2017; Cowan & Jack, 2014). The success of wiki-based projects in higher education was found to rely on both individual and collaborative authoring (Jimoyiannis & Roussinos, 2017). In addition to removing the barriers to early implementation of a wiki system (Yueh et al., 2015), the teacher should remind students on the importance of group dynamic strategies and their roles in supporting collective scaffolding for peers.

## **Limitations and conclusions**

This research had two major limitations. First, there may have been other influential variables attenuating the intention-behaviour link within the same context. For example, students, having set activity goals regarding use of the wiki, may have failed to engage or persist in their activities due to a lack of appropriate self-regulatory mechanisms (Klein et al., 2020; Praskova et al., 2015), such as self-efficacy for goal commitment (Zimmerman et al., 1992) and team role development (Forehand et al., 2016; Lehmann-Willenbrock et al., 2016). This would lead to temporal instability of intentions, which in turn would affect the intention-behaviour gap (Sheeran & Abraham, 2003). Future studies may include other potential variables as moderators rather than mediators.

The strategy used to determine the time interval between the measure of intention and behaviour is another limitation. Although this strategy addressed a common concern that the results of cross-sectional studies may reflect potential response biases, which may inflate estimates of the strength of the relationship between intention and behaviour (Webb & Sheeran, 2006), decisions regarding time intervals are crucial for the accurate measurement of the variables. Therefore, researchers should consider this when interpreting the findings of this study.

The present study addressed the concern pertaining to the intention-behaviour gap by focusing on whether there are specific conditions for the emergence of behaviour. Although the results from the study suggest that goal commitment and wiki-based communication mediate the effect that intention has on behaviour, the existence of such variables depends on the behaviour of interest. However, we raised this context-driven propositional process in the present research. We posited and examined the mechanism bridging the intention-behaviour gap based on the existing ontology and phenomenology.

## **Author contributions**

**Eddie W. L. Cheng:** Conceptualisation, Investigation, Formal analysis, Writing – original draft, Writing – review and editing; **Kevin P. C. Cheng:** Data curation, Formal analysis, Writing – original draft.

