

The Next Generation: Investigating the Impact of Student-Centered and Standard Lecture Pedagogy on Millennial Pre-Service Teachers

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Abstract: *In the history of public education in America, standard lecture format has dominated classroom pedagogy, casting students in the role of passive absorbers of information, while teachers have been viewed as the undisputed locus of all knowledge and authority in the classroom (Burgan, 2006; Kruidenier & Morrison, 2013; Liu, Lin, Jian, & Liou, 2012). In the 21st century, however, constructivist pedagogy, which locates students at the center of their own educational paradigm, increasingly takes center stage (Kane, 2010; Moje, Young, & Readence, 2000; Sharan, 2015). This descriptive research study queried 36 pre-service teachers (elementary and secondary) on their educational history, teacher training pedagogy, and their pedagogical beliefs. Our purpose in conducting this study was to examine how millennial, pre-service teachers' educational backgrounds and teacher training program pedagogies intersect to influence their own pedagogical beliefs. All the participants were enrolled in a foundational class in educational psychology; a required course in teacher education. The Likert and open-ended question survey consisted of 20-items. Findings suggested pre-service teachers believe students learn best through student-centered pedagogy.*

Keywords: *Pre-service teachers, student-centered, standard lecture format, Millennials*

In the United States, teacher education programs are undergoing something of a sea-change. In the history of public education in America, standard lecture format has dominated classroom pedagogy, casting students in the role of passive absorbers of information, while teachers have been viewed as the undisputed locus of all knowledge and authority in the classroom (Burgan, 2006; Kruidenier & Morrison, 2013; Liu, Lin, Jian, & Liou, 2012). In the 21st century, however, constructivist pedagogy, which locates students at the center of their own educational paradigm, has taken center stage (Kane, 2010; Moje, Young, & Readence, 2000; Sharan, 2015). Millennial pre-service teachers will be the first full generation of teachers to enter the classroom with a student-centered pedagogical model to guide their teaching practice (Joscson, 2007; Lester, 2011).

Factors Influencing a Shift in Pedagogy

One of the key factors contributing to the shift toward a more student-centered pedagogy is age. The National Center for Education Statistics reported age demographics of current teachers are 43.2% are ages 39 and under and 30.7% are 50 and older (Digest of Education Statistics, 2013). This means in the next 15 years, approximately 30% of the teaching workforce may retire, with logically the largest replacement coming from those under the age of 30. This statistics

indicate that as much as 70% of the teaching workforce in 15 years may be under the age of 39. This means many of these teachers would be considered Millennials or Generation Y (Digest of Educational Statistics, 2013).

Another key and related factor is the dexterity of the Millennial generation with technology; they are the first generation to be considered digital natives, meaning that they were born into a world of globalized information accessibility as a result of the Internet (Dickinson & Summers, 2010). These are students who have grown up with access to technology undreamt of by even one generation removed; they “have spent their entire lives surrounded by and using computers, videogames, digital music players, video cams, cell phones, and all the other toys and tools of the digital age” (Prensky, 2001, p. 3). These are students who realize that there are myriad methods of obtaining the information they seek, and they also realize that the Internet may sometimes provide them with information more current than what is found in their textbooks (Gatti & Payne, 2011).

The globalized accessibility of information has effectively rendered standard lecture format, which locates all authority and access to information with the teacher, obsolete (Dickinson & Summers, 2010). Research on student attitudes toward pedagogical methods suggest that students feel more engaged by educational methods that value their lived experiences (Dangel & Guyton, 2003), place appropriate responsibility for learning and self-direction in the hands of students (Gatti & Payne, 2011), and actively situate students as partners, rather than captive audiences, in their own education (Herrington & Herrington, 2005).

The research on student-centered pedagogy continues to reflect increases in non-cognitive skills such as creativity, social skills, confidence, collaborative participation, persistence, and resilience (Bacon, 2011; Tough, 2012), as well as higher levels of student engagement and academic success (Graziano, 2008; Taylor, 2010).

