Desks in Rows

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Abstract:

In this article, we attempt to call into question the desks in rows practice that commonly exists in the postsecondary system. We share one teacher's school experience, from elementary to postsecondary, and use this as fodder for a discussion about what we lose in the desks in rows practice and what we gain when we challenge this seating plan. We also, wonder about this tradition as automatically taken-up and lived without conscious application. We hope to encourage others to change the desks in rows practice and use this article is a support of change for the practice of desks in rows.

Key Words:

Classroom Structure, Setting, Environment, Seating Plan, Physical Space.

Introduction

We begin by admitting the need for further discussion, critical reflection and investigation in regards to discourses of student and teacher as well as physical environment. The notion of desks in rows is not a simple concept and has underlying factors that are unexplored in this paper. Instead, we surface desks in rows as a habit or perhaps a less conscious common practice in postsecondary education. For the most part, we use these pages as an opportunity to encourage other postsecondary teachers to consider the seating arrangements in their classes and see this article as support for change.

While thinking about desks in rows we reflected on early educational experiences. This paper will begin with Susan's personal experiences as a student. The impact the physical environment; in particular, individual desks in rows; and the impact that structure has on the learning experience for students and teachers will be highlighted.

The structuring of desks plays a role in power relations, relationship building amongst students and teachers, as well how this might affect teaching and learning.

Susan's Personal Experience

Throughout my early educational experiences and into adult education I was exposed to a variety of learning strategies based on teacher philosophy or interpretations and understanding of curricular guidelines. As a child, I was exposed to the learning through play and experience philosophy that I assume was based somewhat on Dewey's (1938) philosophy of experience and education, and I was allowed to manipulate the environment and explore my surroundings.

As I moved into elementary school, I was required to sit in those uncomfortable, assigned desks that face the teacher at the front of the room; this is where the teacher's desk is typically located. Not all classrooms are set up in this way; some teachers set their spaces such that students sit in groups facing each other encouraging peer interaction while attempting to minimize distractions. As I think back to the group set-up, when peer interaction was encouraged, I know we learned some valuable skills such as communication, problem solving, collaborative and peer learning, negotiation and teamwork. While never overtly described as important or valued, the hidden curriculum (Aoki, 2005) and learning outcomes were able to emerge.

As I continued my education into Junior High and High School, similar desks in rows patterns continued. I recall the first day of grade eight when I quickly scanned the class to see who I knew. The dreaded alphabetical order attendance roll call began. This will determine the seating arrangements for the entire year, my assigned desk – my property to care for during the school season. I wondered whose head I would stare at for the next ten months. The teacher stands at the front of the class where all the other students also face and struggle to see, except, of course, for the taller students or those sitting at the front.

As an adult entering postsecondary education I experienced classrooms where we sat at self-selected tables in groups with our peers, self-selected seating in rows or in some classrooms tables organized in a U-shape with the teacher front and centre. Typically, we had some freedom to choose where we could sit. As a student today, my learning experience is most enriched when I have the opportunity to choose where I sit and to see the faces of most peers as we engage in large and small group discussions and conversations.

Currently, I have dual roles and perspectives to consider, one of which is a part time Ph.D. student attending face-to-face classes, the other being that of University Assistant Professor teaching approximately 120 different students in any given semester. Having these dual roles has heightened my awareness of classroom structure and how that affects learning.

Reflecting on this above writing, it occurred to us that the more enriching school experiences that Susan had occurred when she was less confined by the classroom structure. It became that much more apparent for us that as teachers, what we decide will influence students and this includes decisions that extend beyond the curriculum.

The classroom setting matters and we had gained more awareness about the impact by considering Susan's history.