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## References

- Abdulla, A., & Woods, R. (2021). Comparing mental contrasting with implementation intentions against solution-focused and autonomous planning. *School Psychology International*, 42(4), 398–421. <https://doi.org/10.1177/01430343211000399>
- Ain, N., Kaur, K., & Waheed, M. (2016). The influence of learning value on learning management system use: An extension of UTAUT2. *Information Development*, 32(5), 1306–1321. <https://doi.org/10.1177/0266666915597546>
- Ajzen, I. (1991). The theory of planned behaviour. *Organizational Behavior and Human Decision Processes*, 50(2), 179–211. [https://doi.org/10.1016/0749-5978\(91\)90020-T](https://doi.org/10.1016/0749-5978(91)90020-T)
- Ajzen, I., & Fishbein, M. (1980). *Understanding attitudes and predicting social behaviour*. Prentice-Hall.
- Alalwan, N., Al-Rahmi, W. M., Alfarraj, O., Alzahrani, A., Yahaya, N., & Al-Rahmi, A. M. (2019). Integrated three theories to develop a model of factors affecting students' academic performance in higher education. *IEEE Access*, 7, 98725–98742. <https://doi.org/10.1109/ACCESS.2019.2928142>
- Bagozzi, R. P. (1993). On the neglect of volition in consumer research: A critique and proposal. *Psychology & Marketing*, 10(3), 215–237. <https://doi.org/10.1002/mar.4220100305>
- Bagozzi, R. P., Davis, F. D., & Warshaw, P. R. (1992). Development and test of a theory of technological learning and usage. *Human Relations*, 45(7), 659–686. <https://doi.org/10.1177/001872679204500702>
- Cardon, P. W., & Marshall, B. (2015). The hype and reality of social media use for work collaboration and team communication. *International Journal of Business Communication*, 52(3), 273–293. <https://doi.org/10.1177/2329488414525446>
- Cheng, E. W. L. (2019). Choosing between the theory of planned behaviour (TPB) and the technology acceptance model (TAM). *Educational Technology Research and Development*, 67, 21–37. <https://doi.org/10.1007/s11423-018-9598-6>
- Cheng, E. W. L., Chu, S. K. W., & Ma, C. S. M. (2016). Tertiary students' intention to e-collaborate for group projects: Exploring the missing link from an extended theory of planned behaviour model. *British Journal of Educational Technology*, 47(5), 958–969. <https://doi.org/10.1111/bjet.12379>
- Cheung, R., & Vogel, D. (2013). Predicting user acceptance of collaborative technologies: An extension of the technology acceptance model for e-learning. *Computers & Education*, 63, 160–175. <https://doi.org/10.1016/j.compedu.2012.12.003>
- Chu, S. K. W., Siu, F., Liang, M., Capio, C. M., & Wu, W. W. Y. (2013). Users' experiences and perceptions on using two wiki platforms for collaborative learning and knowledge management. *Online Information Review*, 37(2), 304–325. <https://doi.org/10.1108/OIR-03-2011-0043>
- Chu, T.-H., & Chen, Y.-Y. (2016). With good we become good: Understanding e-learning adoption by theory of planned behaviour and group influences. *Computers & Education*, 92–93, 37–52. <https://doi.org/10.1016/j.compedu.2015.09.013>
- Cilliers, L. (2017). Wiki acceptance by university students to improve collaboration in higher education. *Innovations in Education and Teaching International*, 54(5), 485–493. <https://doi.org/10.1080/14703297.2016.1180255>
- Conner, M., Sheeran, P., Norman, P., & Armitage, C. J. (2000). Temporal stability as a moderator of relationships in the theory of planned behaviour. *British Journal of Social Psychology*, 39(4), 469–493. <https://doi.org/10.1348/014466600164598>
- Cowan, B. R., & Jack, M. A. (2014). The impact of identity on anxiety during wiki editing in higher education. *Journal of Enterprise Information Management*, 27(1), 56–65. <https://doi.org/10.1108/JEIM-09-2012-0057>
- Cronbach, L.J., & Meehl, P.E. (1955). Construct validity in psychological tests. *Psychological Bulletin*, 52(4), 281–302. <https://doi.org/10.1037/h0040957>

