

## **Examining the Impact of School Type on Leisure Constraints in High School Students**

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### **Abstract**

*Changing education philosophies and technological advancement have altered the way educational content can be delivered to students. However, as new formats continue to emerge and gain in popularity, little is known about how the type of school a student attends impacts their out-of-school time recreation and leisure participation. As recreation and leisure pursuits have been shown to address many social, physical, emotional, and psychological issues, it is imperative that researchers continue to investigate factors that could constrain students' regular participation in these activities. Therefore, the purpose of this study is to examine how attending online learning institutions, one of the fastest-growing alternatives to brick-and-mortar schools, affects leisure participation. Results of the study indicate that while students attending full-time multi-district online schools may initially experience constraints on their participation in out-of-school-time activities, these are not likely to be permanent.*

**Keywords:** recreation, leisure, constraints, online education, brick-and-mortar schools, participation, extracurricular activities

During the teenage years of a person's life, recreation and leisure activities have been shown to act as a catalyst for development, lay the groundwork for future behavior, and address many physical, social, emotional, and psychological issues (Klieber, Walker, & Mannell, 2011). Often, opportunities for participation are facilitated by schools, recreation-based organizations, classmates, and friends. To date, research regarding youth recreation participation has focused nearly exclusively on those students who attend traditional, brick-and-mortar institutions. However, the number of students attending schools in alternate formats has grown considerably.

One such alternative school type is online, or virtual, schools, in which students can complete their education from kindergarten through twelfth grade entirely online. These schools have experienced rapid growth since their inception in the late 1990s, and at present, 5.7 percent of all public schools in the United States, serving approximately 278,511 students, are entirely online entities (Riser-Kositsky, 2019; Molnar et al., 2017).

Research has revealed that the change of environment from brick-and-mortar to virtual is often a positive one and that many students enjoy increased academic success (Weatherholtz & Gatti, 2018; Gatti, 2018; Repetto, Cavanaugh, Wayer, & Liu, 2010; Cavanaugh, Gillan, Kromrey, Hess, & Blomeyer, 2004). However, there has always been a concern that the model facilitates increased isolation and decreased face-to-face interaction between teachers, students, and classmates (Posey, Burgess, Eason, & Jones, 2010). While the advancement of learning platforms and video conferencing have helped to address this issue, concern is growing among parents, teachers, and administrators as to how a virtual environment affects students outside of the classroom. Many are worried that attending an online school limits participation in out-of-school activities resulting in social isolation.

Given the impact of recreation and leisure activities on child development, it is imperative that researchers continue to seek a better understanding of the factors that limit children's participation in these activities. At this time, scholars have identified the physical environment (Tucker et al., 2009), access to activities (Samdahl & Jekubovich, 1997), and social and psychological barriers (Hinch, Jackson, Hudson, & Walker, 2005) as common limiting factors. This paper will seek to expand these findings as it compares the leisure constraints perceived by students in online schools and a brick-and-mortar school. For leisure researchers, recreation professionals, and educators, the results of this study will continue to expand the body of leisure research and provide valuable information to school administrators, teachers, parents, and students.

## **Literature Review**

### **Online Learning Institutions**

At the center of this study are two types of schools: traditional schools in which students and teachers meet face-to-face in a physical, "brick-and-mortar" building during established school hours, and online, or virtual, schools in which students

and teachers meet on internet-based platforms. While the brick-and-mortar model has long been the bedrock of education in the United States, online public education is relatively new. Virtual schools came to fruition in 1997 when a \$7.4 million federal grant allowed the formation of the Virtual High School and Florida Virtual School (Barbour & Reeves, 2009). Since that time, five categories of online learning as described by Watson and colleagues (2011) are commonly recognized. Briefly, these are:

- State virtual schools and initiatives: These schools and programs are created by legislation or state education agencies and often serve as a supplement to face-to-face learning.
- Single-district programs: Single district programs are offered to students living within an established school district. This option can provide a full-time online education, or act as an educational supplement to face-to-face learning.
- Consortium online programs: Often comprised of students from multiple school districts, consortium programs allow for the combining of resources to increase efficiency.
- Post-secondary programs: These programs serve as a full-time education option but are privately funded and operated. Thus, unlike public school programs, a tuition or fee is required for enrollment.
- Full-time, multi-district, online schools: These publicly funded schools provide a complete kindergarten through twelfth-grade education online. They exist in special school districts not limited by geographic location within a state. As a result, it is not uncommon for students from across a state to be enrolled.

