Student experience in research in developing world within teaching-intensive public Universities

Research is available, documenting students’ research experiences in research oriented universities (Jenkins, Healey & Zetter, 2007). This is far less the case when it comes to teaching intensive universities. The related literature can also be criticized since it does not adopt a multi-actor perspective. Only recently, also students have been involved in the discussion (Visser-Wijnveen, van der Rijst & van Driel, 2015). Moreover, the topic is under-researched in the context of African universities.

The present quantitative study was set up in Mozambique; a developing country with hardly national and institutional mechanisms/strategies pushing research practices in Higher Education. Students from 8 undergraduate courses representing social sciences, education and humanities programmes at two public universities in Mozambique were involved. Both universities, Universidade Eduardo Mondlane (UEM) and Universidade Pedagogica (UP) are teaching intensive universities. The key research question was to determine what the level of the student research experience is in these teaching-intensive universities and whether differences can be observed between programmes and universities.

A Portuguese version of the Research Integration Scale was developed to measure four latent variables: reflection about research, participation in research, awareness of current research, and motivation to do research. Scale items are presented to respondents who indicate on a 5-point Likert scale to what extent they are involved in the activities (1 very rarely to 5 very frequently). The back-translation method was used to develop the Portuguese version (Behling & Law, 2000). The revised scale reflects high overall reliability (alpha= .92) and acceptable to high reliability in all four subscales. Applying confirmatory factor analysis (CFA), the structural validity of the scale and subscales could be confirmed with good goodness-of-fit indexes ($CMIN=55.685$, $DF=29$, $p=.002$; $CMIN/DF=1.92$; $GFI=.960$; $AGFI=.924$; $CFI=.982$; $TLI=.972$; $RMR=.046$; $RMSEA=.059$). High covariance was observed between the four subscales, confirming the integrated nature of student’s research experiences.

The questionnaire was administered to 261 undergraduate students (51.7 % from UEM) from 6 Faculties, each comprising of 8 departments. Analysis of the subscale scores indicates that students’ research experience is average: Reflection = 3.3/5; Participation = 3.24/5; Current Research; Motivation = 3.44/5. Since, no concrete benchmarks are available to judge the adequacy
of actual research experiences, this study put forward a critical benchmark of 80%, building on established Mastery Learning literature (Zimmerman & Dibenedetto, 2008). This high benchmark is based on the rationale that a sufficient level of research integration experience is critical towards developing new skills, trying to understand future research work, improving competence levels, or developing a sense of mastery based on self-referenced standards. The results of one sample t-tests, comparing above averages with the critical benchmark of 4.2/5 shows the average scores are consistently below par; though with small effect sizes (** = p< .01): Reflection t= -9.8** ; Participation t= -10.0**; Current Research t= -18.4**; Motivation t= -7.7**). The student values seem also to differ between universities and courses; but mostly in relation to Motivation and Reflection, and not in Current Research and Participation. A discussion of the results centres on differences in culture, competences and traditions in teaching intensive universities. The results also put forward an instructional design agenda for these institutions to move to Research-Based Education (RBE) in the context of Teaching and Research Nexus (TRN). The results can be used as benchmarks to direct strategic discussions in universities and specific courses/programs. The limitations of the present study inspire new research involving larger samples, other programs and teachers as key actors next to students.

References