- Cross, A., & Sheffield, D. (2019). Mental contrasting for health behaviour change: A systematic review and meta-analysis of effects and moderator variables. *Health Psychology Review*, 13(2), 209–225. <https://doi.org/10.1080/17437199.2019.1594332>
- Dalton, A. N., & Spiller, S. A. (2012). Too much of a good thing: The benefits of implementation intentions depend on the number of goals. *Journal of Consumer Research*, 39(3), 600–614. <https://doi.org/10.1086/664500>
- Dennis, A. R., Fuller, R. M., & Valacich, J. S. (2008). Media, tasks and communication processes: A theory of media synchronicity. *MIS Quarterly*, 32(3), 575–600. <https://doi.org/10.2307/25148857>
- Dijkstra, T. K., & Henseler, J. (2015). Consistent partial least squares path modelling. *MIS Quarterly*, 39(2), 297–316. <https://doi.org/10.25300/MISQ/2015/39.2.02>
- Du, H. S., Chu, S. K. W., Chan, R. C. H., & He, W. (2016). Collaborative writing with wikis: An empirical investigation. *Online Information Review*, 40(3), 380–399. <https://doi.org/10.1108/OIR-06-2015-0173>
- Eckert, S. (2018). Fighting for recognition: Online abuse of women bloggers in Germany, Switzerland, the United Kingdom and the United States. *New Media & Society*, 20(4), 1282–1302. <https://doi.org/10.1177/1461444816688457>
- Forehand, J. W., Leigh, K. H., Farrell, R. G., & Spurlock, A. Y. (2016). Social dynamics in group work. *Teaching and Learning in Nursing*, 11(2), 62–66. <https://doi.org/10.1016/j.teln.2015.12.007>
- Gollwitzer, P. M., Sheeran, P., Michalski, V., & Seifert, A. E. (2009). When intentions go public. *Psychological Science*, 5, 612–618. <https://doi.org/10.1111/j.1467-9280.2009.02336.x>
- Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2016). *A primer on partial least squares structural equation modelling (PLS-SEM)* (2nd ed.). Sage Publication, Inc.
- Hair, J. F., Ringle, C. M., & Sarstedt, M. (2011). PLS-SEM: Indeed a silver bullet. *Journal of Marketing Theory and Practice*, 19(2), 139–152. <https://doi.org/10.2753/MTP1069-6679190202>
- Hambley, L. A., O’Neill, T. A., & Kline, T. J. B. (2007). Virtual team leadership: The effects of leadership style and communication medium on team interaction styles and outcomes. *Organizational Behavior and Human Decision Processes*, 103(1), 1–20. <https://doi.org/10.1016/j.obhdp.2006.09.004>
- Hathaway, L., & Gregg, M. (2021). Closing the intention-behaviour gap. *ACSM’s Health & Fitness Journal*, 25(4), 37–39. <https://doi.org/10.1249/FIT.0000000000000676>
- He, W., & Yang, L. (2016). Using wikis in team collaboration: A media capability perspective. *Information & Management*, 53(7), 846–856. <https://doi.org/10.1016/j.im.2016.06.009>
- Hollenbeck, J. R., & Klein, H. J. (1987). Goal commitment and the goal-setting process: Problems, prospects and proposals for future research. *Journal of Applied Psychology*, 72(2), 212–220. <https://doi.org/10.1037/0021-9010.72.2.204>
- Ismail, H. A. (2020). Users’ intention to share knowledge using wiki in virtual learning community. *International Journal of Information and Communication Technology Education*, 16(1), Article 1. <https://doi.org/10.4018/IJICTE.2020010101>
- Issa, T., Alqahtani, S. G. B., Al-Oqily, I., Goktalay, S. B., Kose, U. Issa, T., Salih, B. A., & Almufaraj, W. K. (2021). Use of social networking in the Middle East: Student perspectives in higher education. *Heliyon*, 7(4), e06676. <https://doi.org/10.1016/j.heliyon.2021.e06676>
- Jimoyiannis, A., & Roussinos, D. (2017). Students’ collaborative patterns in a wiki-authoring project: Toward a theoretical and analysis framework. *Journal of Applied Research in Higher Education*, 9(1), 24–39. <https://doi.org/10.1108/JARHE-05-2016-0034>
- Kenny, D. A., Kashy, D. A., & Bolger, N. (1998). Data analysis in social psychology. In D. Gilbert, S. Fiske, & G. Lindzey (Eds.), *The handbook of social psychology* (Vol. 1, pp. 233–265). McGraw-Hill.
- Klein, H. J., Lount, R. B. Jr., Park, H. M., & Linfood, B. J. (2020). When goals are known: The effects of audience relative status on goal commitment and performance. *Journal of Applied Psychology*, 105(4), 372–389. <https://doi.org/10.1037/apl0000441>
- Klein, H. J., Wesson, M. J., Hollenbeck, J. R., Wright, P. M., & DeShon, R. P. (2001). The assessment of goal commitment: A measurement model meta-analysis. *Organizational Behavior and Human Decision Processes*, 85(1), 32–55. <https://doi.org/10.1006/obhd.2000.2931>
- Kleingeld, A., van Mierlo, H., & Arends, L. (2011). The effect of goal setting on group performance: A meta-analysis. *Journal of Applied Psychology*, 96(6), 1289–1304. <https://doi.org/10.1037/a0024315>
- Kock, N. (2014). *A note on how to conduct a factor-based PLS-SEM analysis*. ScriptWarp Systems.