Teaching, Learning and School Settings

Teachers play a major role in how classroom environments are organized (Weaver & Qi, 2005). However, in some settings teachers have more ownership over their spaces than in other s4ettings. Where we work, we are required to use the rooms assigned to us by the University through their scheduling system. We must find a way to use this space to accommodate the needs of up to 40 or 60 students at a given time and contribute to their learning. Most rooms are rectangular or square and filled with portable chairs and individual desks. The underlying rule and assumption is that all desks are in neat rows that face the front of the classroom. In our experiences, desks return to the row structure even after we have changed the physical set-up, when we arrive for the following class. An email reminder from the institution about classroom etiquette includes a directive that desks are returned to their neat rows at the end of each class. While we want to acknowledge that other people use the class spaces throughout the week, however, it occurred to us that the change back might have something to say about the assumed appropriateness of the desks in rows structure.

The front of the room is defined by the placing of the projection screen and the computer cabinet. Some rooms have natural light; some rooms do not and rely on the fluorescents that often contribute to headaches and sore eyes. Decades ago, the experts at the time, who likely understood teacher/student relationships in a particular way, designed this environment. According to Watson (2007), "spaces can also limit the possibilities of our activity, restricting us to old modes of working and thinking" (p. 259). While many great teachers, philosophers and researchers (Giroux, & Greene, 1996; Wenger, 1998) challenged environmental ideals over the years, we continue to see the practice of desks in rows approach to pedagogy. It is important however, for teachers and institutions to consider alternate perspectives in how we approach the planning of the classroom environment, even in postsecondary settings. This may require a shift in thinking, or deeper reflection about how classroom structure might merge with notions of teaching and learning.

Purpose of School4

Some philosophers (Greene, 1996; Giroux & Greene 1994) believed that the purpose of teaching, learning and schooling was to meet the needs of society; this might also imply meeting the needs of our workforce to support the economy. If this is the case, then perhaps advocating for a change in the learning space through classroom structure is not necessary. However, Greene and Giroux (1996) and Arendt (2006) believed that schools assisted in producing citizens, and that schools should concern themselves with creating citizens that were concerned about society and living an ethical life that helped a community and society as a whole, flourish. In Levinson's (2010) interpretation of Arendt, she noted that the classroom has the potential to shape the way we prepare students for the world. Greene (1996) suggested that education has to do with engaging human beings in activities of meaning making, dialogue, and reflective understanding. Giroux and Greene (1994) stated:

> It is about organizing school life around a version of citizenship that educates students to make choices, think critically and believe they can make a difference. Educators need to affirm and critically interrogate the knowledge and experiences that students bring with them to the classroom. Education needs to affirm the voices histories and stories that provide students with a sense of place, identity and meaning. Critical educators need to offer students the opportunity to engage in deeper understanding of the importance of democratic culture while developing classroom relations that prioritize the importance of cooperation, sharing and social justice (p. 298).

Extrapolating this thinking into the actual space of the classroom would mean challenging traditional learning that includes the role of teachers, students and the structure of the environment. However, in the privileging of capitalistic thinking, in the west, education becomes a product that leads to a particular outcome with the individual privileged over the group (Fernandez, Huang & Rinaldo, 2011). Therefore, the desks in rows structure lends itself to more productivity (Henshaw, as cited in Hondzel, 2013) and might lead to citizens who fit into particular categories, much like desks in rows.

Watson (2007) recognized that Universities largely continue to rely on the lecture as the main mode of delivery for curricular content. However, Watson, in his discussion of designing a University for the future recognized that learning occurs when in conversation, and that spaces need to support opportunities for dialogue and shared ideas. He suggested that we acknowledge social interactions as educative, as much as we see curriculum as educative and stated "the power of sociality as a source of learning also challenges our view of what 'social' means on our campuses, lifting it above gratuitous sociality to sociality with educational purpose" (p. 259). When we create a space that opens dialogue through shaping the actual space, we enhance social interaction as well as learning. Being social is being a citizen; being a citizen takes responsibility and in order to be a responsible citizen one must be open to learning about and for others (Arendt, 2006). In our estimation, openness and responsible citizenry relates both to students and to the teacher.

