

Title

Predicting Teacher Attrition at the Secondary School Level

Abstract

Teacher attrition is a worldwide phenomenon and many teachers leave the profession before retirement. Teacher behaviour, such as developing an intention to leave, is influenced by individual and contextual (school) factors. A (theoretical) model explaining teacher behaviour at the school level can help, as on this level, organisational improvements can be implemented. The Self-Determination Theory, Integrated Model of Behaviour Prediction and a combination were compared with a survey among Dutch teachers (n=199) to identify their explaining value for teacher attrition. Significant variables were found in both models (Autonomy, Competence, Self-Determined Motivation, Attitude and Perceived norm), and the strongest correlations between Attitude and Perceived norm and teacher attrition were found in the Integrated Model of Behaviour Prediction, both leading to recommendations at the school level.

Extended summary*Theoretical background and research question*

Addressing the teacher attrition problem at the school level might open up opportunities for schools to keep their teachers on board. Teacher behaviour is influenced by various individual and contextual factors and their interrelationships (Deci & Ryan, 2000; Fishbein & Ajzen, 2010) that occur at the school level. Utilizing theoretical models that explain these interrelationships could provide better insight into the factors behind teacher attrition (Den Brok et al., 2017). In this study, two established theories were considered possible explanations for teacher behaviour leading to attrition: Deci and Ryan's (2000) Self-Determination theory and Fishbein and Ajzen's (2010) Integrated Model of Behaviour Prediction. Both theories are widely used in educational contexts and have proved to be effective in predicting behaviour outcomes in the educational field (Hobson & Maxwell, 2016; Kreijns et al., 2014; Pryor & Pryor, 2009). Considering the overlap between the two theories, a combined model (in which the Self-Determination Theory precedes the Integrated Model of Behaviour Prediction) might also apply to the situation of teacher attrition at the school level, as former studies showed the relevance of such a combined model in health and educational contexts (Hagger & Chatzisarantis, 2009; Kreijns et al., 2014). This study aims to identify which (combination of) models best explains teacher attrition at the school level, contributing to a better understanding of teacher attrition in secondary education in the Netherlands. This is expressed in the following research questions:

1. To what extent does the Self-Determination Theory (including satisfaction of Autonomy, Relatedness, and Competence as Basic Psychological Needs), by indicating factors that explain Self-Determined Motivation, contribute to understanding teacher attrition at the school level in secondary education in the Netherlands?
2. To what extent does the Integrated Model of Behaviour Prediction (including Attitude, Perceived Norm, and Perceived Control) predict teacher attrition at the school level in secondary education in the Netherlands?
3. To what extent does a combined model of the Self-Determination Theory (including satisfaction of Autonomy, Relatedness, and Competence as Basic Psychological Needs) and the Integrated Model of Behaviour Prediction (including Attitude, Perceived Norm, and Perceived Control) predict teacher attrition at the school level in secondary education in the Netherlands?

Research design

A cross-sectional quantitative design was used to explore the predictive value of the proposed models. As it is impossible to acquire a sample of teachers who have left the teaching profession at their school, *intention to leave* was used as the dependent variable in the Integrated