- Kock, N. (2015). *WarpPLS 5.0 user manual*. ScriptWarp Systems.
- Ku, H.-Y., Tseng, H. W., & Akarasriworn, C. (2013). Collaboration factors, teamwork satisfaction and student attitudes towards online collaborative learning. *Computers in Human Behavior*, 29, 922–929. <https://doi.org/10.1016/j.chb.2012.12.019>
- Lai, C., Lei, C., & Liu, Y. (2016). The nature of collaboration and perceived learning in wiki-based collaborative writing. *Australasian Journal of Educational Technology*, 32(3), 80–95. <https://doi.org/10.14742/ajet.2586>
- Larsen, J. K., Hermans, R. C. J., Sleddens, E. F. C., Vink, J. M., Kremers, S. P. J., Ruiters, E. L. M., & Fisher, J. O. (2018). How to bridge the intention-behaviour gap in food parenting: Automatic constructs and underlying techniques. *Appetite*, 123, 191–200. <https://doi.org/10.1016/j.appet.2017.12.016>
- Latham, G. P. (2003). Goal setting: A five-step approach to behaviour change. *Organizational Dynamics*, 32(3), 309–318. [https://doi.org/10.1016/S0090-2616\(03\)00028-7](https://doi.org/10.1016/S0090-2616(03)00028-7)
- Lehmann-Willenbrock, N., Beck, S. J., & Kauffeld, S. (2016). Emergent team roles in organisational meetings: Identifying communication patterns via cluster analysis. *Communication Studies*, 67(1), 37–57. <https://doi.org/10.1080/10510974.2015.1074087>
- Li, M., & Kim, D. (2016). One wiki, two groups: Dynamic interactions across ESL collaborative writing tasks. *Journal of Second Language Writing*, 31, 25–42. <https://doi.org/10.1016/j.jslw.2016.01.002>
- Li, M., & Zhu, W. (2017). Explaining dynamic interactions in wiki-based collaborative writing. *Language Learning & Technology*, 21(2), 96–120. <https://doi.org/10.1016/j.jslw.2017.01.003>
- Li, X., Islam, A. Y. M. A., Cheng, E. W. L., Hu, X., & Wah Chu, S. K. (2022). Exploring determinants influencing information literacy with activity theory. *Online Information Review*, 46(3), 568–589. <https://doi.org/10.1108/OIR-03-2020-0092>
- Limbu, L., & Markauskaite, L. (2015). How do learners experience joint writing: University students' conceptions of online collaborative writing tasks and environments. *Computers & Education*, 82, 393–408. <https://doi.org/10.1016/j.compedu.2014.11.024>
- Liu, I.-F., Chen, M. C., Sun, Y. S., Wible, D., & Kuo, C.-H. (2010). Extending the TAM model to explore the factors that affect intention to use an online learning community. *Computers & Education*, 54, 600–610. <https://doi.org/10.1016/j.compedu.2009.09.009>
- Locke, E. A., Latham, G. P., & Erez, M. (1988). The determinants of goal commitment. *Academy of Management Review*, 13(1), 23–39. <https://doi.org/10.5465/amr.1988.4306771>
- Loes, C. N., & Pascarella, E. T. (2017). Collaborative learning and critical thinking: Testing the link. *The Journal of Higher Education*, 88(5), 726–753. <https://doi.org/10.1080/00221546.2017.1291257>
- Masood, A., Feng, Y., Rasheed, M. E., Ali, A., & Gong, M. (2020). Smartphone-based social networking sites and intention to quit: Self-regulatory perspective. *Behavior & Information Technology*, 40(11), 1055–1071. <https://doi.org/10.1080/0144929X.2020.1740787>
- Morley, D. A. (2014). Supporting student nurses in practice with additional online communication tools. *Nurse Education in Practice*, 14, 69–75. <https://doi.org/10.1016/j.nepr.2013.06.005>
- Nielsen, K. S. (2017). From prediction to process: A self-regulation account of environmental behaviour change. *Journal of Environmental Psychology*, 51, 189–198. <https://doi.org/10.1016/j.jenvp.2017.04.002>
- Nolen, S. B., Ward, C. J., & Horn, I. S. (2011). Motivation, engagement and identity: Opening a conversation. In D. McInerney, R. Walker, & G. A. D. Liem (Eds.), *Sociocultural theories of learning and motivation: Looking back, looking forward* (pp. 109–136). Information Age Publishing, Inc.
- Norman, P., Sheeran, P., & Orbell, S. (2003). Does state versus action orientation moderate the intention-behaviour relationship. *Journal of Applied Social Psychology*, 33(3), 536–553. <https://doi.org/10.1111/j.1559-1816.2003.tb01911.x>
- Oettingen, G., Mayer, D., & Thorpe, J. S. (2010). Self-regulation of commitment to reduce cigarette consumption: Mental contrasting of future with reality. *Psychology & Health*, 25, 961–977. <https://doi.org/10.1080/08870440903079448>
- Oliveira, I., Tinoca, L., & Pereira, A. (2011). Online group work patterns: How to promote a successful collaboration. *Computers & Education*, 57(1), 1348–1357. <https://doi.org/10.1016/j.compedu.2011.01.017>

