A COMPARATIVE ANALYSIS BETWEEN PRIMARY AND SECONDARY TEACHERS: A SELF-DETERMINATION PERSPECTIVE

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ABSTRACT

The importance of student motivation within a student's educational career can be viewed as a cornerstone to effective pedagogy and student learning. Xiang, Lee and Shen (2001) have indicated that as student's progress throughout the K-12 system, their level of motivation tends to decrease. As such, a question of intrigue is whether teachers within different grade levels provide different motivational instruction. Therefore, the purpose of this study was to examine the differences between primary and secondary educators ability to provide a motivationally-supportive learning context. Grounded within the self-determination theory (SDT; Deci & Ryan, 1985), this study utilized a quantitative approach to examine grade level differences in instruction and student motivation. Data were analyzed using a one-way MANOVA of teacher perceptions and two one-way ANOVA's of student scores. Results indicated a significant difference between primary and secondary teaching and student motivation.

Key Words: *Self-Determination Theory; Teacher Education; Student Motivation.*

INTRODUCTION

Reeve (2009) indicated that teachers commonly utilize instructional approaches that thwart student motivation. Thwarting motivation can lead to a variety of negative student's behaviours and outcomes, such as increased levels of absenteeism and limited in-class engagement (Ntoumanis, Pensgaard, Martin & Pipe, 2004). The importance of student motivation within education can be viewed as a cornerstone to effective pedagogy and student learning. Xiang, Lee and Shen (2001) have indicated that as student's progress throughout the K-12 system, their level of motivation tends to decrease. As such, a question of intrigue is whether teachers within different grade levels provide different motivational instruction.

Motivation within this study was grounded in self-determination theory (SDT) Deci & Ryan,

1985). SDT posits that student motivation is strongly influenced by their perceptions of the learning context (Deci & Ryan, 1985). Specifically, the degree to which the social context is supportive of student's perceptions of choice and /or control, commonly termed autonomy-supportive (Vallerand, 1997; 2001). Deci and Ryan (1985; 2000) suggests that a teacher is the primary facilitator of a context being autonomy - supportive within education. Furthermore, a learning context can be classified as either autonomy-supportive or controlling (Nezlek & Sheinman, 1981). An autonomy-supportive context is focused on internal motives (e.g. flexible language, accepting negative student emotions), while a controlling context is focused on external pressures, such as using deadlines, guilt and control (Reeve, Jang, Carrell, Jeon & Barch, 2004). SDT posits that students flourish in a highly autonomy-supportive context (Ntoumanis, 2001; Standage, Duda & Ntoumanis, 2003).

The applied student benefits (e.g. active listening and learning) of engaging students within an autonomy-supportive learning context are vast, yet teachers tend to use controlling strategies (Reeve, 2009). Current literature has primarily examined the instructional approaches espoused by SDT from two perspectives; (a) the influence of intervenetions to change in teacher instruction (Reeve, 1998; Reeve, Jang, Carrell, Jeon & Barch, 2004; Tessier, Pelletier, Trouilloud & Chanal, 2008; Tessier, Sarrazin & Ntoumanis, 2010; Perlman, 2011; Perlman & Piletic. 2012) and (b) student responses when engaged in diverse social educational contexts (Williams, Grow, Freedman, Ryan, & Deci, 1996; Ryan & Connell, 1989; Black & Deci, 2000; Sheldon, Ryan, Deci, & Kasser, 2004) with limited investigation on diverse grade levels.

GRADE LEVEL LITERATURE

Examination of differences in instruction focused on grade level (i.e. primary and secondary) is intentional in the notion that teachers within the primary and secondary settings differ (Cortis, 1973). Initial research by Cortis (1973) suggested that primary teachers are less sensitive, while secondary teachers hold their students to a higher

standard. In addition, secondary teachers tend to deal with an increased level of behavioural management concerns (Ecceles & Midgley, 1989). The major influence on teachers within each educational system (e.g. primary versus secondary) can be attributed to the social and organizational structure (Shaw & Reyes, 1992). For example, the visual environment of a secondary school might look very different from a primary school. More recently, Ball (2000) found that secondary teachers want students to attend to what they are doing and saying, giving objective comments about performance, whereas primary teachers are more likely to relate in a different way with both words and body language. While literature on differences between primary and secondary teachers is visible, further investigation is needed. To date, no studies have been identified investigating whether teachers and students within different grade levels utilize and perceive the same meaning of teacher's motivational instruction. Therefore, the purpose of this study was to examine the differences between primary and secondary educators ability to provide an autonomy-supportive learning context. Specifically, this study was guided by the following research question:

1. What are the differences between primary (year 6) and secondary (year 10) teachers' ability to create an autonomy-supportive learning context?