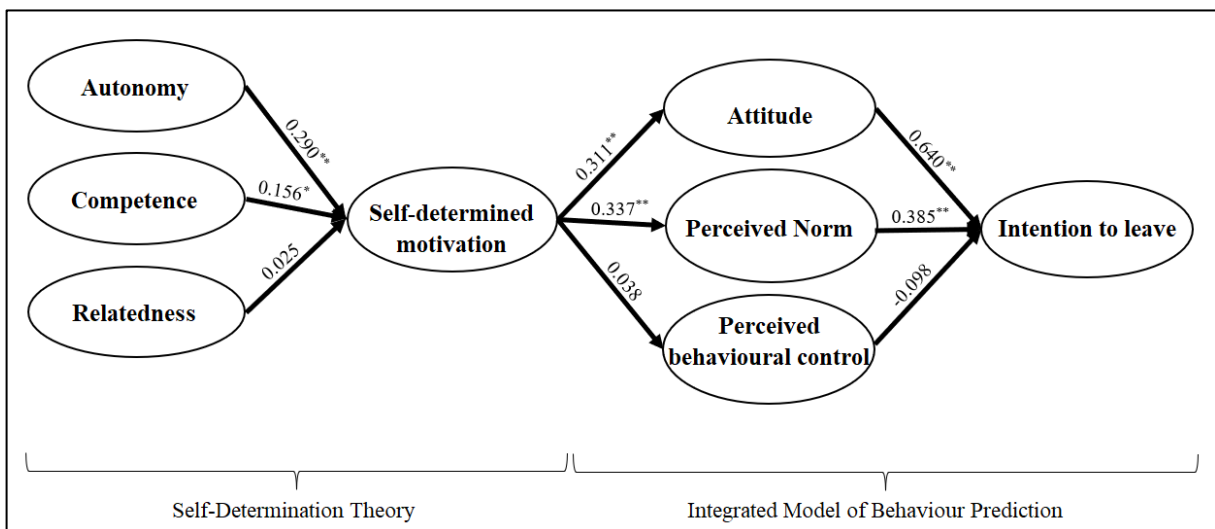
Model of Behaviour Intention and in the combined model; while self-determined motivation was the dependent variable in the first model. The survey was conducted among 199 teachers from more than 30 secondary education schools in the Netherlands. The questionnaire used for the survey consisted of existing validated scales belonging to the Self-Determination Theory (Deci & Ryan, 2000) and the Integrated Model of Behaviour Prediction (Fishbein & Ajzen, 2010). After determining the structure of the questionnaire through CFA using Lavaan (Rosseel, 2012), a correlation matrix was constructed with R to gain insight into the relations between the various variables. Subsequently, the applicability of the Self-Determination Theory, the Integrated Model of Behaviour Prediction, and the combined model of both theories was determined using Structural Equation Modeling (SEM).

Results and conclusions

The SEM model constructed with the Self-Determination Theory as a single theory and the SEM model constructed with the Integrated Model of Behaviour Prediction as a single theory both had good model fits, while the combined model had a less satisfactory fit.

In the single theory models, Autonomy and Competence turned out to be significant predictors of Self-Determined Motivation and Attitude and Perceived Norm turned out to be significantly related to Intention to leave. In the combined model, these significances were also found, as well as a significant relation between Self-Determined Motivation and Attitude and Perceived Norm (Figure 1).

Figure 1. Intention to leave explained by a combined model based on the Self-Determination Theory and the Integrated Model of Behaviour Prediction (Hagger et al., 2006; Kreijns et al., 2014; Vallerand & Ratelle, 2002). *Note.* Coefficients are standardized regressions coefficients. * $p < .05$, ** $p < .01$.



Contribution to the educational practice

This study contributes to the understanding and prediction of teacher attrition at the school level in the Netherlands. The four variables that were found to have predictive power in both the separate models and the combined model were Autonomy and Competence (Self Determination Theory) and Attitude and Perceived norm (Integrated Model of Behaviour Prediction). These four variables provide opportunities for schools to meet teachers' needs. Enforcing teachers' feelings of autonomy and competence can contribute to their self-determined motivation, which in turn contributes to their attitude towards leaving the teaching profession. This enforcement may take place at the school level, as the degree of autonomy teachers have is often determined - implicitly or explicitly - by school policies or school administrators. Further research is needed to specify the background of this variable, as autonomy can refer to different aspects of the teacher's job (inside or outside the classroom, related to paperwork or educational innovations, etc.). Teachers' feelings of

competence are intrinsic but can also be influenced at the school level by (un)supportive colleagues and principals.

Teachers' attitudes towards leaving the teaching job may be influenced at the school level by good human resources policies. Schools not only need to attract teachers to their vacancies but also have a responsibility to keep their staff engaged and motivated during their time at the school. Furthermore, Perceived norm has a significant impact on teachers' intentions to leave, as people tend to base their conclusions and behaviour not only on work-related factors but also on other contextual and individual factors (Appelbaum et al., 2000; Fishbein & Ajzen, 2010), such as the opinions of important others in their environment. For the further interpretation of the found results, the Present & Discuss session during the EAPRIL 2024 will be used. Participants will be asked to reflect on the significant findings concerning the four variables and will be encouraged to share their own experiences, ideas, and concrete examples from practice related to these findings (Padlet will be used). These insights will be used to come to a further interpretation of the findings and the usability of this model.