Purpose Statement

The purpose of this study is to examine the impact of educational histories and current teacher-training program pedagogy on pre-service teachers’ pedagogical positionality. The question driving this study is: How does the intersectionality of millennial, pre-service teachers’ educational histories and their current experiences in student-centered teacher training programs impact their beliefs regarding best practices in their own future classrooms?

Method

Participants

Ranging in age from 18-43, the 36 participants were from a land-grant, 4-year university in the Mountain West of the United States. Of these participants, twenty-seven were female and 7 were male. Two participants elected not to select a gender choice. All were undergraduates enrolled in a foundational class in educational psychology required by the university’s College of Education. The participants are all pre-service teachers seeking certification to teach in K-12 schools.

Of these participants, thirteen (36%) identified as pre-service early childhood teachers, and six (16.7%) identified as pre-service elementary teachers. The remaining fifteen (41.7%) identified as pre-service middle or high-school teachers. Intended disciplinary specializations of the middle or high school teachers ranged from foreign language (2), social studies (3), science (5), math (1), and English (4). One (2.8%) pre-service high school teacher indicated dual-certification with English and music. Participation was voluntary and confidential. The

participants did not receive course credit or remuneration of any kind in exchange for participation in this study. Students who were not pre-service teachers were not recruited for participation. All are American citizens and speak English as a first language.

Data

Survey. The 20-item questionnaire (see appendix A) was designed and developed using the University's on-line survey tool. The survey utilized three kinds of questions, including twelve Likert scale questions, scored on a 0-4 scale: Strongly Disagree (0), Disagree (1), Neither Agree Nor Disagree (2), Agree (3) Strongly Agree (4), closed response, open-ended, and demographic. Prior to administration of the survey and the collection of data, a research professor in the College of Education at the University reviewed the survey for errata and confusing or misleading questions. The University's Institutional Review Board confirmed approval of this study and research tool by awarding an IRB to the primary researcher for work with human subjects. Survey responses were confidential and partially anonymous. No information was requested that would directly identify individual participants, except as students enrolled in one of two sections of a required course.

Procedure

Students were invited at mid-semester to participate in the survey via an email announcement, including an embedded link to the survey, on the course web page. Students were provided with both out-of-class and in-class time for participation in the survey. Students were informed that the survey would take approximately 20 minutes to complete. Students were reminded in two-week increments, during class and via email, to complete the survey. Students received no remuneration or extra credit for completing the survey.

Results

Data was analyzed using the Statistical Package for Social Sciences (SPSS). In regards to students' past experience with standard lecture format in their secondary classrooms, participants indicated that their middle and high school classes were, in their opinions, mostly taught in standard lecture format ($M = 2.67$, $SD = 0.96$) with Likert scale values from Strongly Disagree (0) to Strongly Agree (4). Participant responses indicated they believed their elementary classes were slightly more student centered ($M = 2.00$, $SD = 1.15$).

In spite of this data indicating that participants' middle and high school experiences more closely aligned with standard lecture format than with student-centered pedagogy, participants indicated that they themselves aligned more closely with student-centered pedagogy. One type of survey item focused on how they view the value of their own life experiences in their educations ($M = 3.4$, $SD = 0.70$), as well as the usefulness of peer collaboration ($M = 3.50$, $SD = 0.56$), student-centered pedagogy as adaptive pedagogy ($M = 3.00$, $SD = 0.68$), and self-constructed knowledge ($M = 3.26$, $SD = 0.61$). These data suggest that these pre-service teachers believe that education is more useful and adaptive to students' needs when it is collaborative and relates to students' lived experiences.