The two virtual schools in this study are considered full-time, multi-district, online schools. Each are publicly funded and incorporate a hybrid of synchronous and asynchronous teaching strategies. This means that students are able to interact with teachers and fellow students in real time (synchronous), but also complete course work utilizing methods that do not require immediate response or interaction, such as a message board or email (asynchronous).

### **Out-of-School Time**

Another crucial element of this study is the notion of out-of-school time. Put simply, out-of-school time refers to the time after the school day is completed (National Institute on Out-of-School Time, 2003). The activities in which students engage during this time can be organized with a specific structure, schedule, or duration, or the activities may be unorganized and self-directed. The aim of this study is not to identify specific activities in which students are participating, but rather, to determine if they are actively engaging in *something* outside of their school hours.

### **Leisure Constraints Theory**

Leisure constraints can be described as those elements which prevent, reduce, or modify participation in leisure activities (Henderson, 1997). Three types of constraints—intrapersonal, interpersonal, and structural—were identified by Crawford and Godbey (1987) and have been shown to affect participation. Intrapersonal constraints include psychological barriers, such as stress, anxiety, or

depression (Samdahl & Jekubovich, 1997). Interpersonal constraints refer to personal relationships between members of social networks and how these relationships, whether positive or negative, influence participation (Samdahl & Jekubovich, 1997). Finally, structural constraints include external conditions, such as lack of funds or access to leisure activities (Samdahl & Jekubovich, 1997). Constraints will vary across our lifespans, but the presence of a constraint does not necessarily result in total non-participation as constraints are often overcome through alternate activities or forms of participation.

## **Methods**

The purpose of this study was to determine the relationship between the type of school students attend and the leisure constraints the students experience. To achieve this goal, the study used a non-experimental comparative research design. The design, which used a self-reported survey, allowed students attending the two types of schools to retrospectively examine those factors that constrained their participation in leisure activities.

## **Data Collection and Sample**

One hundred fifteen high school-aged students from one brick-and-mortar school (n=73) and two full-time multi-district online schools (n=42) completed the survey to determine possible constraints to their leisure participation. There were no restrictions based on age, sex, race, or any other factors as all students in the institutions were encouraged to participate. The brick-and-mortar school was a public institution located in the midwestern United States. Four grade levels, freshmen through seniors, comprised a total enrollment at the school of 784 students at the time of data collection. The two participating online institutions were full-time, multi-district schools located in Tennessee and enrolling students from across the state. At the time of data collection, they had a combined enrollment of 110 students. Convenience sampling was used in the selection of the schools.

The study followed procedures related to research studies for each school and administrators granted approval prior to data collection. The participating schools distributed parental consent forms and submitted completed forms to the researcher as both hard and digital copies. The researcher provided participants with an informed consent document before they completed the survey.

## **Research Instrument**

At the onset of data collection, the researchers asked participants to complete a brief demographic survey, including sex, the type of school attended, current grade level and the number of years they had attended their current institution. To measure leisure constraints, the study used the shortened version of the leisure constraints questionnaire (LCQ) developed by Carroll and Alexandris (1997). The short form of the LCQ is a valid and reliable measure of leisure constraints as demonstrated by Carroll and Alexandris (1997) in their initial study, in which satisfactory psychometric characteristics with a Cronbach Alpha of .85 were reported. Gürbüz, Öncü, & Emir (2012) yielded similar results as the Pearson Correlation Coefficient was calculated and demonstrated that the factor loadings of

the items were between 0.49 and 0.91. A Cronbach Alpha of 0.85 indicated the internal consistency of the total scale.