The Teaching Space

It is important to consider student motivation for enrolling in College or University programs. It is a safe assumption to suggest that students have some expectations of acquiring new knowledge through this postsecondary experience and that after completion of the course of study they are better prepared for the workforce; acquiring such skills as problem solving and critical thinking. The focus on curriculum, skill building and acquiring knowledge is necessary but may disregard any impact the setting has on how that focus is taken up. While most teachers recognize different personalities, temperaments, learning styles and individual needs there may be differences about how knowledge is acquired which includes beliefs about whether or not the physical space impact learning. While it might be difficult to make a space that is conducive to everyone's needs, it is possible to make spaces flexible (Watson, 2007).

Teachers bring their skills, experiences, knowledge as well as their content expertise to plan and facilitate learning opportunities for students. It is an assumption that professors in higher education have chosen to teach based on a passion for their field

of study, desire to share their knowledge and to engage in collaborative learning experiences with others. Regardless, we know that the teacher has control over the course concentration, how it is shared, as well as explored within the classroom setting, and how to assess the student's understanding. The teacher also has control over how students influence the process of knowledge exchange and, to some extent, how the environment can be used to support the exchange process. If teachers/professors do not have a clear understanding of their position, the physical space might inhibit or interfere with their goals (Prochansky & Wolfe, 1974; Watson, 2007).

Students often see teachers as the authority of knowledge in the classroom**.** According to Weaver and Qi (2005):

> The classroom's hierarchical nature, power structure, and distinct divisions between the professor and students might also constrain participation. The professor typically "leads" the class, defines what is to be learned, identifies the activities and readings students are to undertake, and determines how student performance will be evaluated. In Freire's (1970) view, the "banking model" prevails in education wherein faculty use lectures to communicate knowledge and information to mostly passive students who, in turn, regurgitate on exams some portion of the knowledge and information they absorb. Numerous studies report how faculty authority hinders student participation and learning and suggest various ways for faculty to distance themselves from their position of authority—e.g., by memorizing students' names, requesting that students refer to them by their first name, arranging desks in circles, and otherwise creating an atmosphere of openness, respect, and equality (p. 573).

Many approaches to education and learning emphasize the importance of the teacher and student sharing responsibility for the learning process. Learning flows in both directions, and the teacher's role becomes that of facilitator rather than expert (Matusov, 2001). If responsibility for learning is shared, then the physical space, in which learning occurs, must also be shared. Since the room is not solely the possession of the teacher, all members of the class must have input and planning into the effective use and management of that space, which includes an understanding by all members of the group (Prochanksy & Wolfe, 1974).

Desks in Rows: The Problematic

This vision of the desks in neat rows harkens to societies when discipline and control were essential components to support the teacher in their effort to transmit knowledge to students. Rosenfeld and Civikly (as cited in McCorskey & McVetta, 1978) compared desks in rows to "something like tombstones in a military cemetery" (p. 99). When one enters a classroom and sees desks in rows there is an assumption that all focus must be towards the front of the class, where the teacher will present the lecture expecting all eyes and ears on him or her. This set-up implies that the teacher is the knowledge expert with an expectation that students attend to and learn this knowledge as imparted. Potentially, early conditioning in our social structures prepares us for the present and desired levels of interaction and the imbalance of power that exists in the classroom based on the set-up. Brendtro, Brokenleg, and Van Brockern (2002) discussed the historical underpinnings related to education and recognized the "well-established

tradition of coercion and punishment" (p. 31). Illustrating the European influences of obedience training in education and childrearing, these authors noted how as children enter the school system, they are driven into obedience and this culture may carry on well into young adulthood and the postsecondary system (Brendtro et al., 2002). It may be difficult for Western teachers to shift their roles in order to co-create an educational space since it calls into question their own early training in obedience.

When the room is organized with desks in rows and the teacher at the front of the class, one can infer that the teacher has freedom of space, can direct the students to move, and has control over the entire physical environment (other than limitations set by the institution). Students' effect on the physical environment is usually limited to sitting in the space, the placement and orientation of their bodies as physical and social objects within the existing structure (Sommer, 2001). Students' perceptions of, and experiences within the classroom, play a crucial role in shaping their participation in class (Weaver and Qi, 2005).

