

The Theory of Planned Behaviour and Healthcare Students' Intentions to Communicate With Foreign Co-workers

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Abstract : The Japanese government's plans to increase the number of foreign healthcare workers in Japan will make second-language workplace communications more likely. This research used the theory of planned behaviour to model healthcare students' attitudes towards these interactions. The results demonstrated that this model was suitable for investigating such behaviour. As more and more non-Japanese workers start to be employed in the Japanese healthcare system, this study will be of interest to those involved in both healthcare education and hospital administration.

Key words: second-language use, theory of planned behaviour, Japanese healthcare system

Introduction

One of the more intractable issues facing Japan is its rapidly aging population. Not only is this causing a decline in the size of its workforce, it is also increasing demand for healthcare related services. Therefore, the healthcare industry in Japan is facing pressure from both directions.

The government is seeking to alleviate some of the manpower shortage issues by encouraging foreign workers to come and work in Japan. It is attempting to add up to 60,000 non-Japanese healthcare providers to the workforce within the current five year period. This expansion will be accomplished through a combination of easing visa restrictions and promoting training programs (Immigration Services Agency of Japan, 2022).

As these non-Japanese workers begin to be employed in healthcare institutions around Japan, there will no doubt be cultural and linguistic challenges faced by everyone involved. These challenges will include those encountered by healthcare administrators as they attempt to assimilate the new workers into their institutions and workspaces. However, the greatest foreseeable area for

difficulties lies in the interrelationships at the co-worker level. This is due to the high number of interactions that are likely to occur in the course of day-to-day work-based activities. Therefore, this research attempts to investigate the attitudes and behavioural intentions of pre-service Japanese healthcare workers towards second-language (L2) communications in the workplace.

This study follows on from a previous one that looked at the reasons and impediments that pre-service nurses could envision for communicating in an L2, in this case English, with non-Japanese co-workers, and their intention to engage in such interactions (Hoggard, 2021). In the current investigation, a much larger group of pre-service healthcare workers, from a variety of disciplines, were surveyed and their responses analysed through the framework of the theory of planned behaviour.

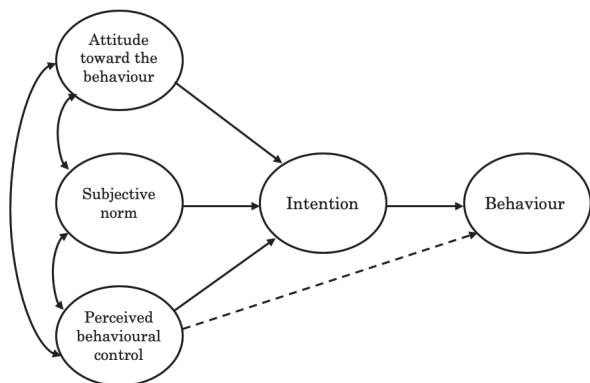
Literature Review

The theory of planned behaviour (TPB) is a cognitive-based behavioural model that connects attitudes, subjective norms, and perceived behaviour control regarding a goal-directed behaviour, with the intention to perform the behaviour (Ajzen, 2012). This model states that an individual's behavioural intention is a product of their attitudes towards the behaviour, how they view their social referent's opinions

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regarding the behaviour, and the degree to which they believe they can adequately perform the behaviour (see Figure 1 below).

Figure 1
Theory of Planned Behaviour Based on Ajzen (1987)



As can be seen in the figure above, attitudes, subjective norms, and perceived behavioural control all combine to form behavioural intention, which precedes the actual behaviour. Perceived behavioural control can also directly affect the performance of the behaviour. This occurs when an individual's self-perceived behavioural control diverges from their actual behavioural control.

The TPB has been used to investigate a wide variety of behaviours, ranging from public transport use (Heath & Gifford, 2002), to food consumption (Vermeir & Verbeke, 2008). Furthermore, meta-analysis has shown that the model can consistently account for 40~49% of the variance in intention to perform the behaviours it has investigated (McEachan, Conner, Taylor, & Lawton, 2011).

However, the TPB has not often been utilised in the study of communication or language learning behaviours. One noticeable exception being a study of over 600 high school English learners in South Korea, which found the TPB to be an effective social-psychological model for predicating the intention to learn an L2 (Kim & Pae, 2019).

Within the field of L2 communication research, intention to communicate has often been equated with the willingness to communicate construct (e.g. MacIntyre, Dörnyei, Clément, & Noels, 1998). Previous studies in the Japanese context have found significant correlations between willingness to communicate and actual communication behaviours (e.g. Yashima, Zenuk-Nishide & Shimizu, 2004).

The previous study into a similar cohort of pre-

service healthcare workers uncovered a wide range of reasons they could envisage for communicating in English with non-Japanese co-workers (Hoggard, 2021). These reasons included instrumental factors, such as the most commonly cited reason, improving their English ability. They also included integrative factors, such as making friends with non-Japanese colleagues. While the two reasons above were both given as options for the participants to select, they could also add their own ideas. Among the ones they added were that they could broaden their view of the world and be able to provide healthcare to a larger group of people if they used English at work.

