The use of web-based surveys in educational research is growing in popularity every year (Solomon, 2001). And as familiarity with technology increases, survey methodologist and researchers alike will find developing and implementing web-based surveys can help to preserve valuable resources as well as speed the collection and analysis of data. When compared to paper based surveys, serious measurement issues have overshadowed the benefits that web-based surveys can bring to the researcher (Dillman, 2001). This disparity between paper based and web-based survey methodologies have created the need for further study into the effect that web-based surveys might have on data and its subsequent evaluation. Web-based surveys are a relatively new area of research. Kiesler & Sproull (1986) published one of the first experimental surveys on the differences between email surveys and postal mail surveys. With the exception of this article and a few others, the sheer paucity of research into the reliability and validity issues of web-based surveys is troubling. This creates measurement issues because we currently do not know what impact the design of the web-based survey will have on data, nor do we know whether the answers respondents supply on web-based surveys will differ significantly from those provided via a paper-based survey. It is clear that web-based research is a new and untested tool, with further research needed, especially in web-based survey design and implementation as well as a closer comparison of web-based and paper based responses (Dillman, 2001).

The purpose of this study is to determine whether the serious measurement issues of web-based surveys can be overcome through proper implementation and design, and whether the web-based survey will yield equivalent results to those obtained from a paper based survey. In order to examine these questions, researchers will present results from the administration of two like-content survey forms (paper and pencil and web-based) that were administered in a quasi-experimental design to over 300 participants of a teacher training session. This sample provides unique opportunities into determining relative validity and reliability of the web-based survey by non-randomly assigning teacher to control and experimental groups based on previous web experience so that there is equal representation of web abilities in both groups (Roberts & Onwuegbuzie, 2000).

Preliminary results from analyzed data indicate the following responses to the above research questions. First, web-based surveys were more likely to provide complete results by improving examinee fidelity (e.g., accidentally missing an item, skipping blocks of questions or pages, forcing responses to all items). Second, because of completed teacher response, reliability estimates tended to be higher since alpha is negatively affected by persons randomly missing items (Roberts & Onwuegbuzie, 2000). Third, the ease of transfer of data from an already established database to a statistical analysis program in the web-based survey ensures that there is no error when researchers are transferring data from paper to the computer (as in the paper and pencil version). This can prove an important issue in both quantitative and qualitative research. Fourth, as with the previous point, data entry time is dramatically reduced for researchers. And finally, the combination of the above four points in favor of web-based surveys is advanced by the fact that web-based survey lost no reliability or validity in the transfer from paper and pencil form (as will be shown by the data).