Due to the nature of the school formats, the delivery method for the survey differed for each school. For brick-and-mortar students, the researchers administered the surveys in person to classes approved by school administrators. Surveys for the online students were distributed by school administrators via the schools' education portal. Once distributed, students were given a two-week period to complete the questionnaire. It took approximately one hour to complete the survey, regardless of format, and students were permitted to ask clarifying questions regarding content. Brick-and-mortar students were able to ask their questions in person, while virtual school students utilized email, phone, or video conferencing.

## Results

Data collected via online and hard copy were entered into a data table for analysis. The researchers coded each leisure constraint item separately and gave each a numeric value corresponding to the text response options. The items were divided based on the type of constraint, specifically: time, psychological factors, knowledge, access to resources or facilities, accessibility or cost, transportation, partners, and interest. The researchers created an index including all the variables for an overall leisure constraint scale. This was used as the dependent variable in an analysis of variance (ANOVA) where the independent variables were school type, sex, and years of attendance.

## Descriptive Statistics

The survey was completed by 97.2 percent of the students who were presented the survey in the brick-and-mortar school, compared to 38.1 percent of virtual school students, for an overall response rate of 62.8 percent. The majority of participants (84.3 percent,  $n=97$ ) self-identified as white, and a slight majority identified as female, 53.9 percent ( $n=62$ ). First-year students dominated the survey (51.3 percent,  $n=59$ ), with second year attendees following at 35.7 percent ( $n=41$ ). The full results displaying all demographic information can be found in Table 1.

**Table 1. Demographic characteristics of participants (n= 115)**

| Characteristic                   | N  | %    |
|----------------------------------|----|------|
| <b>Gender</b>                    |    |      |
| Male                             | 49 | 42.6 |
| Female                           | 62 | 53.9 |
| Prefer not to answer             | 4  | 3.5  |
| <b>Race</b>                      |    |      |
| White                            | 97 | 84.3 |
| Hispanic or Latino               | 10 | 8.7  |
| Asian                            | 6  | 5.2  |
| American Indian or Alaska Native | 2  | 1.7  |
| <b>School Type</b>               |    |      |
| Brick and Mortar                 | 73 | 63.5 |
| Virtual                          | 42 | 36.5 |

| <b>Number of Years Attending Current School</b> |    |      |
|---|----|------|
| 1 year  | 59 | 51.3 |
| 2 years   | 41 | 35.7 |
| 3 years   | 6  | 5.2  |
| 4 or more years                                 | 6  | 5.2  |
| <b>Class Standing</b>                           |    |      |
| Freshman  | 38 | 33   |
| Sophomore                                       | 42 | 36.5 |
| Junior  | 16 | 13.9 |
| Senior  | 11 | 9.6  |

### Leisure Constraints

The researchers conducted an ANOVA to measure the impact of school type on leisure constraints. The results revealed that the interaction of the school students attended by the number of years they attended the school was significant ( $p < .01$ , 2df). The analysis then divided the sample by school type, with brick-and-mortar students placed in one group and online school students in another.

A separate ANOVA was conducted on each group. For brick-and-mortar students neither sex nor length of attendance was significant. For online school students, however, sex ( $F = 4.65$ , 1df) and attendance ( $F = 16.23$ , 2df) were significant. The analysis showed that males attending the online school were more likely to be constrained in their leisure participation ( $B = 111.6$ ,  $p = .038$ ) than were females. However, the longer a student attended the online school, the less likely they were to be constrained in their leisure activities (Table 2). Comparatively, students who were in their first year attending the online school ( $B = -450.9$ ,  $p < .001$ ) were more constrained than those students in their second year attending the school ( $B = -476.70$ ,  $p < .001$ ), a noticeable decline.

**Table 2. Analysis of variance of leisure constraints for virtual schools**

| Characteristic               | M      | SD     | n  | Df | F                | p     |
|------------------------------|--------|--------|----|----|------------------|-------|
|                              |        |        |    |    | Between subjects |       |
| <b>Source: Reduced Model</b> |        |        |    | 3  | 14.76            | <.001 |
| Main Effect (Sex)            |        |        |    | 1  | 4.65             | 0.04  |
| Male                         | 167.34 | 407.43 | 6  |    |                  |       |
| Female                       | 1.26   | 0.93   | 35 |    |                  |       |
| Main Effect (Attendance)     |        |        |    | 2  | 16.23            | <.001 |
| 1 year                       | 1.24   | 0.87   | 29 |    |                  |       |
| 2 years                      | 1.18   | 1.23   | 10 |    |                  |       |
| 3 years                      | 25.56  | 705.42 | 2  |    |                  |       |
| Within-group error           |        |        |    | 37 |                  |       |