Does Seating Matter

While considering a study by Fernandes, Huang and Rinaldo (2011), we began to recognize that seating does matter. They found that location can and does affect both student learning and the teacher's perception of the student. Teachers may infer that students who choose to sit at the front, near them, care more about their learning and engage more. In fact, students might succeed by sitting at the front of the class because they "have better access to learning resources, such as the teacher" (Fernandes, Huang & Rinaldo, p. 68). Students who sit at the back might be perceived as less involved and therefore less interested.

Prochansky and Wolfe (1974) suggested that, "the physical and spatial aspects of a learning environment communicate a symbolic message of what one expects to happen in a particular place. The atmosphere of a classroom is readily apparent when one enters it and is reflected by subtle cues in the physical arrangement as well as by the style of teaching" (p. 558). The traditional set-up of the space communicates to students an authoritarian message that all eyes must be up front on the expert. This arrangement can also suggest that teachers are more concerned with controlling than teaching, and that school is not for learning. It is, rather, as Holt (as cited in Champagne & Tausky, 1976) suggested, "a place where students are made to go, where they are told what to do and where unquestioning obedience is demanded" (p. 232). Both Dennison and Kozol concurred (as cited in Champagne & Tausky, 1976) and stated that "almost all aspects of school including tests, grades, rigid seating arrangements, written records and punishment are said to be part of this environment of coercion and control" (p. 232.). Because of this control, students are left out of the democratic and collaborative learning process. Students need real opportunities to be engaged and to express themselves.

As students enter the classroom, the positioning of desks might set the tone for the delivery of class material and the facilitation of learning. Structure supports assumptions as to how knowledge is shared, or not, and who is perceived to hold the knowledge, as well as where the expert is and who might be that expert. Some students may appreciate the desks in rows to evade speaking or sharing, by avoiding eye contact with

the teacher as questions are asked. Students might take the desks in rows as an opportunity to surf the net, text to friends or check out their status updates on Facebook; they often cannot hear or see the teacher at the front anyways. There is an assumption and imbalance of power when the teacher is the assumed expert in front of the class. The teacher is the content expert and the student expectations is to sit, listen and take in new information so comprehension and understanding can then be reaffirmed back through tools that assess uptake such as assignments, tests or exams.

Rigid seating assignments can prevent dialogue between student and teacher as well as student and peers. Student involvement in decision-making processes is important and a "lack of interactivity has been diagnosed as one of the major pedagogical issues facing many educational institutions" (Siau, Sheng, Fui-Hoon Nah, 2006, p. 398). Champagne and Tausky (1976) also identified that a significant problem confronting education is "the continued use of coercive regimentation and control in conventional schools atmosphere of freedom" (p. 232). Students' input in the classroom structure and delivery of material is rarely sought, nor are students asked about existing knowledge or what might be meaningful for their course of study. In regards to learning theories that support students, Fischer and Grant, as well as Smith (as cited in Weaver and Qi, 2005) suggested that:

> active involvement in class facilitates critical thinking (Garside, 1996) and facilitates the retention of information that might otherwise be lost (Bransford, 1979). Although most teachers acknowledge the value of active participation in the college classroom, achieving success in eliciting it appears more difficult. Professors talk almost 80% of the time (p. 570).

The teacher in the front and the students situated in desks in rows discourage student-to-student conversations and discussions, and rather places focus on a didactic conversation between the teacher and the particular student who chooses to raise a hand and answer a question. In our experience, it is often the same few students volunteering to answer the questions.

Eisner (2002) spoke about schools fostering compliant behaviours and competitiveness such as the use of rewards to change behaviours, and students competing for the teacher's time and attention. Eisner suggested that learning is a humbling experience compared with teaching; acknowledging the assumption that to teach puts one in a superior position, and to learn one is in a subordinate position. This resurfaces the issue of teacher power within the classroom and assumed expert. It also supports the assumption that the students are the only participants in learning, forgetting that teachers too can learn from their students. As Palmer (2007) suggested, good teaching depends on co-creating a space where control and power is shared.