Other items investigated the participants' determination of the value of standard lecture format, both from experience as students, and as future teachers. When presented with a statement on Standard Lecture Format as the preferred delivery method for expert instructors, participant responses reflect disagreement ($M = 1.08$, $SD = 0.97$). Additional items on the subject of standard lecture format, such as whether teachers of Standard Lecture Format are more respected ($M = 1.14$, $SD = 0.76$), whether their own future students will learn best through

Standard Lecture Format instruction ($M = 0.88$, $SD = 0.77$), and whether Standard Lecture Format engages students in deep and meaningful learning ($M = 0.82$, $SD = 0.39$) suggest that participants do not believe that Standard Lecture Format represents best practices, either for them or for their own future students.

These data reflect the shifting perspective of pre-service teachers; despite having been educated largely in standard lecture format during their middle and high school years, the results indicate that they believe student-centered pedagogical methods to be more effective for meaningful, mutually-respectful learning that values their own perspectives, knowledge, and experiences.

Discussion

Participants were asked questions that investigated their past experiences with both standard lecture format and student centered pedagogies, their current beliefs as pre-service teachers enrolled in a constructivist teacher education program, and their methodological intentionality as future teachers. Participants reported consistently low agreement with items that promoted standard lecture format, but reported consistently high agreement with items promoting student-centered pedagogical methods and philosophy, such as collaborative effort and valuing students' lived experiences ($M = 3.50$ and $M = 3.44$), respectively, on a Likert scale of 0-4). These responses indicate that these pre-service teachers believe that they and their future students may learn best through student-centered pedagogical methods, which may influence their pedagogical methodology as future teachers.

Participants also are demonstrated stronger support for construction of their own knowledge ($M = 3.26$ and $SD = 0.61$). Millennial students' responses indicated that they value active learning over passive learning. This demographic of students require teachers to develop curricula that meaningful engage students in their own learning experience and process.

Conclusion

While the results of this study provide insights into the experiences and beliefs of pre-service teachers regarding best educational practices, an area of limitation in this study was the small number of participants. The data is also somewhat skewed by the ratio of female to male participants, at 27 females and 7 male participants (two participants elected not to indicate gender). A related limitation is the lack of a provision for participants identifying as a gender other than male or female. This study is further limited by the lack of geographical diversity, as these participants are all enrolled in one teacher education program at one university.

Another limiting factor may be the dispersion of participants across different levels of intended instruction; it may be more useful, for future research, to focus on a participant group of, for example, pre-service high-school English or math teachers with an equal gender distribution, rather than an amalgam group of early childhood, elementary, middle, and high school pre-service teachers across multiple disciplines.

It is also true that these participants are all enrolled in a teacher education program with a clear and defined foundational philosophical approach of student-centered, Constructivist pedagogy. Further research is needed to explore the pedagogical leanings of pre-service teachers enrolled in teacher education programs that embrace other pedagogical philosophies.

Still, these results clearly suggest that pre-service teachers currently enrolled in a teacher education program identify student-centered pedagogy as instrumental to both their own and their future students' educational success. As the next generation of classroom teachers in

America, an increasingly reflective, globalized approach to teaching may not just be a preference, but the natural path forward.

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Appendix A
Survey

	Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree
My elementary school classes were mostly Standard Lecture Format	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
My middle/high school classes were mostly Standard Lecture	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Student-centered pedagogy creates too much extra work for students	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Instructors should lecture, because they are the experts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
My life experiences are valuable parts of my educational experience	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Collaboration amongst peers facilitates classroom learning	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I learn best by taking notes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Adaptive teaching is facilitated by a student-centered pedagogical approach	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Teachers of Standard Lecture Format	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

are more respected by students

Knowledge that I help construct is most useful to me

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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My students will learn best through Standard Lecture Format

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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	Never	Sometimes	Always
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Standard Lecture Format engages me in deep, meaningful thought

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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I retain more useful knowledge from Student-Centered than Standard-Lecture Format

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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	False	True
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I welcome the responsibility of contributing meaningfully to in-class discussions

<input type="checkbox"/>	<input type="checkbox"/>
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Student-Centered Discussion is worthless in classes like Mathematics

<input type="checkbox"/>	<input type="checkbox"/>
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