PARTICIPANTS

Participants within this study were 162 physical education specialists and their respective students from public schools in the United States. Teachers were assigned to either the primary (N=85; Male=40; Female=55) or secondary setting (N=77; Male = 51; Female=26) dependent upon their current teaching assignment. Primary teachers were classified as teaching in the K-6 school system, while secondary teachers taught students in years 7-12. As part of the criteria for assignment, each teacher must have been teaching in the same grade level (e.g. primary) for a minimum of three consecutive years. The purpose of the three years teaching criteria was to alleviate issues associated with

instructional novelty and limited experience with each student population. As a component of this study, a single class per teacher was utilized to gain insight into student perceptions of their current teacher's instructional practices. Student participants within the primary group were enrolled in year 6, while secondary students were enrolled in a year 10 class. As such, a total of 1,785 students (Male=901; Female=884) from year 6 and 1,617 (Male=888; Female=729) year 10 students were utilized within this study.

MEASURES

Background information

Background information was obtained from students (year in school and gender) and teachers (gender, years of teaching experience, current position and years at current position).

Teacher perceptions of autonomy -support

Each teacher was asked to complete the Problems in Schools questionnaire (PIS) Deci, Schwartz, Sheinman & Ryan, 1981. The PIS asks the participant to read a school related vignette and rate 4-items per vignette using a 7-point Likert scale. Each item is evaluated using 1="very inappropriate" and 7="very appropriate" scale. The PIS contains a total of eight vignettes. Scores are calculated by averaging each response within a particular subscale and provide an individual rating for instruction; highly controlling (HC), moderately controlling (MC), moderately autonomy-supportive (MA) and highly autonomy - supportive (HA). Use of the PIS with educational professionals has been deemed a valid and reliable measure (Deci et. al., 1981).

Student perceptions of autonomy - support

Students were asked to complete an abridged 6-item 7-point Likert scale Learning Climate Questionnaire (LCQ) Williams & Deci, 1996) adapted for use within the physical education setting (Standage, Duda and Ntoumanis, 2005). Items were rated using a 1="strongly disagree"; 7="strongly agree" scale. Scoring of the LCQ was conducted through averaging students ratings of all items, thus providing a score related to a students perception of autonomy - support. Standage, Duda and

Ntoumanis (2005) indicate adequate reliability and validity for use of the LCQ in physical education.

Student motivation

Students were asked to complete the 15-item Sport Motivation Scale – Abridged (SMS) Pelletier, Fortier, Vallerand, Tuson, Brière & Blais, 1995). Each item within the SMS required students to rate their level of agreement using a 7-point Likert scale (1='strongly disagree' and 7='strongly agree'). Each student is provided four scores (intrinsic motivation, identified regulation, external regulation and amotivation) through averaging each students response within each subscale. In order to provide each student with an overall motivation score or self-determination index (SDI), data were further condensed using the following calculation ((2* intrinsic motivation) + identified regulation)-(external regulation + (2* amotivation)). Ward, Wilkinson, Vincent and Prusak (2008) identified adequate reliability and validity for use of the SMS-abridged within physical education.

DATA COLLECTION AND ANALYSIS

Before beginning this study, both university review approval and consent from all participants was granted. This study utilized a cross-sectional approach and collected survey data online. Each teacher was provided a week time frame to complete the PIS. Furthermore, students within their class were provided a similar time frame to complete the LCQ and SMS. Each participant was advised that surveys had no impact on their grade in physical education and if they did not desire to complete the surveys they did not have to.

Before analysis of the PIS, LCQ and SMS, a check was conducted to ensure surveys that had missing data were omitted. Descriptive (Mean and Standard Deviations) and reliability (Cronbach) statistics were calculated on all dependent variables (i.e. HC, MC, MA, HA, student perceptions of autonomy - support and SDI) within each group (primary and secondary).

