**Effects of Experimentally Induced Choice on Motivation in Middle Childhood:**

**The Moderating Role of Teacher and Student Characteristics**

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ABSTRACT

Objectives. Based on Self-Determination Theory (SDT), many studies have investigated  
the effects of choice provision on people’s intrinsic motivation. However, the number of  
experimental studies is still limited and many questions concerning moderating factors are still open. Therefore, we set up an experimental field study to examine the effect of choice  
provision (versus choice deprivation) on the intrinsic motivation of elementary school children. In doing so, we addressed the moderating role of teacher (i.e., child-teacher relatedness and teachers’ general autonomy-supportive teaching style) and child (i.e., indecisiveness) characteristics.

Methods. In a group of elementary school children (N = 104), we induced an  
experimental manipulation of choice in which the teacher allowed half of the children to  
perform their preferred painting activity (i.e., the choice provision condition), while the other half was  
obliged to do another one (i.e., the deprivation of choice condition). After actually performing  
the activities, we assessed levels of intrinsic motivation, need satisfaction, and psychological  
well-being through questionnaires.

Results. Results showed that children in the choice condition displayed enhanced  
intrinsic motivation, higher levels of need satisfaction, and more vitality in performing the  
painting activity. In addition, the perceptions of choice and the experience of competence  
satisfaction mediated these main effects of choice provision. Further, multiple regression  
analyses showed that high-indecisive children benefitted less from choice provision in terms of  
intrinsic motivation.

Conclusion. This study identifies choice provision as a contextual factor to enhance  
children’s intrinsic motivation and reveals the attenuating effect of indecisiveness. Limitations  
and directions for future research are discussed.

**SUMMARY**

Intrinsic motivation is a key motivational resource with beneficial effects on students’ engagement, well-being, and performance. In the motivational literature and in literature based on Self-Determination Theory (SDT, Deci & Ryan, 2000) in particular, many studies have investigated how various external events affect intrinsic motivation (e.g. providing optimal challenges, providing guidance and enough time, etc.). One commonly discussed, yet somewhat controversial, motivational technique is the provision of choice. Specifically, many studies revealed positive and beneficial effects on students’ intrinsic motivation and needs satisfaction after choice was provided (e.g. Patall et al., 2010). For instance, choice provision was found to result in more engagement and interest in class (e.g. Flowerday & Schraw, 2000). However, other scholars are more critical about the benefits of choice and claim that, at least in some individuals or cultures, choice may backfire (e.g. Schwartz, 2000). For instance, highly indecisive individuals may experience the provision of choice as stressful rather than as motivating.

In an attempt to contribute to the literature on the complex effects of choice, we set up an experimental field study to examine the effect of choice provision, versus choice deprivation, on the intrinsic motivation and psychological well being of elementary school children. On the basis of SDT, we hypothesized that the provision of choice would lead to students’ subjective experience of choice which, in turn, would contribute to the satisfaction of the needs for autonomy and competence and subsequent intrinsic motivation. To the best of our knowledge, to date no experimental research tested this detailed and integrated model of the effects of choice among elementary school students. This is unfortunate because intrinsic motivation is of utmost importance in this developmental period. Moreover, many questions concerning contextual factors that affect the effect of choice provision are still open. In doing so, we addressed the role of several potential moderating factors. First, we addressed the role of child-teacher relatedness as a potential moderator. It has indeed be argued that the harmful effect of choice deprivation would be suppressed in close child-teacher relationships (Bao & Lam, 2008). Second, we examined whether the positive impact of choice provision on intrinsic motivation would be limited to students who are used to receive choice from their teachers and who generally experience teachers as autonomy-supportive. Third, we examined whether the motivational effects of choice are affected by the extent to which students are indecisive.

In an elementary school, children (*N* = 104; 51.9% female; mean age = 10.2 years) from seven classes were asked to make a choice between three interesting painting activities (‘graffiti’, ‘painting in the dark’ or ‘painting with marbles’). At this moment, we also assessed levels of child-teacher relatedness, the teacher’s overall level of autonomy-support in class and children’s personal indecisiveness. In the afternoon, we induced an experimental manipulation of choice, with half of the children being allowed (so said by the teacher) to perform their preferred activity (i.e., the choice provision condition) and with the other half of the children being obliged (again so said by the teacher) to do another activity (i.e., the choice deprivation condition). The children then actually performed the activities. Afterwards, when children were gathered back in their classrooms, we assessed levels of perceived choice, need satisfaction and intrinsic motivation through questionnaires.

Results showed significant main effects of choice provision, versus choice deprivation, such that children in the choice condition displayed enhanced intrinsic motivation, higher levels of need satisfaction, and more vitality in performing the painting activity. A path analysis indicated that effects of choice provision on intrinsic motivation were mediated by perceptions of choice and experiences of autonomy and competence satisfaction. These findings indicate that subjectively felt choice and the increased feelings of competence satisfaction following from felt choice explain largely the association between choice provision and enhanced intrinsic motivation. Further, multiple regression analyses indicated one moderating effect, showing that high-indecisive children benefited less from choice provision in terms of intrinsic motivation and competence need satisfaction. Importantly, simple slope analysis revealed that choice provision was still beneficial for children high on indecisiveness.

These results demonstrate that provision of choice is generally beneficial for enhancing intrinsic motivation among elementary school students. In addition, we found evidence for indecisiveness as a personal factor attenuating the benefits of choice provision. In terms of practical implications, this finding might inform teachers to apply choice provision in class and to provide guidance for children who are high indecisive. In terms of theoretical implications, we believe that the current design is a suitable base for future research in order to address further questions and features of choice provision. For example, psychophysiological measurements (e.g. EEG, ECG) may add to our understanding of the motivational effects of choice provision versus choice deprivation. Second, future studies on the theme of choice should include a neutral / control condition (i.e. choice is not provided / deprived) to reveal whether the impact on intrinsic motivation is due to the deprivation (i.e. decreased intrinsic motivation) or to the provision of choice (i.e. increased intrinsic motivation). Third, it is important to determine whether the effects of choice provision depend on the amount of options, on the attractiveness of the options and on the differences between options. In general, research with high levels of ecological validity is of utmost importance to both the scientific literature and to classroom practice because the provision of choice has the potential to optimally motivate students and, ultimately, to contribute to their learning and well-being.

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