Alternatives

The Reggio Emilia philosophy on learning views students, teachers and the environment differently, by seeing all three as educators (Strong-Wilson, & Ellis, 2007). There is a high emphasis placed on collaborative learning and the use of the environment as a third teacher. This approach advocates that teachers pay close attention to the varying ways that the space can speak and invite interaction (Cadwell,

2003; Fraser, 2006 in Strong-Wilson & Ellis, 2007). While this Reggio Emilia approach focuses on young children in preschool and school settings it is transferable based on some philosophical arguments about the adult learning environment. The dialogue, ideas, and input of students, environment and teachers together play a role as educators. Therefore, the notion of teachers as learners is realized. The collaborative learning partnership might have the students and teacher working together to decide how the room can be arranged to best support learning.

Another approach to teaching is creating interactive and trusting spaces for learning as described by Robinson and Kakela (2006). They suggested highlighting characteristics and strategies that promote engagement, deep learning, and meaning. A space like this would focus on the process of learning and personalized learning for students. While this might contradict the highly touted learning outcomes model (Dunne, 2001), it is still likely to reach the long-term goals of students who are prepared for the workforce. When students are given a space that is supported through trust and respect they often feel more confident to contribute. Robinson and Kakela (2006) spoke to the need for individual creativity as a skill required for critical thinking and solving complex problems. Listening to and understanding the views of others are also essential in complex tasks. When given the space and encouragement, students can learn how to be creative, express their creativity, and listen to others. In the Reggio Emilio philosophy, a large focus is on building relationships and collaborative learning.

One challenge to changing the traditional structure may be to help teachers and professors accept a model created and used with young children and see it as fitting for the postsecondary system. We argue that, in some respects, the present system adopts a survival of the fittest atmosphere in the postsecondary system knowing full well that belonging and cooperation lead to better learning outcomes (Fernandez, Huang & Rinaldo, 2011; Henshaw as cited in Hondzel, 2013) Learning is fostered in conditions of relaxation not anxiety (Kostouros, 2010). Mackler (2010) proposed that both students and teachers could seek meaning, rather than engaging in the cognitive positivist way of questions and answers.

The creation of learning teams is another way to support student learning and is less traditional, getting away from the desks in rows. Students meet in small groups to discuss topics, exchange information and practice new techniques (Schmuck & Schmuck, as cited in Walker 1996). Afterwards the students come together with the larger group to discuss their smaller group experience. Often described as the jigsaw approach to learning, Walker (1996) suggested that students participating in cooperative learning classrooms interact more and increase interdependence than students in traditional classrooms in which the teacher lectures and peer interaction is discouraged. Matusov (2001) would concur that a community of learners is a more effective environment. In the cooperative learning model, the teacher guides and assists students, acting as both a facilitator of learning and a source of information.

To Shape or Not to Shape

To summarize, research and theories suggest that learning is best supported when individuals are engaged in critically reflective dialogue with their peers. It is through the process of listening to other perspectives that assists in construction of new knowledge;

understanding that meaning can be made of new knowledge or concepts (Ahn & Class, 2011). It is also relevant to show how we learn from one another and how that increases meaning in one's personal life and makes learning relevant to both job attainment and citizenship.

Wenger (1998) believed that a key implication of our attempts to organize learning is that we must become reflective with regard to our own learning discourses and their effects on how we design educational materials. Reflection happens both internally as a self-process, but is informed by interaction with others as in a classroom environment. Learning is most effective when individuals use experiences, personal knowledge, interests, learning networks, and dialogue to support their professional development. Practices of critical reflection enhance the learning experience and make it more meaningful to learners. It is through the process of inquiry that awareness, understanding, learning, and competence are developed and realized (Matusov, 2001).

According to many theorists, including Lei (2010), students learn in diverse ways. Higher education administrators must realize that classrooms need designs that promote various ways of learning to acquire knowledge. Well-designed classrooms not only enhance teamwork and interest in student learning, but also encourage active class participation (Watson, 2007). A classroom arrangement of visual, furniture, and equipment should be carefully considered in order to empower both teachers and students (Niemeyer, 2001 as cited in Lei, 2010). A review by Hill and Epps (2010) suggests that students who study and learn in environments that have upgraded aesthetics and technology have higher grades, higher satisfaction and that teacher effectiveness as assessed by the student increases.

