A MODERATED SERIAL MEDIATION ANALYSIS OF WORKSHOP ELICITED BEHAVIOUR CHANGE: VALIDATION AND EXTENSION OF THE THEORY OF PLANNED BEHAVIOUR

PREDICTING BEHAVIOUR

Theory of reasoned action (TRA) & Theory of Planned Behaviour (TBP)

TRA & TPB suggests intentions are best predictor.
- Intentions are a function of personal attitudes & perceived subjective norms $^3,4$.
- Also included perceived behavioural control – inappropriate for current study.

Other work has extended this to include two other phases $^1,2,5$
- Deliberative: which goals to pursue.
- Implemental: when, where and how to pursue these goals.
- Currently mixed evidence whether this is worthwhile including in behaviour prediction.
THE EFFECT OF ENVIRONMENT

Antecedent processes are behaviours elicited in a group environment that are believed to facilitate learning in groups.\textsuperscript{6}

Important to note: focus is on behaviours that may result in learning, opposed to learning itself.

Current practice in educational workshops involves only assessing essentially antecedent processes, although substantial variation exists.
Figure 1. Theoretical pathway.
CURRENT DATA

The WEE was designed to measure these aspects.

- Resulted in three domains: Antecedents, Belief & Decisional scores.
  - Antecedents = the environment, psychological safety, effectiveness of educator in communicating $\alpha = .64$
  - Belief = composite of Attitudes towards the behaviour and perceived Subjective Norms around the behaviour $\alpha = .75$
  - Decisional = composite of Deliberative processes of deciding whether or not to pursue a behaviour, and Implemental, deciding when, where and how to perform a behaviour $\alpha = .80$

- However, previous results found a significant interaction between antecedents and belief scores.

- Pearson’s correlations with a self-report and observation based measure of behaviour are robust, $r = .53$ and $r = .66$ respectively, strongly supporting predictive validity.
HYPOTHESIS

It is suggested that a moderated serial mediation pathway will be present in the data.

Antecedent scores will be the best predictor of belief scores.
Beliefs will be the best predictor of decisional scores
Decisional scores will be the best predictor of behaviour.
This pathway will differ based on antecedent scores of participants.

Can assess with an OLS regression pathway analysis.
MODERATION & MEDIATION

Moderation is where a relationship amongst the data exists only at certain levels of a third variable.

Mediation is where a relation amongst the data is explained by a third variable.

Moderated mediation is where a mediation occurs only at certain levels of a third variable.
- Moderated serial mediation suggests the serial pathway may only exist at certain levels of a third variable.
MODERATION
MEDIATION

Direct relationship

Mediated relation

Serial Mediation

How much variance can be predicted in the target variable directly from the direct relationship compared to the mediated relationship?
Assess for serial mediation with interaction term.

Found to predict significant variance in behaviour, $R = .55$, $R^2 = .31$, $F(4, 67) = 7.43$, $p < .001$

- Lack of complete serial mediation.
- Interaction term prompts follow up by split file analysis.
WHEN ANTECEDENTS ARE LOW

Failed to predict significant variance in behaviour, $R = .37$, $R^2 = .14$, $F(3, 29) = 1.55$, $p = .22$

- Complete serial mediation present at this level.
- However, variance in behaviour is not accounted for.
WHEN ANTECEDENTS ARE HIGH

Found to predict significant variance in behaviour, $R = .79$, $R^2 = .62$, $F(4, 18) = 10.41, p < .001$.

Included covariate of topic code as it was significant.

- Serial mediation can be seen when antecedents are high.

- Further more, very high variation in behaviour predicted.
PRELIMINARY INTERPRETATION

When Antecedents are low, behaviour cannot be reliably predicted.

When antecedents are high, can be predicted with substantial success.

Likewise, complete serial mediation pathway appears to exist when antecedents are low, but not when antecedents are high.

- This suggests a unique case of moderated serial mediation and emphasizes both the importance of antecedent processes and the insufficiency of only measuring antecedent processes.
THE FAILINGS OF CURRENT WORKSHOP EVALUATION

Current practice is to assess the equivalent of antecedent processes.

- This is insufficient to judge the efficacy of a workshop in changing behaviour.
- Both the participants beliefs about the behaviour and their immediate decisions about the behaviour have a role.
  - Need to include this in future evaluation.

Current measure suggests that tracking a breakdown of behaviour change might be possible.
THE VALUE OF CURRENT WORKSHOP EVALUATION

The drastic moderating effect of antecedents on the total model suggest one very important idea: if the environment is not conducive for learning, education is ineffective at altering behaviour.
THEORY OF EDUCATIONAL TRANSLATION

• TRA/TPB are now misnomers for the current model.

• Theory of Educational Translation best explains current model.

• Take home message: Ensuring a suitable environment for education is necessary but not sufficient to translate education into behaviour. Learners must also have belief in the value of the behaviour along with specifically intending to perform the behaviour.
REFERENCES


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