Participants in the previous study also had an opportunity to select impediments that they could see preventing them from communicating in English at work. By far and away the impediment most commonly selected from the available options was a lack of confidence in their own English ability. Among the impediments added by the participants were communication anxiety, and also a reluctance to engage with foreigners.

Methods

This research was conducted at a medical university in Japan. Four groups of pre-service healthcare workers were surveyed: nurses, medical technicians, social workers, and psychologists. The medical technician and psychology students were first-years, the nursing and social work students were second years. Participation in the survey was completely voluntary, in total 261 students responded.

The research instrument was a questionnaire that was administered via the use of QR codes and Google Forms to minimise the risk of viral transmission during the COVID-19 pandemic. The questionnaire contained twelve items, three for each of the four constructs measured. For each item the participants rated their level of agreement to a statement on a six-point Likert scale, ranging from strongly disagree to strongly agree. As the scale had six points there was no neutral midpoint.

The questionnaire items were first written in English before being translated into Japanese and checked by an L1 Japanese speaker. An example of the statements assessing the participants' attitudes towards L2 communication with non-Japanese co-workers is, 'Using English to communicate with my co-workers would be useful'. An example of the subjective norm statements is, 'My friends would be impressed if I used English to communicate with my co-workers'. An example of the perceived behavioural control

statements is, 'I can communicate in English without becoming nervous'. And finally, an example of the statements assessing the participants' intention to communicate in an L2 with non-Japanese co-workers is, 'I would talk to my co-workers in English if I had the chance'.

The responses obtained from the survey were entered into SPSS (Ver 23) and checked for anomalous or missing data before being analysed. The results of this analysis are presented in the following section.

Results

The four scales were checked for reliability and grouped together to form composite scores for behavioural intention, attitudes, subjective norms, and perceived behavioural control. These scores were then analysed to test the TPB model introduced above. It should, however, be noted that actual behaviour was not measured as part of this study.

A multiple regression was carried out to investigate whether attitude, subjective norms, and perceived behavioural control could significantly predict the participants' intention to engage in L2 communication with non-Japanese co-workers. The results of the regression indicated that the model explained 63.7% of the variance and that it was a significant predictor of behavioural intention, $F(3,257) = 150.08, p = .000$. All of the factors contributed significantly to the model (see Table 1 below).

Table 1
Summary Statistics, Correlations, and Regression Results (N = 261)

Variable	Mean	SD	Correlations	B
BI	4.55	.87		
Attitude	5.00	.78	.754***	.696***
SN	4.42	.91	.466***	.153***
PBC	2.18	.93	.422***	.201***

BI = Behavioural intention, SN = Subjective norm, PBC = Perceived behavioural control

* $p < .05$, ** $p < .01$, *** $p < .001$

The means shown in the table above show a higher than neutral (3.5) score for behavioural intention, attitudes, and subjective norms. The only factor to be lower than the mid-point was perceived behavioural control.

Discussion

The results from the multiple regression analysis presented in the previous section indicate that the TPB model is a suitable one for investigating L2 communication intention between co-workers in the Japanese healthcare system. A score of over 60% for the explained variance is higher than expected from meta-analysis of previous studies, which suggested scores in the 40~50% range were more common (McEachan, Conner, Taylor, & Lawton, 2011). However, it has been found that studies utilising self-reported measures do tend to report higher levels of explained variance (Armitage & Connor, 2001).

The higher than the neutral mid-point mean score for behavioural intention returned in this survey suggest that the participants have a positive inclination towards L2 communication with non-Japanese co-workers. This is encouraging when considering how well the new additions to the Japanese healthcare workforce are likely to assimilate and cooperate together to create a harmonious working environment.

Both attitudes and subjective norms also had higher than neutral mean scores. This, again, is promising in that it indicates that the participants do not only view L2 use with co-workers in a positive light, they also perceive their social referents as viewing such behaviour positively. These results give further credence to the supposition that Japanese healthcare workers will be welcoming towards their non-Japanese colleagues.

In spite of the positive results for attitudes and subjective norms, the low mean scores and correlations for the perceived behavioural control factor suggest that this is an area of concern. As all three factors, attitudes, subjective norms, and perceived behavioural control, combine to generate behavioural intention, a weak score from just one factor can have an impact on intention, and thus actual behaviour. In a previous study, low levels of perceived behavioural control, in the form of self-efficacy beliefs regarding L2 competence, have been linked to reduced verbal output of language students using a TPB based model (Zhong, 2013).

