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Esther Lynn Jackson
Walden University, estherljackson@hotmail.com

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Technology Preferences of Multiple Generations in the Workplace Classroom

Esther L. Jackson, EdD

Problem
All employers, including public sector organizations, must face the challenge of effective training delivery across generational divides in the workplace classroom. There must be consideration of technological preferences of the four generations present. The research problem was determining how to meet the needs of a generationally diverse audience with technology inclusion in instructional approaches for the workplace classroom.

Purpose
The purpose of this causal-comparative study was to investigate whether employees in 4 generations differed with respect to attitudes toward instructional approaches using technology in the workplace classroom.

Significance
Information obtained on employee perspectives can be used to restructure training approaches with customized technology inclusion to address generational gaps in instruction. Employee feedback can highlight ideas to be implemented in training approaches that are more favorable for employees. It can reveal any negative aspects of the training approaches that should be discontinued or altered and may also identify the aspects of technology approaches that may be the most challenging for some generations. Organizations that heed the demand to accommodate all generational preferences with a variety of modalities for workplace learning can address the generational divide while targeting performance improvement.

Social Change Implications
Evolving with the training methodologies in the multigenerational classroom can ignite new attitudes in generations becoming more dependent on their colleagues who are representative of other generations. Improved worker attitudes across generations would also be reflected in our social behaviors in the community since the workplace is a reflection of our community. When we can work and learn better together, we can live better together.

Theory or Framework
The theory of andragogy (Knowles, 1980) is based on six assumptions which can inform adult trainers and educators for program design and development.

Generational theory (Strauss & Howe, 1991) sets the framework for the design and development of the project components to align with generations and generational preferences.

Relevant Scholarship
Adult learners can be categorized into four generational groups represented in the workplace: Traditionalists, Baby Boomers, Generation X, and Generation Y who are also called Millennials (Hannay & Fretwell, 2011).

Many researchers agreed that Millennials grew up extremely comfortable with technology as a part of their daily lives, which was contrary to the two earliest generations (Cekada, 2012; Papp & Matulich, 2011; White, 2011).

More Baby Boomers were working beyond retirement age as a surge of Millennials were entering the workforce (Daley, 2012).

Physical limitations and slower cognitive processing did not prevent Veterans and Baby Boomers from learning with technology, but could have influenced training effectiveness (Heagans, 2012).

Aside from the varied ages, communication styles, values, and work styles, differences in technology preferences are also characteristic of the generational span (Elias, Smith, & Barney, 2012).

If generational needs were not represented in instructional approaches and techniques, the desired outcome—learner response and performance—could not be fully achieved (Wolfson, Cavanagh, & Krager, 2014).

Research Question
How do the four generations differ in employee attitudes toward technology use in the workplace classroom?

Participants
The target sample from the population was 300 employees of various ages holding various job titles selected through stratified random sampling by age and department while 325 actually responded.

Procedures
The measurement tool was the Media and Technology Usage and Attitudes Scale or MTUAS (Rosen, Whaling, Carrier, Cheever, & Rokkum, 2013) which has 16 statements using a 5-point Likert-type scale. Four subscales were used Positive Attitudes Towards Technology, Preference for Switching Between Tasks, Anxiety About Being Without Technology, and Negative Attitudes Toward Technology.

An email invitation consisting of a consent form, agreement, and link to the scale was sent to 900 potential participants in order to obtain the sample of 300. The Cronbach alpha values for the subscales ranged from .80 to .87.

Analysis
Participants were coded into one of the four generational groups, based on their birth year: Traditionalists (before 1946), Baby Boomers (1946 – 1964), Generation X (1965 – 1980), and Millennials (1981 – 1997). One-way ANOVAs were conducted for each of the MTUAS subscales. Tukey’s HSD test was also done to determine the differences between means.

Findings
Research findings led to the conclusion that some differences existed in generational attitudes toward instructional approaches with technology inclusion.

ANOVA for Subscales by the Four Generations

<table>
<thead>
<tr>
<th>Subscale</th>
<th>F</th>
<th>df1</th>
<th>df2</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive Attitudes Toward Technology</td>
<td>Between Groups</td>
<td>6.11</td>
<td>3</td>
<td>231</td>
</tr>
<tr>
<td>Preference for Switching Between Tasks</td>
<td>Between Groups</td>
<td>.76</td>
<td>3</td>
<td>231</td>
</tr>
<tr>
<td>Anxiety About Being Without Technology</td>
<td>Between Groups</td>
<td>1.02</td>
<td>3</td>
<td>231</td>
</tr>
<tr>
<td>Negative Attitudes Toward Technology</td>
<td>Between Groups</td>
<td>2.56</td>
<td>3</td>
<td>231</td>
</tr>
</tbody>
</table>

Interpretation
Results led to rejection of the null hypothesis. ANOVA results for the Positive Attitudes Towards Technology subscale indicated a significant difference. Generational differences in the preferences warrant the use of customized instructional approaches instead of a one-size-fits-all solution. Older generations view technology as helpful but not as a means of accomplishing more or making life less complicated.

Limitations
Potential limitations included:
• Survey feedback not reflective of actual evaluation and analysis of instructional methods using technology
• Study participants needed minimal level of comfort with technology for survey completion
• Participants’ attitudes partially based on use of technology by instructors with various styles in courses completed on the job
• Four generations included in sample but limited representation for Traditionalists generation

Recommendations
Implement technology with customized approaches to workplace learning in respect to four generations. Allow learners to share their instructional preferences. Ensure instructors and facilitators are trained for the multigenerational audience and the use of current technology in the workplace classroom. Future research could address identifying preferred technology options by the generations, the types of technology that require more customizations in approaches, and how the generational divide can be positively impacted with more current technological integrations in workplace learning.

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