If research suggests that learning is optimized through the use of collaborative problem solving and critical thinking (Fernandes, Huang & Rinaldo, 2011), then students should engage in conversations with their peers, to make meaning of the course content, and new information. The two-way dialogue between teacher and student, with desks in rows, needs to be exposed as archaic and an ineffective strategy to support learning (Watson, 2007). Fisher and Hurst (as cited in Hill and Epps, 2010) found that a student's physical and psychological comfort, amongst other environmental factors, are significantly positively related to student outcomes, including performance and attitude.

Based on our experiences we prefer having students sitting in a U-shape where they are able to see most of their peers as well as the teacher. We are able to make eye contact with everyone and encourage more participation and discussion from all students, including the quieter/shy student. U-shaped seating arrangements enhancing the relationships between the community of learners. In addition, we tend to sit as opposed to stand, giving us a lateral position to decrease assumed power. When the teacher enters the community as a potential learner, relationships build readily and both student and teacher take more risks in their learning (Matusov, 2001). Positioning may also speak to the importance of using universal design concepts.

Universal design addresses both the physical and environmental space for people experiencing certain barriers. The concept of universal design is to create a space that is accessible for everyone. While typically thought of as used for those with an accessibility issue, universal design can be implemented regardless of accessibility

needs or not. For example, in their review of the literature related to universal design in the postsecondary system Roberts, Park, Brown, and Cook (2011) noted that the instructional space could be adapted for all students. In particular, they showed that one principle related to space would be "making seating easily accessible, if possible, so everyone could see each other and communicate with one another directly. Circular seating may address this principle" (p. 6).

Therefore, it would seem that there is sufficient research and theory to challenge the notion of desks in rows. We assert that the room set-up, in particular, desks in rows, is a reflection of the teaching, learning and education philosophy of the institution and the teacher (Matusov, 2001). Certainly, LaRocco, Anderson and Archambault (2013) recognize that many teachers in Universities and Colleges have no training in pedagogy and therefore, may default to what they had experienced as learners. In particular, they default to old habits of classroom design that does not consider today's learner (Watson, 2007).

Susan's Experiment

This semester, from the very beginning of one class, Susan had the students sit in groups of four. She did this to try something different from desks in rows, and because the classroom shape and size would not accommodate the U-shape for 30 students. She asked students to self- select their groups and encouraged them to move to different groups in each class. The class plans involved various activities that had them engaged in small and large group discussion based on Susan's experiences of how learning is enhanced. It seemed that almost all students contributed to these discussions; and as Susan arrived to class each day, students had the room arranged in groups and had no problem putting the desks back into the rows at the end of class. Another time when there were a smaller number of students, Susan and the students moved the desks into the U-shape. From that day forward, Susan had students request this type of set-up; they stated that they felt more involved, enthusiastic, and eager to participate.

Henshaw (as cited in Hondzel, 2013) confirmed that when a teacher encouraged conversation and discussion, the seating arrangements played a large role in student participation. Susan's exploration of desks in rows this semester not only affected the students, but her as well. As the teacher, she felt more involved and connected to the students, and felt a part of the group learning process since she too was learning. Susan sat at a desk in the U-shape and felt the power she once held shifted to a more balanced perspective. There seemed to be more trust, openness and willingness to take risks by everyone.

When in another class, Susan is forced into fixed seating and moving the furniture is not possible; here the desks are in their neat rows. Susan feels less connected to students as individuals, and experiences the students as less engaged in the discussion. This room set-up seems obsolete; yet it has such enormous implications and consequences in the experiences of all involved.

It is our hope that postsecondary teachers would consider their learning space as a place where curriculum can be lived and shared. We believe this is possible when the

space is open for exchanges between everyone reducing the imbalances that exist when desks are in rows. We encourage and support others to experiment with their postsecondary classroom spaces and create learning communities.

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