However, identification of the area requiring attention is always a necessary step in producing strategies and plans for interventions that can be used to address the issue. In this case, it is clear that self-confidence in their ability to communicate effectively is acting as a dampener on the participants' intention to communicate with their co-

workers in English. Low levels of L2 communication self-confidence or self-efficacy is an issue that has surfaced in previous studies in the Japanese context (e.g. Ball & Edelman, 2018), so it is not unique to this particular group of learners. It was also the most selected impediment chosen in an earlier study at the same institution (Hoggard, 2021). Therefore, it will not be a simple matter to address. For this type of behaviour, communicating with non-Japanese co-workers who are themselves not L1 English speakers, interventions aimed at fostering an awareness of World Englishes might alleviate some of the concerns they may have in regards to making mistakes, or not producing L1-level English.

Finally, although the results of this survey and analysis are encouraging, they only investigated the *intention* to communicate in an L2 with non-Japanese co-workers. The link between intention and actual behaviour can be affected by a variety of factors (Ajzen, 2015). As the participants in this study are still pre-service, it is conceivable that their opinions and attitudes may shift by the time they enter the workforce. It is also possible that there is a gap between self-perceived behavioural control and actual control. However, given the low scores already recorded for behavioural control, this unlikely to be a factor in this instance.

Conclusion

This study indicated that the theory of planned behaviour is a useful model for investigating second-language communication intention between Japanese and non-Japanese healthcare workers. Multiple regression analysis of the questionnaire data showed that over 60% of the variance in behavioural intention could be explained by a model incorporating attitudes, subjective norms, and perceived behavioural control.

However, although the results also suggested that Japanese pre-service healthcare workers would be open to such interactions, there are a number of caveats that should be considered. First of all, as the participants in this study are still students, it is possible their opinions differ from in-service workers. Secondly, as they were not included in the current study, it is unknown whether the non-Japanese healthcare workers would be willing participants in L2 communication behaviours. It is possible that they would not be able to communicate with their Japanese colleagues in English, even if they were willing. It is also likely that they would prefer to communicate in Japanese with co-workers, in order to improve their ability to communicate with their, mostly

Japanese, patients.

Considering the limitations and unanswered questions outlined above, it would be useful to do a follow-up study including both in-service Japanese and non-Japanese healthcare workers. An even more comprehensive picture would be created if non-Japanese pre-service healthcare students could be surveyed before they came to Japan.

References

- Ajzen, I. (1987). Attitudes, traits, and actions: Dispositional prediction of behavior in personality and social psychology. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 20, pp. 1-63). New York, NY: Academic Press.
- Ajzen, I. (2012). The theory of planned behavior. In P. A. M. Lange, A. W. Kruglanski & E. T. Higgins (Eds.), *Handbook of theories of social psychology* (Vol. 1, pp. 438-459). London, UK: Sage.
- Ajzen, I. (2015). The theory of planned behaviour is alive and well, and not ready to retire: A commentary on Sniehotta, Priesseau, and Araújo-Soares. *Health Psychology Review*, 9, 131-137.
- Armitage, C. J., & Conner, M. (2001). Efficacy of the theory of planned behaviour: A meta-analytic review. *British Journal of Social Psychology*, 40, 471-499.
- Ball, S., & Edelman, C. (2018). Self-efficacy, motivation, and perceived importance of English as an L2 among Japanese university students. *Language Teacher*, 42, 13-18.
- Heath, Y., & Gifford, R. (2002). Extending the theory of planned behavior: Predicting the use of public transportation. *Journal of Applied Social Psychology*, 32, 2154-2189.
- Hoggard, S. (2021). Nursing Students' Intentions, Reasons, and Impediments Regarding English Communication With Foreign Co-workers. *Health Sciences University of Hokkaido — Journal of Nursing and Social Services*, 28, 31-34.
- Immigration Services Agency of Japan. (2022). Initiatives to accept new foreign nationals and for the realization of society of harmonious coexistence. <https://www.moj.go.jp/isa/content/930004452.pdf>
- Kim, K., & Pae, T. I. (2019). Social psychological theories and sustainable second language learning: A model comparison approach. *Sustainability*, 11, 1-16.
- MacIntyre, P. D., Dörnyei, Z., Clément, R., & Noels, K. A.

- (1998). Conceptualizing willingness to communicate in a L2: A situational model of L2 confidence and affiliation. *The Modern Language Journal*, 82, 545-562.
- McEachan, R.R.C., Conner, M., Taylor, N., & Lawton, R.J. (2011). Prospective prediction of health-related behaviors with the Theory of Planned Behavior: A meta-analysis. *Health Psychology Review*, 5, 97-144.
- Vermeir, I., & Verbeke, W. (2008). Sustainable food consumption among young adults in Belgium: Theory of planned behaviour and the role of confidence and values. *Ecological Economics*, 64, 542-553.
- Yashima, T., Zenuk-Nishide, L., & Shimizu, K. (2004). The influence of attitudes and affect on willingness to communicate and second language communication. *Language Learning*, 54, 119-152.
- Zhong, Q. M. (2013). Understanding Chinese learners' willingness to communicate in a New Zealand ESL classroom: A multiple case study drawing on the theory of planned behavior. *System*, 41, 740-751.