

Book Review

Handbook of Research on Assessment Technologies, Methods, and Applications in Higher Education

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Handbook of Research on Assessment Technologies, Methods, and Applications in Higher Education

Christopher S. Schreiner

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INTRODUCTION

In *Handbook of Research on Assessment Technologies, Methods, and Applications in Higher Education*, Christopher Schreiner, Professor of English at the University of Guam, explains that the purpose of research in this text is to help educators better articulate and systematize their assessment efforts by demonstrating applied research in various cases and initiatives in higher education institutions both nationally and internationally (xxiii). Though originally published in 2009, the implications of the individual studies remain relevant to current higher education assessment. Schreiner's argument responds to the problems of top-down institutional pressure that often results in reactive, ineffective initiatives (xxiii). Schreiner explains that all the chapters in the text express a desire to turn instead "from a reactive to active context for assessment" (xxv). The scope of the text covers a range of topics in higher education assessment, including critical thinking, assessment technologies, creativity, racial validity, qualitative and quantitative methods of assessment, program evaluation, instruction delivery, basic writing, student-centered initiatives, multi-modal writing, student and faculty engagement, diversity, design assessment, alternative assessment, authentic assessment, outcomes assessment, peer assessment, transformational assessment, and international assessment. Schreiner approaches these studies hermeneutically, utilizing holistic, incisive interpretation of the contexts. The sections look closely at the different organisms in relationship within the ecology, describing specific cases of assessment design and then the assessment of larger assessment methods and programs.

ORGANIZATION AND CONTENT OF THE BOOK

Schreiner's *Handbook* is situated within a constructivist paradigm, using the metaphor of growth through ecological assessment, or organic assessment, in which assessment is used by and for the benefit of stakeholders, to cultivate and grow students, programs, and institutions. The agricultural and ecological metaphors present the chapters as locally validated criteria and methods of assessment, "on our own terms," with value placed on their specific contexts (xxi). In this way, the premise of Schreiner's text echoes that of O'Neill, Moore, and Huot's guide to college writing assessment: "making good decisions about assessment for placement is a local, contextual activity requiring local knowledge and expertise," as curricula, students, programs, and institutions are unique. The book is divided into three sections: "Assessment Technologies and Instruments," which discusses the design of assessment instruments; "Assessment Applications and Initiatives," which investigates the implementation of assessment technologies in various contexts, programs, and institutions; and "Assessing Assessment," which examines the underlying, overarching, or critical theories informing assessments and evaluates their effectiveness within their local contexts.

Certainly, the strength of the book lies in its overall breadth and the processual organization of the sections. Schreiner's metaphorical framing of growth is appropriate to his emphasis on "organic growth" of assessment, sowed through interdependence and reciprocity. The chapters look deeply at the roots of assessments, within the soil of contexts from which assessments emerge. Assessment ecologies are shown as highly complex, subject to numerous factors and exigencies. The chapters show how assessments grow and thrive in the light of evaluation, which has the generative goal of reproducing what is deemed as effective by local stakeholders and altering, pruning, that which needs improvement.

It is important to note, however, that the original publication date was 2009, and considerable changes in technology have taken place since then. For example, the links to the ePort Consortium, MIT's iMOAT assessment program, and the CLAQWA assessment tool are no longer functional, and testing e-portfolios that use personal digital assistants (PDAs) is no longer germane, as PDAs have fallen out of use with the advent of the smartphone. As the title of the book suggests, digital technologies play an integral role in contemporary assessment. However, while the specific programs and technologies in some of the chapters may no longer be as relevant as in the time of publication, the implications, such as methods for evaluating e-portfolios, remain critical to discussions of higher education assessment.

SUMMARY

I examine Schreiner's collection through the lens of growth and extend his metaphor of assessment ecologies with applications and opportunities to "discover native needs" (xxi). I apply the definition of an ecological approach to assessment articulated by Stevens, Kirst, and Mitchell in *Remaking College: The Changing Ecology of Higher Education*: "to conceive of higher education as comprising myriad service providers, instructional and administrative labor, funders, and regulators interacting in a messy system of educational production." Moreover, this approach considers the competing yet interdependent entities of higher education and enables a comprehensive view of the higher education institution as a community of organisms that can grow and propagate when afforded the necessary resources and opportunities as nourishment. These organisms are enmeshed and interdependent, relying on one another for sustenance.

