

Meet the New Class, Same as the Old Class? Millennials and Their Surprising Learning Preferences

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Colleges and universities are rapidly implementing technology in the classroom, particularly in an effort to better serve millennial learners. Student perception, however, does not necessarily comport with these efforts. Our research shows that lectures still hold significant clout in the minds of students, and that group work is perceived to be of questionable value. A follow up study helps explain this preference, and also reveals dramatic change in instructional technology acceptance.

INTRODUCTION

Technology has had a profound impact on modern life, and the classroom is no exception. As institutions prepare for “millennial” learners, instructional methodology is being analyzed like never before. Popular opinion describes this generation as disinterested in “old-fashioned” lectures, while possessing short-attention spans and strong technological affinity. Yet there has been little research into student preference, particularly among undergraduate business students. Is new technology pedagogy, including visual media, what today’s learners seek? Are lectures truly a thing of the past, a relic to be cast away in favor of group discussion? Our research takes the first steps in answering these questions, and strives to provide some insight into student perception of learning styles.

Researchers have already looked into the incorporation of technology into the classroom (McCabe & Meuter, 2011, Buzzard et al, 2011), and at how instructional technology can lead to positive outcomes (Robinson, 2006). While this research has found merit in the use of instructional technology, a major component of Robinson’s findings is that students were more successful when they expected the technology to offer more to their learning experience. This study tries to take that into account by having students consider their preferred classroom environment. Through two quantitative studies, students expressed their preference for learning style, as well as the manner of delivery and technological involvement. The first study looks broadly at the classroom environment, including what makes a professor successful in students’ eyes. The second study arose in response to the findings of the first, and looks specifically at lectures and the use of visual media.

This research contributes to the literature on active learning, business school education and the classroom environment. As students change and technology advances, it is important to know how we can best impact the young people in our classrooms. It is more crucial than ever to understand what students want; the cost of college is increasing, and the availability of classroom-less, online degrees has increased

exponentially. These two studies help us to better understand how technology can enhance or aid the learning experience, and just as importantly, when it cannot.

LITERATURE REVIEW

Despite the prevalence of technology, the classic lecture still dominates the undergraduate classroom. In fact, research over the years has seen little change in the use of lecture as the primary mode of delivery (Marris, 1964; Costin, 1972; Bowles, 1982; Nance and Nance, 1990, Gunzburger, 1993; Charlton, 2006). In the past twenty years, a number of researchers have defended the use of lectures, arguing their place in the classroom environment (Bligh, 1998; Charlton, 2006; Burke et al. 2010). However, others have encouraged teachers to begin to incorporate other delivery methods into their lectures in order to make them more interesting (Van Dijk et al, 2010). Ware and Williams found in a 1975 study that while students preferred a more “seductive” lecture, students also achieved more in them. This demonstrates the possibility that incorporating more of what students want into the classroom may not only allow them to enjoy the class, but also produce better outcomes.

Going back further, several studies compared the use of traditional teaching (lecture) with television (Chu and Schramm, 1967; Dubin and Hedley, 1969). Even then, these studies found slight significance in favor of lectures over the newer media. Today’s newest media comes in digital form, ranging from images and animation to video. As student preferences and social norms have changed significantly since the 1960’s, it is fitting to revisit the idea of media and lecture. It would be remiss to only look at the use of media; incorporating activities into the classroom is an important consideration as well (LeBlanc, 1996). Though there have been myriad studies that focus specifically on the effectiveness of lectures (Cooper & Foy, 1967; Matheson, 2008), there is a lack of research on multiple modes of delivery in the classroom.

The research presented here investigates these issues with two studies. The first focuses on all major forms of instruction, including lecture, visual media, class discussion and group work. Based upon those results, the second hones in specifically on the contrasting styles of lecture and visual media and their potential integration. This paper will provide the reader with the details of the two studies and their respective results, followed by a discussion, limitations and directions for future research, and a conclusion based on what was learned.

STUDY ONE

General Learning Preferences

To guide the study we had several research questions:

- Do students like lectures? Are they seen as educational?
- Do students find visual media courses educational?
- How much work/time do students consider appropriate for their courses?
- What resources help to improve the classroom experience?
- What characteristics make up a better professor?

The study focused on the use of different classroom activities including lecture, visual media, group work etc. Eighty-three business students from two schools participated in this study, 58 percent male and 42 percent female. The institutions chosen were a small private college and a medium-sized state university. Students completed surveys by answering Likert scale questions regarding classroom preferences. Questions pertained to preferred content delivery style in the classroom (lecture, class discussion, group projects, visual media), which educational styles they found most educational and preferred to be graded on.

