The article *Sustaining Teachers' Capacity For Teaching Statistical Inference Through Reflective Practice* by Reston and Jala (2014) pointed out new teaching strategies in statistics. The paper used qualitative design to elicit the journey of college statistics teachers in teaching statistical inference in selected 28 college universities in Cebu City. Using Taggart’s Reflective Thinking Model (2005), the authors revolved their study with the teachers’ reflective thinking levels namely “technical, contextual and dialectical”.

Contextualizing teaching statistics in the Philippines, the authors emphasized the “dominance of traditional formula-based and computational methods for teaching probability and hypothesis testing with little or no coverage in sampling distributions and estimation of parameters traditional methods of teaching” (p. 2). Though the authors recognized the efforts of the Philippines to make use of local-based and contextualized pedagogical skills in teaching inferential statistics through workshops, local for a and context-based publications, they also pointed that “there is need for statistics teachers to explore their own conceptions on statistical inference and their teaching practice on the topic as basis for more focused and improved instructional decisions and actions” (p. 2). Thus, in situating their study, Reston and Jala argued that “teachers need to develop reflective thinking skills in order to model and sustain reflective practice”.

A workshop for the 28 selected college statistics teachers were made where they had two (2) pre-assessment tests in order to measure “their knowledge of probability and inferential statistics concepts and methods” (p. 3). Aside from pre-assessment, “the participants also answered a Profile Inventory of Reflective Thinking Attributes (Taggart, 2005) which consisted of 30 items that elicited their responses when confronted with a problem situation and when preparing, implementing, and assessing a lesson” (p. 3). After the workshop, selected teachers have been followed up for reflections on their classroom practice through class observations, interviews and other reflective techniques such as self-reports, peer observation and assessment, and journal writing to support the integration of reflective practice into their teaching.

As a result of this qualitative study on teachers’ capacity of teaching inferential statistics, Reston and Jala found out that the participants were categorized under the technical and contextual domains only. For one, these teachers’ educational backgrounds are mathematics, social studies and not statistics. In addition, this means that “most of these teachers’ concern is on their competency towards meeting outcomes in relation to course content, behaviors and skills with reference to students’ background and there is minimal consideration of alternative teaching practices in relating content, examples and exercises to context, other social issues and real life uses of statistical inference” (p.4). Furthermore, the authors also recognized other constraints experienced by these statistician teachers like “the lack of time for class preparation due to heavy teaching load, the lack of activity-based teaching materials and computer technology facilities for teaching statistics and the need for institutional and collegial support in their department” (p.5).

Hence, Reston and Jala sees the strong potential “for reflective practice in improving teacher’s own learning and teaching practices in statistics instruction” and if that’s the case, it will break the vicious myth that teaching inferential statistics is a “cycle of routine and mechanistic teaching practices” but if through reflexive practice, they could reflect this on their instructional decisions and actions.

Another perspective on statistics education is the article *Assessment of Graduate Students’ Conception of Statistical Inference: Philippine Perspective* by Jala and Rston (2010) where they focused on the graduate students’ conception of statistical inference. The authors pinpointed remarkable reforms in teaching and learning statistics education in the undergraduate programs in the Philippine context. However, the authors also noted that minimal attention was given to the graduate level considering that they graduate students are required of research methodology subjects which include basic statistics.

The study used mixed-methods approaches in investigating and assessing graduate students conception of statistical inference, wherein participants were 18 graduate students enrolled in two graduate statistics courses of a private sectarian university in Cebu City. Out of the 18 participants, seven were enrolled in doctorate statistics courses while 11 were enrolled in the master’s level. The participants’ undergraduate backgrounds were from various fields such as engineering, education, commerce and philosophy. Most of them are teaching while some are working in offices such as banks and some others are administrators of schools.

In order to assess the graduate students’ perception of statistical inference, they use pre-post assessments using the Survey of Attitudes Toward Statistics–28 (SATS-28 ©) by Schau (2003) and a modified adaptation of a researcher-made Statistical Literacy Assessment Scale (SLAS) by Reston (2004) were administered to the study participants to assess students’ attitudes towards statistics and statistical literacy, particularly on interpreting statements involving statistical inference, and these were administered at the beginning of the semester. The authors explained the necessity of these tools such that the SATS-28 © comprises 28 items which assess four components of students' attitudes toward statistics; namely affect, cognitive competence, value and difficulty, using a 7-point Likert type response scale with higher scores corresponding to more positive attitudes. On the other hand, the researcher-modified SLAS consists of 15 items designed to assess students’ statistical literacy in interpreting statements involving statistical inference as used in a given context, and in evaluating generalizations or inferences based on sample data.

For the results of their study, Jala and Reston (2010) highlighted that “graduate students’ attitudes and beliefs about statistics were greatly influenced by their previous experiences in learning statistics in their undergraduate or even secondary education”. In addition to this, the authors also believed that graduate students’ misconceptions on the concepts of sampling, sample representativeness, and the logic of inferential reasoning when dealing with sample data also stemmed from poor background knowledge on inferential statistics in their undergraduate statistics courses. Hence, toward the end of their paper, Jala and Reston suggested that the findings of theor study is deemed necessary as basis for interventions needed to improve graduate students’ conceptual understanding and reasoning about statistical inference.