

# On the dynamic relationship between contextual and situational motivation in German physical education: A longitudinal approach

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## Introduction

In order to better understand motivation in the physical education (PE) context, motivation should be analysed as a multidimensional construct that is changeable over time and exists at different levels of hierarchy (Deci & Ryan, 2000; Vallerand, 1997). The hierarchical model of intrinsic and extrinsic motivation (HMIEM, Vallerand, 1997; Vallerand & Ratelle, 2002) proposes the existence of a dynamic relationship between adjacent levels of motivation in the hierarchy, for example between contextual motivation (e.g., context PE) and situational motivation (e.g., specific PE class). These dynamic relationships could be addressed as top-down (TD) effects and bottom-up (BU) effects. Due to a lack of research in the PE context, the purpose of the present study is to analyse TD and BU effects over a period of three weeks.

## Method

The sample consisted of 128 students aged between 14 and 21 years ( $M = 16.00$ ;  $SD = 1.50$ ; 36 % female, 51% male, 13 % missing<sup>1</sup>) from different German secondary schools. Contextual motivation was assessed with the German version of the Perceived Locus of Causality Questionnaire (PLOCQ-G; Wolf et al., 2021; original version from Goudas et al., 1994; calculated as Relative Autonomy Index (RAI), taking into account all six forms of behavioural regulation). Situational motivation was measured with the German version of the short scale of intrinsic motivation ("Kurzsкала intrinsische Motivation" (KIM); Wilde et al., 2009; original version from Deci & Ryan, 2003; calculated as situational autonomous and controlled motivation factors). Data acquisition was conducted at five measurement time points within three weeks, of which the first (t1) and last (t5) time points measured contextual motivation. Situational motivation was assessed at the three measurement points in between (immediately after PE class; t2, t3, t4) (s. Figure 1). In order to test TD and BU effects, a path analysis using IBM SPSS AMOS 27 was conducted.

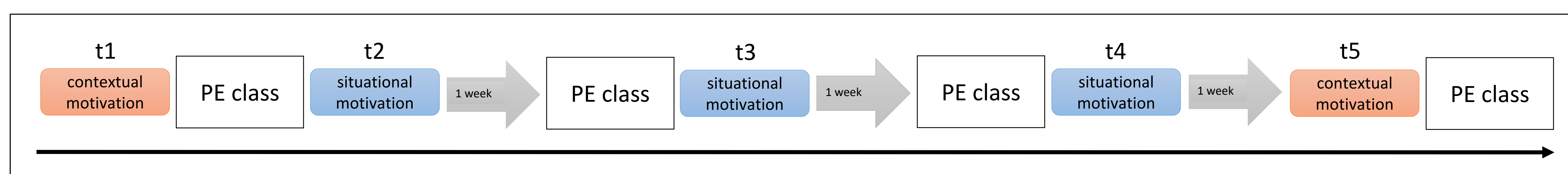


Figure 1. process of data acquisition.

## Results

**TD effect:** The positive paths of contextual motivation on situational autonomous motivation were all found to be significant. The paths of contextual motivation on situational controlled motivation were all not found to be significant.

**BU effect:** Only the positive path between situational autonomous motivation at t3 and contextual motivation at t5 was significant, as well as the negative path between situational controlled motivation at t4 and contextual motivation at t5. All results of the path analysis are presented in Figure 2.