Results of Study One

Despite the popular notion that millennials view lectures as tedious and outdated, our findings indicate nearly half of students surveyed preferred lectures. Furthermore, males showed a strong affinity for lecture ($F(1,83)=6.290$, $p=.015$). Findings also indicate that students enjoy the incorporation of technology in the classroom, but they strongly question its educational value. Our research also discovered another disconnect between popular theory and student perception. The National Association of Colleges and Employers found as recently as October of 2013 that working effectively in a team is the most sought skill in graduates entering the workforce (Adams, 2013). While many institutions already include a great deal of group work in their courses, our data reveals students not only dislike group projects, but also question their educational value.

The results continue to show significant differences between male and female preference. While males prefer lecture, females prefer working in groups ($F(1,83)= 6.223$, $p=.016$). While there has been evidence (both anecdotal and in the literature) that some students dislike group work, our study also found that students do not find the projects educational. This finding is important as it impacts today's learners in a number of ways. It seems more essential than ever to show students the benefits of working in teams, and tie them to real educational or professional outcomes. If students lack an appreciation for what has been deemed a crucial skill, there is an obvious deficit to be addressed in the classroom.

Discussion of Study One

This data shows that while students may not be excited for a lecture based course, they do believe that lectures are educational. The results of the visual media questions were particularly interesting. It was expected that students would prefer a visual media course to that of a lecture, however we were surprised to learn that students question the educational value of this type of course. They believe it would be far more enjoyable, but are not confident they would learn from it. Given the disparity between expectations and popular opinion on one hand, and the results we garnered on the other, it seemed necessary to conduct a second study focusing specifically on lecture versus visual media.

STUDY TWO

Lecture and Visual Media Learning Preferences

We set out to find how students would feel given specific classroom scenarios. The results from Study One showed a dichotomy between visual media and lecture use, specifically that visual media was viewed as enjoyable but not educational, and vice-versa for lecture. As such, these two modes of instruction were of particular interest. To guide the research we concentrated on several research questions:

- Do students find lectures to be educational regardless of how they are incorporated into the classroom?
- Do students find the use of visual media to be enjoyable regardless of how it is incorporated into the classroom?
- Can either visual media be used in a way that is seen as educational?
- Can lectures be used in a way that would be considered enjoyable?
- Are students able to predict what they would want out of their classroom environment?

Study Two was broken into two survey groups, one with a visual media condition ($N=64$) and the other a lecture condition ($N=57$). One hundred and twenty one participants were split into one of the two conditions and asked a series of questions relating to the particular mode of instruction. Each cohort then answered questions regarding four specific classroom scenarios. Both gender and condition were investigated as covariates, but unlike Study One neither were found to be significant.

Results of Study Two

Once again, lectures were seen as educational with 91% of participants rating it very or somewhat educational. Participants continued to indicate that that lectures are less engaging, with 87% of students rating them as either somewhat enjoyable or not very enjoyable. Also similar to Study One, 100% of participants in the visual media condition rated this mode of instruction as either very or somewhat enjoyable. Breaking from Study One, however, Study Two participants felt that visual media courses are indeed educational, with 98% of respondents finding them to be either somewhat or very educational. In fact, while only 28% of participants in the lecture condition found lectures to be very educational, 56% of participants in the visual media condition rated that mode of instruction as very educational.

Next, participants were presented with four scenarios that combine the classroom activities previously measured in Study One, including media, lecture, class discussion, and group work. In each scenario the participants were told that the main mode of instruction for the class would be lecture or visual media, depending on the survey condition. After the lecture or video, the professor would use one of the other methods for the duration of class. The following is an example of one of the lecture scenarios:

“You arrive at class today and your professor announces that the format of the class will be lecture. During the class, the professor gives a lecture. Following the lecture, the professor assigns a group project to be completed by the end of class.”

Each participant rated the scenarios based on how educational and how enjoyable they’d find the classroom experience. This was measured using both a dichotomous scale (1=educational, 2=not educational) as well as a 1-10 rating scale of how educational/enjoyable would you find this activity (with endpoints of a lot and very little).

TABLE 1
RESULTS OF STUDY TWO SCENARIOS

<i>Scenario</i>	<i>Educational</i>	<i>Enjoyment</i>	<i>Educational avg (1-10)</i>	<i>Enjoyment avg (1-10)</i>
Lecture & Activity	1.2, 1=79%	1.5, 1=46%	6.65	5.11
Lecture & Images	1.2, 1=84%	1.3, 1=70%	6.97	5.98
Lecture & Video	1.1, 1=93%	1.2, 1=84%	7.56	6.74
Lecture & Group Project	1.3, 1=72%	1.5, 1=53%	6.35	5.19
Visual Media & Activity	1.2, 1=80%	1.2, 1=77%	6.84	7.27
Visual Media & Discussion	1.2, 1=84%	1.2, 1=80%	7.45	7.28
Visual Media & Lecture	1.5, 1=48%	1.7, 1=33%	6.09	5.58
Visual Media & Group Project	1.4, 1=64%	1.4, 1=61%	6.45	6.06

For the lecture condition, the combination of lecture and video was the highest rated both for being educational and enjoyable. Ninety-three percent of students thought it would be educational and 84% believed it would be enjoyable. For the visual media condition, visual media and class discussion was rated the highest by participants. Eighty-four percent of students thought it would be educational and 80% of participants thought it would be enjoyable.