The first section examines the foundations of the assessment ecosystem through the development and design of various assessment instruments in different contexts and institutions.

Chapter 1 "Multi-Tier Design Assessment in the Development of Complex Organizational Systems" by Dyehouse, Baek, and Lesh illustrates the intricacy involved in assessment design in complex educational organization or programs. Dyehouse, Baek, and Lesh propose a multi-tier design

assessment for educational programs and organizations that do not have clearly defined objectives and indicators. They emphasize the important of feedback loops and reports to decision-makers to ensure that design assessment is applied only to evolving goals. Design assessment entails designing the education system as it is being measured, so that it responds directly to how it is going to be assessed. Design assessment suggests that the education organism grows toward the light of evaluation.

Chapter 2 “A Critical Thinking Rubric as the Basis of Assessment and Curriculum” by Lewittes describes the development of a critical thinking rubric in the State University of New York’s General Education program. Lewitt’s assertion of the utility of the rubric in the classroom adheres to Schreiner’s call for organic assessment that is derived from the roots of its contexts.

Chapter 3 “A Survey of Effective Technologies to Assess Student Learning” by Pieper, Edwards, Haist, and Nolan is one of the more dated chapters, as some of the specific technologies described are no longer operating. The types of assessment tools (i.e., electronic portfolios, course management systems, and audience response systems), nevertheless remain commonly used. The suggestions of expanding current research with technology advancement, considering student backgrounds and characteristics when adopting technologies, and considering how technology enhances pedagogy and practice remain applicable to the institutional ecology by considering how all stakeholders are affected by technology.

Chapter 4 “Assessing Creativity Using the Consensual Assessment Technique” by Baer and McKool describes the Consensual Assessment Technique (CAT) that utilizes expert rating to assess the creativity of stories, collages, poems, and other artifacts. The benefits of the expert-rater system are fairly well documented (see Clauser, Swanson, and Clyman; Child and Iwao; Haritos-Fatouros and Child; Rostan, Pariser, and Gruber; and Runco, McCarthy, and Svenson). Baer and McKool then claim that although the Consensual Assessment Technique has not been linked to any theory of creativity, it remains valid and free of gender and race/ethnicity biases. Continued application of this technique in various educational contexts and locations would add to the strength of its claim of validity, especially as it can be argued that creativity and artistic merit are highly contextual.

In Chapter 5 “Creativity Assessment in Higher Education,” Charyton, Ivcevic, Plucker, and Kaufman argue that creativity assessment as a means of evaluating students’ skills in higher education has numerous benefits, such as diagnosing creativity in the educational context, identifying students who have the potential for future professional creative activity, offering feedback to students and faculty, and offering information on how to facilitate creativity in the classroom. This multidimensional approach shows how creativity is a means of enhancing the growth of classrooms and institutions.

Chapter 6 “The Technology of Writing Assessment and Racial Validity” by Inoue was, for me, one of the most notable chapters, as Inoue presents an initial heuristic for evaluating racial validity. This chapter is particularly significant in diverse populations, as Inoue interrogates how racism and racial formations can be reproduced in teaching practices and assessments. Inoue observes how getting to the root of resisting hegemony can create racially equitable opportunities for more students to flourish.

In Chapter 7 “Qualitative and Quantitative Methods as Complementary Assessment Tools,” Thompson and Vaccaro argue for moving beyond the binary and instead using multiple, mixed methods for good assessment. The combination, Thompson and Vaccaro affirm, will provide richer forms of assessment for higher education institutions.

Chapter 8 “Effects of Assessment Results on a Writing and Thinking Rubric” by Flateby details the development of the Cognitive Level and Quality of Writing Assessment (CLAQWA) at the University of South Florida as a classroom analytic writing and thinking assessment rubric, a classroom instruction and assessment tool, and as a resource for better peer review. While Flateby found CLAQWA to be effective particularly for disaggregating assessment data for distribution and for classroom peer review, the tool can no longer be accessed through the link provided in the article.

The second section of the book looks at the various ways assessments have been implemented and the conditions that allow them to bloom and prosper within their contexts.