- Praskova, A., Creed, P. A., & Hood, M. (2015). Self-regulatory processes mediating between career calling and perceived employability and life satisfaction in emerging adults. *Journal of Career Development, 42*, 86–101. <https://doi.org/10.1177/0894845314541517>
- Preacher, K. J., & Hayes, A. F. (2004). SPSS and SAS procedures for estimating indirect effects in simple mediation models. *Behavior Research Methods, Instruments, & Computers, 36*(4), 717–731. <https://doi.org/10.3758/BF03206553>
- Rhodes, R. E., Plotnikoff, R. C., & Courneya, K. S. (2008). Predicting the physical activity intention-behaviour profiles of adopters and maintainers using three social cognition models. *Annals of Behavioral Medicine, 36*(3), 244–252. <https://doi.org/10.1007/s12160-008-9071-6>
- Sandberg, T., & Conner, M. (2008). Anticipated regret as an additional predictor in the theory of planned behaviour: A meta-analysis. *British Journal of Social Psychology, 47*(4), 589–606. <https://doi.org/10.1348/014466607X258704>
- Schumacher, L. M., Thomas, C., Ainsworth, M. C., & Arigo, D. (2021). Social predictors of daily relations between college women's physical activity intentions and behaviour. *Journal of Behavioral Medicine, 44*, 270–276. <https://doi.org/10.1007/s10865-020-00166-x>
- Schwarzer, R. (2008). Modelling health behaviour change: How to predict and modify the adoption and maintenance of health behaviours. *Applied Psychology: An International Review, 57*(1), 1–29. <https://doi.org/10.1111/j.1464-0597.2007.00325.x>
- Sheeran, P. (2002). Intention-behaviour relations: A conceptual and empirical review. *European Review of Social Psychology, 12*(1), 1–36. <https://doi.org/10.1080/14792772143000003>
- Sheeran, P., & Abraham, C. (2003). Mediator of moderators: Temporal stability of intention and the intention-behaviour relation. *Personality and Social Psychology Bulletin, 29*(2), 205–215. <https://doi.org/10.1177/0146167202239046>
- Sheeran P., & Webb T. L. (2016). The intention-behaviour gap. *Social and Personality Psychology Compass, 10*(9), 503–518. <https://doi.org/10.1111/spc3.12265>
- Sniehotta F. F., Scholz, U., & Schwarzer, R. (2005). Bridging the intention-behaviour gap: Planning, self-efficacy and action control in the adoption and maintenance of physical exercise. *Psychology & Health, 20*(2), 143–160. <https://doi.org/10.1080/08870440512331317670>
- Stoddart, A., Chan, J. Y.-Y., & Liu, G.-Z. (2016). Enhancing successful outcomes of wiki-based collaborative writing: A state-of-the-art review of facilitation frameworks. *Interactive Learning Environments, 24*(1), 142–157. <https://doi.org/10.1080/10494820.2013.825810>
- Su, L., Yang, X., & Huang, Y. (2022). Tourists' goal-directed behaviours: The influences of goal disclosure, goal commitment and temporal distance. *Journal of Travel Research, 61*(4), 940–960. <https://doi.org/10.1177/00472875211000446>
- Sumer, E. (2018). Factors related to college students' self-directed learning with technology. *Australasian Journal of Educational Technology, 34*(4), 29–43. <https://doi.org/10.14742/ajet.3142>
- Sutton, S. (1998). Predicting and explaining intentions and behaviour: How well are we doing? *Journal of Applied Social Psychology, 28*(15), 1317–1338. <https://doi.org/10.1111/j.1559-1816.1998.tb01679.x>
- Tan, P. J. B. (2013). Applying the UTAUT to understand factors affecting the use of English e-learning websites in Taiwan. *SAGE Open, 3*(4). <https://doi.org/10.1177/2158244013503837>
- Thürmer, J. L., Wieber, F., & Gollwitzer, P. M. (2017). Planning and performance in small groups: Collective implementation intentions enhance group goal striving. *Frontiers in Psychology, 8*, Article 603. <https://doi.org/10.3389/fpsyg.2017.00603>
- Venkatsh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). Users acceptance of information technology: Toward a unified view. *MIS Quarterly, 27*(3), 425–478. <https://doi.org/10.2307/30036540>
- Venkatsh, V., & Zhang, X. (2010). Unified theory of acceptance and use of technology: US vs. China. *Journal of Global Information Technology Management, 13*(1), 5–27. <https://doi.org/10.1080/1097198X.2010.10856507>
- Vygotsky, L.S. (1978). *Mind in society: The development of higher psychological processes*. Harvard University Press.
- Walther, J. B. (1996). Computer-mediated communication: Impersonal, interpersonal and hyperpersonal interaction. *Communication Research, 23*(3), 3–43. <https://doi.org/10.1177/009365096023001001>

