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When the row predicts the grade: Differences in marketing students' performance as a function of seating location

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ABSTRACT

Although there can be few doubts about the influence of the learning environment on individual behaviors, the relationship between seating location and efficacy of the learning performance has not been clarified yet. This study investigates the relationship between students' seating location in the classroom and their learning achievements in five marketing classes (N = 232) over a 5-year period, exploring the moderating role of personal traits (i.e., shyness, and nonconformity) previously neglected in past research. Results suggest that sitting in a particular row of the classroom does influence learning performance, and this relationship is moderated by the individuals' levels of shyness, but not of nonconformity. Implications for educators and marketers are discussed.

1. Introduction

Ever since school has existed, it is a common belief that the worst students sit in the back rows of the classroom. The question about the truth of this assertion is not only confined to the field of mere curiosity, as the existence of such a phenomenon could have at least two major implications.

The first one concerns the effectiveness of teaching and, in turn, the utility delivered by a service such as a university lecture. As a matter of fact, sitting in a back row could have negative effects on the students' ability to learn and to be involved in class, regardless of their level of intelligence or preparation.

The second implication is more general and concerns the effects in settings different from schools, when sitting in back rows could affect the capability to fully comprehend or receive various kinds of messages. Indeed, the effects of seating location on the learning process could also be particularly relevant in the field of communication and marketing, where different kinds of sales – from ambulant sales (where potential customers are grouped around the seller in rings) to promotional sales of goods and services, such as attending courses of various kinds (e.g., programs aimed at improving self-esteem, seduction techniques and other topics that are nowadays very popular) – are presented and sold in conference rooms where potential customers are seated in rows.

2. Seating location and effectiveness of the learning performance

The literature on this issue has never completely clarified the question: if, indeed, to listen to a lecture or a presentation from the back of a room can obstacle the learning process of the conveyed information. Evidences on the topic are conflicting and, although there are few doubts about the influence of the learning environment on student behavior (cf. Moore & Glynn, 1984; Stires, 1982) and perception (Yang, Becerik-Gerber, & Mino, 2013), the relation between the seating position and learning performance has not been completely ascertained yet.

Some studies maintain that a causal relationship may exist between the students' seating location and the obtained performance in the learning environment (cf. Becker, Sommer, Bee, & Oxley, 1973; Brooks & Rebeta, 1991; Buckalew, Daly, & Coffield, 1986; Holliman & Anderson, 1986; Rennels & Chaudhari, 1988; Wulf, 1977). Maintaining that the learning performance (e.g., measured through grades) may decrease as a function of the distance from the teacher (and, in turn, from the front rows), these studies support the hypothesis that the best students are likely to be found in the front of the classroom. Hence, students who are placed in the front rows would be actually the best performers, being capable of achieving higher grades than those positioned farther back. In line with these evidences, Perkins and Wieman (2005) revealed that seating location had a noticeable impact on learning performance in a course, since students sitting in the back of the room were nearly six times as likely to receive a low grade as students who seated in the front. More recently, in a preliminary research focusing on the seating choice of small marketing courses, Vander Schee (2011) found that students in the front row did earn a significantly higher course grade than those seated in the back. Analyzing the effects of seating location and

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stereoscopic displays on learning outcome in an introductory physical geography class, Hirmas et al. (2014) found a significant difference in learning performance between students seated in high and low seating angle areas when using interactive software to present lecture material. Lindquist and McLean (2011) found that frequency of task-unrelated images and thoughts (TUIT), which has a negative impact on academic performance, is reduced for students seated in the front of the lecture theatre.

However, other studies report conflicting results, arguing that a different relation between the seating location and the learning performance may exist as a consequence of which the best performing students could be those seated in the middle (Marshall & Losonczy-Marshall, 2010; Stires, 1980) or in the outer four corners of a classroom (cf. Monterola, Roxas, & Carreon-Monterola, 2008); or completely questioning the existence of such a relation, finding no grade effects of seating location (Kalinowski & Taper, 2007; Millard & Stimpson, 1980) and highlighting the absence of an unambiguous directional pattern, since in some cases the obtained grades in the back of the classroom were at least as high as the grades gained in the front (Montello, 1988). Nevertheless, the influence of the students' seating location would be reflected only in terms of increased participation in the classroom (Koneya, 1976; Loftin, Davis, & Hartin, 2010; Marx, Fuhrer, & Hartig, 1999; Sommer, 1965, 1967) and in terms of learning motivation (Burda & Brooks, 1996; Mercincavage & Brooks, 1990; Rebeta, Brooks, O'Brien, & Hunter, 1993; Walberg, 1969).

Despite these conflicting evidences, no recent study has definitively clarified the role played by sitting position on learning performance, apart from analyzing seating preferences (Benedict & Hoag, 2004). Furthermore, past studies have neglected to investigate the role of personality differences which can moderate the relationship between these variables, even though past literature seems to suggest that personality may be one of the factor impacting students' choice of seating position within a classroom environment (Çinar, 2010).