Chapter 9 “Assessing Outcomes in a Technical Communication Capstone” by D’Angelo and Maid describes the development of an outcomes assessment for the Multimedia Writing and Technical Communication Program at Arizona State University. D’Angelo and Maid’s process of mapping courses and outcomes in the use of e-portfolios results in an assessment method that informs a review of the curriculum and assessment processes and demonstrates the benefits of a recursive model of assessment—a cyclical process that ensures the continual growth of the program.

Chapter 10 “Assessing the Composition Program on Our Own Terms” by Borton, Frost, and Warrington details a comprehensive analysis of the rationale, theoretical foundations, methodologies, and results of the University of Louisville Composition program assessment. The analysis demonstrated the organic growth of an assessment program, as a “way people who are immersed in and most affected by the program environment can contribute to its progress and shape its direction for the future” (179).

Chapter 11 “A Case Study of Instructional Delivery Formats” by Aitken uses a case study to evaluate the assessment of three instructional delivery formats—online, distance/satellite campuses, and traditional format. Results show that significantly more students reached competency in the traditional format than in the others and a high percentage in all the formats failed in synthesis, conceptual, values, and critical literacy. The authors maintain that this is a continuous assessment to create a culture of assessment within the institution. It would be interesting to examine whether or not students’ competency levels in each instructional delivery format has changed since the article’s publication almost a decade ago.

Chapter 12 “Inverting the Remedial Mathematics Classroom with Alternative Assessment” by Brunsten is an interesting addition to the collection but still has relevance to the ecology of assessment. Brunsten provides a case study of a classroom technique that entails both assessment and remediation of college student’s mathematics skills, particularly problem solving. The use of the WeBWorK instructional tool was beneficial to the function of the mathematics classroom context through its teaching of active learning techniques.

Chapter 13 “A Case Study of Authentic Assessment” by Eubanks examines Coker College’s assessment program for student thinking and communication skills and provides a philosophical framework and practical methods that institutions can use to assess liberal arts learning outcomes. Eubanks provocatively claims that there is a problem of attempting to measure the qualitative with a quantitative, scalable unit and instead suggests giving up “learning units” altogether in favor of an event-based criterion of assessment, wherein students’ skills are demonstrated in practice (217). Eubanks’s highly philosophical approach unearths the epistemology of assessment for a more contextual, authentic approach.

Chapter 14 “Outcomes Assessment in Japanese Language Instruction” by Kang and Gugin is unique in that it is the only chapter that emerges from Schreiner’s home institution, the University of Guam. Kang and Gugin report on an outcomes assessment of the Japanese Studies courses. They respond to the argument of organic assessment that Schreiner makes initially in the text, that assessment should be internally motivated and not externally driven. They maintain that each program is responsible for conducting their own assessment audits and reports to establish multi-step assessment loops that benefit the classes, the program, and the university overall.

Chapter 15 “Assessing the Effectiveness of a Basic Writing Course” by Barboza and Singh describes an outcomes assessment study completed in a basic composition course at Hostos Community College/CUNY that enabled collaboration between administrators and faculty and institutional curricular change. The chapter reveals how assessment can involve various stakeholders to better serve students and serve the missions of the institution.

Chapter 16 “Peer Assessment for Development of Preservice Teachers” by Gilpin, Bodur, and Crawford describes the impact of peer observation and feedback on preservice teacher training. This case study shows the benefits of self-reflective assessment for the purposes of professional development, with teachers as stakeholders aiding in the growth and improvement of emerging stakeholders who will soon take a more active role in the institutional assessment ecology.

Chapter 17 “Workshops and E-Portfolios as Transformational Assessment” by Brammer and Parker reports on the Samford University Department of Communication Studies senior capstone workshops and e-portfolios, which is assessed using qualitative and quantitative methods. The data collected through this assessment method affirms the benefits of e-portfolios, wherein students “tell their own ‘assessment story,’” and prompts the fruition of student engagement, faculty development, and departmental transformation.

The third section moves beyond implementation and assesses the use of assessment methods in a variety of programs and institutions, affirming the contextual, organic basis of effective assessment.