- Wang, W., & Wei, Z. (2011). Knowledge sharing in wiki communities: An empirical study. *Online Information Review*, 35(5), 799–820. <https://doi.org/10.1108/14684521111176516>
- Wang, W.-T., & Lin, Y.-L. (2022). Exploring social networking sites and problem-based learning in healthcare education in Taiwan: A difference analysis. *Kybernetes*, 51(3), 1231–1249. <https://doi.org/10.1108/K-08-2020-0535>
- Webb, T. L., & Sheeran, P. (2006). Does changing behavioural intentions engender behaviour change?: A meta-analysis of experimental evidence. *Psychological Bulletin*, 132(2), 249–268. <https://doi.org/10.1037/0033-2909.132.2.249>
- Woo, M., Chu, S., Ho, A., & Li, X. (2011). Using a wiki to scaffold primary-school students' collaborative writing. *Educational Technology and Society*, 14, 43–54. [https://drive.google.com/open?id=1GgFPqw7dlfKiwEv9Ydjed\\_8cMKOCSlAB](https://drive.google.com/open?id=1GgFPqw7dlfKiwEv9Ydjed_8cMKOCSlAB)
- Yueh, H.-P., Huang, J.-Y., & Chang, C. (2015). Exploring factors affecting students' continued wiki use for individual and collaborative learning: An extended UTAUT perspective. *Australasian Journal of Educational Technology*, 31(1), 16–31. <https://doi.org/10.14742/ajet.170>
- Zimmerman, B. J., Bandura, A., & Martinez-Pons, M. (1992). Self-motivation for academic attainment: The role of self-efficacy beliefs and personal goal setting. *American Educational Research Journal*, 29(3), 663–676. <https://doi.org/10.3102/00028312029003663>
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