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A study of self-determined motivation toward physical education among different levels of schooling

Abstract

Educational research is continuously examining the changes and progress of students throughout their educational career. Understanding student change is a critical element in creating learning settings that can meet the diverse needs of students. An area of inquiry important to the education, engagement and learning of students is their motivation or self-determination. Researchers commonly make an inference that motivation decreases as student's progress throughout their academic career, yet no empirical evidence has been gathered to support these claims. Therefore, the purpose of this study was to examine the self-determined motivation toward physical education of three different groups of students. Data were collected using a cross-sectional longitudinal design, whereby 50 students each in grades 7, 9 and 11 were randomly selected for this study and completed a survey on motivation toward physical education. Results revealed that as students progressed throughout their career, their motivation toward physical education decreased.

Keywords

toward, physical, determined, among, education, different, levels, study, schooling, self, motivation

Disciplines

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A STUDY OF SELF-DETERMINED MOTIVATION TOWARD PHYSICAL EDUCATION AMONG DIFFERENT LEVELS OF SCHOOLING

Perlman*

ABSTRACT

Educational research is continuously examining the changes and progress of students throughout their educational career. Understanding student change is a critical element in creating learning settings that can meet the diverse needs of students. An area of inquiry important to the education, engagement and learning of students is their motivation or self-determination. Researchers commonly make an inference that motivation decreases as student's progress throughout their academic career, yet no empirical evidence has been gathered to support these claims. Therefore, the purpose of this study was to examine the self-determined motivation toward physical education of three different groups of students. Data were collected using a cross-sectional longitudinal design, whereby 50 students each in grades 7, 9 and 11 were randomly selected for this study and completed a survey on motivation toward physical education. Results revealed that as students progressed throughout their career, their motivation toward physical education decreased.

KEY WORDS : Teacher Education, Academic Career

INTRODUCTION

Educational research is continuously examining the changes and progress of students throughout their educational career. Understanding student change is a critical element in creating learning settings that can meet the diverse needs of students. An area of inquiry important to the education, engagement and learning of students is their motivation or self-determination (Van den Berghe, Vansteenkiste, Cardon, Kirk & Haerens, 2012). Self-determined motivation is a psychological construct defined as the internal desire or feeling to engage in a particular behavior (Deci & Ryan, 1985). Motivation has been roughly classified into three categories of intrinsic (*activities done for internal reasons*), extrinsic (*activities engaged in by some external factor*) and amotivation (*extremely low level of*

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motivation) (Vallerand&Losier, 1999). Deci and Ryan (1985) placed each motivational level on a continuum that is aligned with a level of self-determination. Figure 1 provides an illustration between self-determination and individual motivational levels.

Figure 1		
Intrinsic Motivation	Extrinsic Motivation	Amotivation
High Self-Determination		Low Self-Determination

Self-determination and motivation in physical education has been correlated and associated with many student outcomes and experiences (Van den Berghe, Vansteenkiste, Cardon, Kirk & Haerens, 2012). For instance, high levels of self-determined motivation have been aligned with increased levels of in-class physical activity (Perlman, 2013) and academic achievement (Black & Deci, 2000). As supported by the literature above, motivation is important to the education and engagement of the physical education student, yet more inquiry is needed. Specifically, research on motivation has been focused on (a) strategies for enhancing student motivation and (b) understanding the connections between motivation and student experiences/behaviors. What is less researched is the change in self-determination as student's progress throughout their educational career. Researchers commonly make an inference that motivation decreases as student's progress throughout their academic career, yet no empirical evidence has been gathered to support these claims. Therefore, the purpose of this study was to examine the self-determined motivation toward physical education of three different groups of students.

METHODS

Before beginning this study, ethics approval was granted by the governing university and all students or their guardian provided informed consent in writing. Data were collected using a cross-sectional longitudinal design, whereby 50 physical education students each in grades 7, 9 and 11 were randomly selected for this study. Physical education within this school was compulsory for all grades (k-12).

Self-determined motivation was measured using a modified Sport Motivation Scale for use within physical education (SMS; Ward, Wilkinson, Graser & Prusak, 2008). The SMS is a 16-item 7-point Likert scale that is used to calculate four motivational scales of Intrinsic Motivation (IM), Identified Regulation (IR), External Regulation (ER) and Amotivation (AM). Each subscale is calculated by averaging individual scores for 4-items within each subscale. These subscales are further used to calculate a self-determination score using the following equation: $((2*IMK) + IR) - (ER + (2*AM))$. As this study is focused on self-determination, the self-determination score will be the only score used within this study.

Data were collected on the second to last week of school and completed in a class setting. Administration of the survey was conducted by the researcher and took around 20 minutes to complete. Analysis of data were done in two stages of (a) descriptive statistics

and (b) a one-way analysis of variance (ANOVA) with post hoc t-test's to examine where the significant difference occurred. Due to the use of multiple t-test comparisons, a Bonferonni adjustment was calculated (adjusted $p \leq .017$).

RESULTS

Descriptive statistics (Means and Standard Deviations) are displayed in Table 1.

	Mean	Standard Deviation
Grade 7	6.34	1.23
Grade 9	6.22	1.11
Grade 11	4.25	1.09

ANOVA results indicated a significant between-group difference $F(2,148) = 17.34$, $p \leq .05$. Follow-up t-tests revealed significant differences between grades 7 ($M=6.34$, $SD=1.23$) and 11 ($M=4.25$, $SD=1.09$); $t(98) = 8.99$, $p \leq .017$ and grades 9 ($M=6.22$, $SD=1.11$) and 11 ($M=4.25$, $SD=1.09$); $t(98) = 8.95$, $p \leq .017$, while grades 7 ($M=6.34$, $SD=1.23$) and 9 ($M=6.22$, $SD=1.11$) were deemed insignificant; $t(98) = .512$, $p \geq .017$.

DISCUSSION

The results of this study showed significant differences between classes. Specifically, as students progress throughout their educational career, their level of self-determined motivation toward physical education decreased. As illustrated by the progressive lowering of self-determined mean scores and significant follow-up t-test results. This study supports the inferences made by many other researchers that motivation toward physical education decreases. Future research may need to examine the influences on motivational change. Possessing a greater understanding of the influences of motivational change may assist in developing future strategies to enhance and maintain students desire to engage in physical education.

REFERENCES

- Black A.E. and Deci E.L. The effects of instructors' autonomy support and students' autonomous motivation on learning organic chemistry: A self-determination theory perspective, *Science Education*, 2000; 84(6): 740 – 756.
- Deci E.L., and R.M. Ryan R.M. *Intrinsic motivation and self-determination in human behavior*, 1985; New York, Plenum.
- Perlman D.J. The influence of the social context on students in-class physical activity, *Journal of Teaching in Physical Education*, 2013; 32: 432 – 60.
- Vallerand R. J. and Losier G.F. An integrative analysis of intrinsic and extrinsic motivation in sport, *Journal of Applied Sport Psychology*, 1999; 11: 142-169.

- Van den Berghe, L. Vansteenkiste M. Cardon G. Kirk D. and Haerens L. Research on self-determination in physical education: Key findings and proposals for future research. *Physical Education and Sport Pedagogy*, 2012; 1 – 25.
- Ward, J. Wilkinson, C. Graser, S.V. and Prusak, K.A. Effects of choice on student motivation and physical activity behavior in physical education, *Journal of Teaching in Physical Education*, 2008: 27: 385-398.