In Chapter 18 “Neglected Necessity in Liberal Arts Assessment: The Student as the Unit of Analysis,” Chambliss scrutinizes the trend of the Collegiate Learning Assessment (CLA), which is found to overlook the specific learning experiences of individual students in the liberal arts, and instead argues for the student as the unit of analysis in assessment initiatives. Chambliss privileges the lived experience of students and claims that well-educated students should be the goal, instead of just aiming for effective departments. Chambliss thus shifts the focus of assessment to students as the primary beneficiaries of assessment.

Chapter 19 “Redefining Writing Reality with Multi-Modal Writing and Assessment” by Pettipiece, Ray, and Everett presents a variety of multi-modal writing assessment methods, such as AccuPlacer or WritePlacer, iMOAT, and TracDat. While the authors argue the use of multi-modal writing platforms as possibly “the most time-saving, cost-effective, and useful way of providing evidence of student learning to external evaluators during institutional assessment,” perhaps a comparative analysis of the effectiveness of each method would help better qualify this claim within specific contexts.

Chapter 20 “Engaging Faculty as a Strategic Choice in Assessment” by McKittrick explores assumptions about including faculty in the assessment process and provides strategies for engaging faculty for the purpose of sustainable assessment. Pettipiece, Ray, and Everett also argue against top-down managerial accountability approaches and believe that the key agents are faculty who can ensure successful implementation of assessment programs when engaged in meaningful conversations of their applications and relevance.

Like McKittrick in the previous chapter, Chapter 21 “Developing a Receptive and Faculty-Focused Environment for Assessment” by Culver and VanDyke describes the development of a faculty-focused assessment environment that utilizes a common assessment language that faculty can take into their individual classrooms. Faculty buy-in is possible, according to Culver and VanDyke, when faculty take ownership of the curriculum revision and see the assessment process as related to their values. The faculty then acts as facilitators, and “not the inhibitors” to the assessment process (344).

Wittman in Chapter 22 “New Collaborations for Writing Program Assessment” adds to the previous argument, claiming that both students and instructors need to be involved in writing program assessment as the primary stakeholders. Wittman argues for a dialogic conversation between stakeholders to revise curriculums to respond to both students’ and instructors’ needs. The concept of the dialogic exchange in writing assessment is applicable to a constructivist learning pedagogy, where change and progress is made possible through collaboration.

Chapter 23 “Reporting Race and Ethnicity in International Assessment” acts somewhat as a companion to Inoue’s chapter, with their arguments being further developed in their joint work, *Race and Writing (Studies in Composition and Rhetoric)*, published in 2012. Poe maps 480 research articles about racial-ethnic minorities and educational testing in English-language educational assessment and finds that “the last 20 years of U.S. political discourse has brought forth a working belief that if we ignore race (in favor of ‘diversity’), then racism will go away” (371). Poe’s ambitious project remains relevant in today’s contexts and perhaps should be revisited to observe whether English-language educational assessment has changed in the way that it constructs racial-ethnic categorizations and examine the testing policies related to these constructions.

In the final chapter, Chapter 34 “Method Development for Assessing a Diversity Goal,” Hawthorne, Dumova, Bradley, and Pedersen assess the outcome of a “cultural familiarity” general

education goal through a locally-developed oral examination assessment method. The chapter displays the complexities of developing assessment plans for general education, yet illustrates the benefits of assessment methods that develop organically around an institution's unique goals.

The chapters together focus on the development of the local needs of each program and institution, with some describing the implications for other higher education contexts. While many of the chapters remark on the complexity of designing, implementing, and assessing assessment methods and programs, these processes are seen as lively, dynamic, and multifaceted. The assessment ecology is displayed in the chapters' descriptions and analyses of assessment technologies, faculty and administrative labor, and student learning interacting within messy systems of educational production in local contexts. While "messy," the chapters present assessment as not so much a wilderness as an intricate environment of interdependent stakeholders. Overall, I recommend this book for those who find themselves in the thick of assessment ecologies, who desire to use its goals of growth and development within their administrative or teaching contexts.

READERSHIP

This book may be particularly helpful for program administrators, provosts, and higher education instructors. With chapters on writing assessment, liberal arts assessment, mathematics assessment, Japanese studies assessment, and teacher training, there are applications for a variety of disciplines and programs.

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