The researchers created separate scales measuring the interpersonal, intrapersonal, and structural leisure constraints. An ANOVA measured the impact of type of school attended on each of the three types of leisure constraints. The main effect of school type was significant in relation to structural constraints ( $F=3.8$ ,  $1df$ ). The analysis showed that online school students ( $B=87.87$ ,  $p=.05$ ) were more likely to be constrained by structural variables than were brick-and-mortar school students (Table 3).

**Table 3. Analysis of variance of structural constraints**

| Characteristic                          | M      | SD    | n  | df  | F                | p    |
|---|--------|-------|----|-----|------------------|------|
|   |        |       |    |     | Between subjects |      |
| <b>Source: Main Effects Model</b>       |        |       |    | 1   | 3.799            | .054 |
| Main Effect (School Type)               |        |       |    | 1   | 3.799            | .054 |
| Brick and Mortar                        | 999.0  | 0     | 40 |     |                  |      |
| Virtual                                 | 911.13 | 284.5 | 68 |     |                  |      |
|   |        |       |    |     |                  |      |
| Within-group error                      |        |       |    | 113 |                  |      |
|   |        |       |    |     |                  |      |
| eta2=.035 for Main Effects ( $p<.054$ ) |        |       |    |     |                  |      |

### Discussion and Implications

The current study sought to determine if the type of school a student attends can act as a constraint to leisure participation. The study did so by comparing the survey responses of students attending brick-and-mortar schools to those of students attending virtual schools. The results echo previous findings that indicate that perceived constraints are significantly impacted by unique attributes of the population (Cho & Price, 2018; Dong & Chick, 2012; Stodolska 1998; Kay & Jackson, 1991). In this case, enrollment in an online learning institution does initially alter students' participation in leisure activities, especially due to structural constraints. However, the results also indicated a significant drop in the students' perceptions of constraints the longer the students attend the school. This leads the researchers to believe that the initial transition from a brick-and-mortar to online environment creates barriers that students are able to successfully negotiate following a period of adjustment to their new lifestyle. This is supported in previous work in which participants successfully negotiated leisure constraints to avoid nonparticipation (Godbey, Crawford, & Shen, 2010; Palen et al., 2010; Jackson & Rucks, 1995; Jackson, Crawford, & Godbey, 1993).

This transition is aided by online institutions that are engaged with students and their parents, in some cases even more so than in the brick-and-mortar environment (Borup, Graham, & Drysdale, 2014). Further, opportunities for face-to-face engagement in social activities, physical education courses, and field trips have long been included in online school curricula (Bogden, 2003; McCluskey, 2002). However, additional attention should also be paid to increasing availability and access to out-of-school time leisure activities while emphasizing the benefits of

participation. This can be accomplished through participation in government initiatives, partnerships with community and private recreation agencies, and taking an active role in advocating for legislation allowing the participation of non-traditional students in school-sponsored extracurricular activities within districts. This option has been successful in multiple instances and led to the creation of enrollment provisions in several school districts (Atkinson, 2014; Brown, 2014).

### **Conclusions and Limitations**

As with many research studies, the current study does have limitations. The small sample size will affect the generalizability of the study. Future studies should include the replication of the current study with an expanded participant group including a greater number of students and varying geographic locations. In addition, the inclusion of home-schooled students would provide an additional group for comparison from a unique education environment. Finally, supplementing quantitative data with qualitative data will allow us to delve into what is constraining each group of students, and why these factors change over time.

The current study provides insight into the leisure constraints affecting out-of-school time participation for students in varying educational environments. Virtual school students experience higher constraint levels compared to brick-and-mortar students, but are able to successfully overcome these barriers as they continue in their education. Partnerships between school administrators, recreation agencies, and lawmakers could allow for increased accessibility and participation in recreation-based programming by students who attend online educational institutions.

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