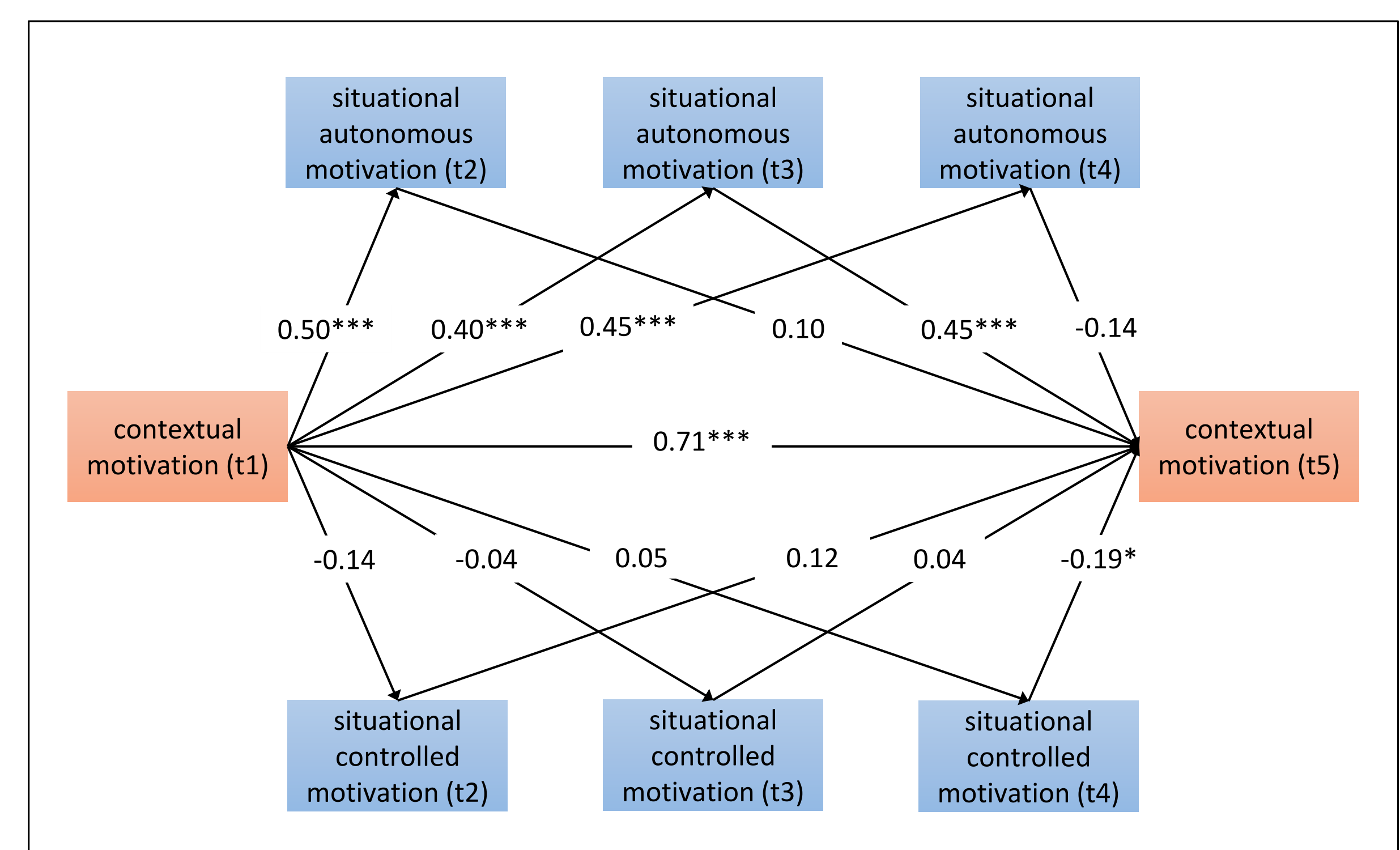


Figure 2. Structural model with path coefficients. Note. \*\*\*  $p < .001$ , \*  $p < .05$ .

## Discussion

The study clearly confirms TD effects between contextual motivation and subsequent situational autonomous motivation. Therefore, contextual motivation has above all an influence on the subsequent situational autonomous motivation. The study only confirms BU effects for situational autonomous and situational controlled motivation at one time point each. BU effects can therefore scarcely be found in a short time frame (i.e., three weeks) in PE, which means that only certain situations have impact on contextual motivation.

<sup>1</sup> Missing values result from the absence of data from participants at t1, because the age of the participants was only recorded at t1.

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Schulsport2030 is part of the "Qualitätsoffensive Lehrerbildung", a joint initiative of the Federal Government and the Länder which aims to improve the quality of teacher training. The programme is funded by the Federal Ministry of Education and Research. The authors are responsible for the content of this publication.

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