3. Research objectives

We focused our research on marketing students in order to clarify whether a relationship between the seating location and the learning performance when attending a course does actually exist. The purpose of this study was to evaluate the correlation between the position occupied by introductory marketing course students inside their classroom (i.e., *seating location*) and the effectiveness of their learning performance in the final exams, using as a proxy variable the achieved performance (i.e., *grades*). Since almost all research on the causal role of the seating location was carried out with college students (lower school orders frequently use nonrandom seating for disciplinary purposes – Montello, 1988), a sample of undergraduate students in a medium Italian university was considered.

An inverse relationship between the actual seating location and the effectiveness of the learning performance (measured through grades) was hypothesized so that students who are placed in the first rows of the classroom would actually be the best performers, receiving highest grades. Hence:

H1. *There is a negative relationship between the students' seating location and the effectiveness of their learning performance. Students who occupy the lowest (front) rows are the best performing, achieving highest grades, while students who occupy the highest (back) rows are worst performing, achieving lowest grades.*

According to Totusek and Staton-Spicer (1982), there are personality differences among students based on seating locations: moreover, seating location could determine some differences in students' behaviors. Since personality traits and behaviors are related to seats, it was also investigated if there are specific constructs that could have a moderating role on the former relationship.

More specifically, in a social context, the choice of sitting in a particular place can be mainly determined by the propensity to social interaction or by the will of being detached from a group of people. Hence, we hypothesized that both individuals' *shyness* – defined as the individual propensity to avoid social interactions and to fail to join in properly in social situations (cf. Pilkonis, 1977) – and *nonconformity* – defined as a reaction against group norms (cf. Nail, MacDonald, & Levy, 2000) – could affect the relation between seating location and students' learning performance.

Although it should be distinguished from related constructs such as introversion or low sociability (Phillips & Bruch, 1988), *shyness* could influence people's decisions on where to sit due to the presence of feelings of discomfort and inhibition that stem directly from the interpersonal nature of some situations (cf. Jones, Briggs, & Smith, 1986). Shy people report greater discomfort and emotional arousal in novel or formal situations (cf. Buss, 1980; Jones & Russell, 1982), and disclose heightened affective reactions, thoughts of escaping and worrying about others' evaluations (cf. Jones et al., 1986; Pilkonis, 1977). Creating discomfort and inhibition in social situations, shyness interferes with pursuing individual's goals and may compromise academic performance (Ericson & Gardner, 1992), as shy subjects experience cognitive difficulties in processing information in the presence of others (Carducci & Zimbardo, 1995).

Since shy students are thought to comprise approximately 40% of the student body (Condon & Ruth-Sahd, 2013), recent studies analyzed the growing use of technology to reduce shyness in educational settings, such as the "Clickers" or Personal Response Systems, which offer an opportunity to alleviate student fears by allowing them to participate anonymously to classroom activities (Stowell, Oldham, & Bennett, 2010). Albeit the evidence of shyness as a factor operating in the classroom environment, existent literature that relates it to learning performance is scarce and offers conflicting results. Bashosh, Nejad, Rastegar, and Marzban (2013) showed that there is no significant relationship between shyness and foreign language proficiency, while Chishti, Anwar, and Khan (2011) found a negative relationship between shyness and classroom performance. However, despite these evidences, no study has until now investigated the possible moderating role of shyness in the relationship between seating location and learning performance.

Thus, it seems plausible to assume that individual shyness could moderate the relationship between seating location and learning performance in a class. It was hypothesized that increasing levels of shyness may negatively affect the relationship between seating location and performance, and in such a circumstance sitting in front rows does not have the same effect, impairing particularly shy subjects from actually performing better. Hence:

H2. *Students' shyness level moderates the relationship between seating location and the effectiveness of the learning performance, such that, for low and mean values of shyness, there is a negative relationship between students' seating location and achieved grades; conversely, when shyness is high, this could impair best performing students when sitting in front rows.*

The decision to occupy a particular row could also result from the degree of *nonconformity* of individuals, who may choose voluntarily to occupy a position farthest from the front, which is near to what represents the authority in the classroom (e.g., the teacher), as a way to express their independence or their level of detachment. Stemming as a reaction against group norms (anti-conformity) or as a form of simple independence (cf. Nail et al., 2000; Ridgeway, 1978), nonconformity can be helpful in differentiating people from others when pursuing a need for uniqueness (cf. Griskevicious, Goldstein, Mortensen, Cialdini, & Kenrick, 2006). Because nonconformity might affect students' seating decisions or their intention not to pay a tribute to the authority, it was hypothesized that the nonconformity level could affect the relationship between seating location and learning performance. However, for high

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