Lastly, participants were asked to specifically select which of the four scenarios they had read would be most educational and enjoyable. For the lecture condition, the combined the use of lecture and images was rated the highest both for education (44%) and for enjoyment (61%). For the visual media condition, the combination of visual media and class activity was selected as the most educational (61%) and enjoyable (56%).

DISCUSSION

Interestingly, when reading each scenario in full, participants rated classroom instructional methods differently than when comparing a list of all four options. For a lecture-based environment, students indicated a strong preference for adding video, but given the full spectrum selected lecture with images. Similarly, in the visual media condition students responded with affinity for combining with discussion, yet with all options available chose media plus activity.

The duality of respondent preferences makes specific conclusions challenging, but there are some consistencies across the responses. The results of Study Two shows a strong student preference for visual media and interactivity. Lecture, once again, is perceived to be highly educational; despite that perception, however, the data indicates that students do not tend to enjoy lectures. Likewise students still do not find value group projects as valuable as alternatives, consistent with the results in Study One. In both conditions group projects were rated as the second lowest scenario: second to class activity when with lectures and second to lectures with visual media. Clearly, we need to rethink how we are structuring our group projects. Despite the call for more group work from the business community, students are not finding value when working in teams. We speculate that traditional challenges, like problem group members and difficulty in getting together outside of class as the major reasons students struggle with group work.

LIMITATIONS

Despite the interesting results we found, our research has several limitations. The studies were fairly contemporaneous, as the studies were taken by similar business school cohorts within one academic year. Nonetheless, visual media adoption in courses and student exposure is likely increasing quickly enough to alter perception. In Study One, respondents were unsure of a visual media course's educational value. By Study Two, only 2% of students found visual media to not be educational. This is an important change in a relatively small time frame.

This study was focused on business student perception, but the sample was taken from two Northeast institutions, one public and one private. As such, the results may not generalize to the U.S. student population. Lastly, we only focused on four different types of instructional methods. There are many other strategies and combinations that can be incorporated into the classroom, but were not measured in this survey. In the future, it would be beneficial to include other common scenarios in order to continue determining what methods students prefer.

FUTURE RESEARCH AND CONCLUSIONS

The aforementioned limitations offer important directions for future research. This study should be run using a larger national population in order to find more applicable results. Other teaching methods should also be studied in order to gauge their effectiveness. The results of the lingering questions about group work should be looked into further. Is it simply a matter of getting children to "eat their vegetables," knowing the result is valuable despite perception? Alternatively, have students become oversaturated with group work? It also may be interesting to conduct this study longitudinally to see if there are any changes in student preferences over time, particularly given how Study One and Study Two had stark differences in visual media perception despite the brief time between data collection.

Sociologists and researchers alike have struggled to find a consistent reflection of millennial desires. In just the past six months, claims have been published that: millennials don't want to own cars; they are buying lots of cars; or they aren't buying cars, but their population is large enough to make their buying appear substantial (Thompson, 2015; Cao, 2015). It is hardly surprising then that millennial students are inconsistent in their learning preferences. Their choices are not illogical, however. Much like car purchasing is tied to economic health, classroom methodology is a product of context and environment. The rapid increase in perceived educational value of visual media informs us that students have quickly

come around on the topic. This is illustrative of the better tools and training available to professors, and will likely continue trending positively.

How to explain lecture then? Like most perceptions, this is likely tied to cultural values. The classic image of a college classroom is of a wizened professor espousing wisdom to an audience of eager learners. Movies, television, and books still depict the classroom in exactly this manner. This “sage-on-the-stage” method is widely believed to be outdated for today’s impatient audiences, yet is still held dear in the minds of many thanks to the foregoing. This serves to reinforce both the results of Study One and Study Two. As the former discovered, students still feel lectures are highly educational; male students even prefer this style. Yet in Study Two it becomes clear that while educational, students do not find this classroom delivery to be enjoyable.

The educator is thus tasked with managing perception. If lectures are removed entirely, students may not feel they are adequately learning. On the other hand, lectures alone will result in a less satisfied student body. Further, visual media is clearly starting to resonate with millennials. The most popular scenarios in Study Two may be illustrative of the short-term future of undergraduate education; combining lecture with images or video allows professors to provide the best of both worlds. Effective utilization of both lecture and visual media may hold the key to both satisfying students and providing an engaging learning environment.

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