The primary research question examined the differences in autonomy-supportive instruction between primary and secondary

physical education teachers. Intraclass correlation coefficients (ICC) were calculated to investigate whether the individual or group should be used as the unit of analysis. ICC results followed the recommendations of Kenny and La Voie (1986), whereby the individual was deemed the appropriate unit of analysis. Analysis of teacher data (i.e. HC, MC, MA and HA) were conducted using a one-way MANOVA with follow-up univariate ANOVAs to examine areas of significance. Student data were examined using two separate one-way ANOVAs (adjusted p≤.025).

RESULTS

Table-1
Displays results of the descriptive statistics and reliability analysis

	Primary		Secondary		
	M	**SD**	**M**	**SD**	**Alpha**
Highly Controlling	3.66	1.12	3.20	0.93	.92
Moderately Controlling	4.14	0.61	4.18	0.67	.91
Moderately Autonomous	4.21	0.72	4.06	0.72	.95
Highly Autonomous	5.21	0.81	5.45	0.60	.94
Student Autonomy-Support	3.18	2.71	4.37	2.25	.91
Self-Determination Index	4.66	1.29	3.40	1.18	.88

One-way MANOVA calculations revealed a significant difference for teacher autonomy-support $F(4,157)=3.96$, $p=.004$. Follow-up univariate ANOVAs showed that teachers' perceptions for highly autonomous $F(1,160) = 4.38$, $p=.038$ and highly controlling $F(1,160)=7.82$, $p=.006$ were statistically significant. Specifically, secondary teachers were more autonomous, while primary teachers were statistically more controlling. It is important to note that the aspects of moderately autonomous $F(1,160)=1.73$, $p=.190$ and moderately controlling $F(1,160)=0.16$, $p=.689$ were deemed insignificant. Student perception of autonomy-support data revealed a significant difference $F(1,3401)=190.73$, $p=.000$, whereby secondary students perceived a significantly higher level of autonomy-support within their physical education classes. Finally, SDI scores were deemed insignificant $F(1,3401) = 143.02$, $p=.000$, whereby primary students were more motivated.

DISCUSSION

The purpose of this study was to examine the difference between primary and secondary physical education teachers

development of an autonomy-supportive learning context. As a result of this study, differences in instruction as espoused by SDT, were evident. Specifically, primary teachers were deemed significantly more controlling, while secondary teachers were more autonomous. These results were supported by student data that indicated a significantly higher perception of autonomy-support within secondary physical education classes, while individual student motivational measures were no different between the groups.

Primary teachers and their respective students were deemed more controlling when compared with a group of secondary teachers. This result could be attributed to primary teachers focus on the explicit managerial aspects of instruction. Teachers at the primary level are required to clearly articulate expectations of students in order to identify what needs to be completed and how a student should demonstrate they are ready to learn (Hastie & Siedentop, 1999). As such, these statements can be portrayed as highly controlling with limited input or control from the student. In addition, this result is supportive of the claim by Reeve (2009) that teachers commonly utilize controlling behaviours as a means of instruction. Between the inherent desire to use controlling strategies and increased focus on behaviour management, this may lend more of a controlling context for students within this setting

On the contrary, secondary students and their teachers were deemed more autonomy-supportive. This result contraindicates that claim of Reeve (2009) who stated that teachers commonly utilize controlling instruction. A plausible reason for the difference could be attributed to the student population that can be provided an enhanced level of control over their learning. Teachers within the secondary setting have been known to give students more of a voice and be more inclusive in the decision making process (Corbett & Wilson, 2002). In addition, students at the secondary level may be more cognitively able to handle an increased level of control or choice over their learning.

Student motivation results supported the notion that secondary students are less motivated when compared with primary students. This results supports previous studies that indicated the dame resolve (Xiang, et al., 2001; Ntoumanis, 2001). A possible reason for the difference in motivation could be attributed to the time/exposure students have within school physical education. Change in student motivation toward physical education could be initially facilitated by the controlling nature of primary education and is manifested within secondary classes.

CONCLUSIONS

The results of this study illustrate the differences within instruction between primary and secondary teachers. It should be noted, that more autonomy-support could come at a cost to the education of students. The traditionally prescriptive environment of schools can thwart motivation (Grolnick & Ryan, 1986), yet focus students on the instructional goals. As such, utilization of autonomy-supportive instruction can be positive toward student motivation, although it should be conducted in a manner that is conducive to meeting the educational goals of the students. This study is not without limitations, as the curricular approaches and units of study have been known to influence the perceptions of students within physical education. Future studies may need to address the concern associated with balancing autonomy-supportive instruction and appropriate pedagogical and educationally appropriate practices.

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