

Preparing Education Researchers: Identifying Necessary Competencies for Teachers, Administrators, and Student Affairs Professionals

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ABSTRACT

This descriptive study aimed to answer two research questions: (a) what are the assessment, evaluation, and research (AER) competencies necessary for three educator types (teachers, K-12 administrators, and higher education student affairs professionals); and (b) what are the similarities and differences in competencies by educator type? Current professional standards for each educator type were identified and coded for alignment with AER topics, then reviewed for similarities and differences. Results suggest that teacher competency standards focus heavily on assessment; administrator competencies focus on ethical decision making and continuous improvement; and student affairs professional standards focus on advocacy and supporting institutional mission. These results imply that education preparation programs may need to adjust AER course curriculum and instruction to align with distinct educator needs.

KEYWORDS

education research competencies, professional standards, education program curriculum

The value and necessity of educator engagement in assessment, evaluation, and research (AER) practice is clearly argued in the literature; professional standards have long referenced the need for competency in AER for all educator types, including teachers (NCATE, 1954), K-12 administrators (NBEA, 1989), and higher education student affairs professionals (ACE, 1937). Education research seeks to understand the “human attributes, interactions, organizations and institutions that shape educational outcomes” (Madalińska-Michalak, 2020, p. 31). Educator engagement in research promotes a plethora of benefits for students, schools, and educators alike. Practitioners and policymakers can use research results to inform practice and decision making, allowing for the improvement of schooling at the classroom, school, district, and community level (Ho, 2017). The act of doing research prompts educators to think of the student experience in new ways, leading to practice and decision making that better aligns with student needs and experiences (Nguyen et al., 2019). Further, educators who regularly engage in AER understand the importance of research-driven practice and take responsibility for their action, practices, and decision making (Phelps-Ward et al., 2017).

In the past decade, educator competency in AER has become more of a necessity than ever before (Banta & Palomba, 2015; Darling-Hammond, 2016; DeLuca et al., 2015; Hamrick & Edwards, 2017), and as a result, AER coursework within education degree

programs is critical. With the goal of increasing student knowledge and decision-making abilities in research contexts (Wieting, 1975), AER courses introduce students to the how-to skills of doing research (Lei, 2010), offer first-hand experience in research practice (Lewthwaite & Nind, 2016), and communicate the why and how of conducting research (Aguado, 2009; Denham, 1997). Within education degree programs, research methods coursework fills an important need to equip educators with the ability to use research practices to assist in programming and service development (ACE, 1949), oversee school systems and continuously improve practice (Bowers, 2017), increasingly foster student learning (Banta & Palomba, 2015), internalize and make education work meaningful (Evans & Reason, 2001; Sriram & Oster, 2012), and practice research-informed teaching (Griffiths, 2004).

CLARIFYING AER COMPETENCIES

Despite this increased call for educator competency in assessment, evaluation, and research, the literature has yet to identify the specific skills and outcomes necessary for educators trained in AER. For example, it is unclear whether teacher and K-12 administrators should be trained in advanced qualitative analysis techniques or simply taught to use various assessment and evaluation methods. Further, many graduate education programs



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enroll students of multiple educator types in the same AER courses without acknowledging the differences between educator needs and professional standards. Jones (2014) found that student affairs professionals who were enrolled in a general education research methods course were unsatisfied with their experience, noting that the “course actually felt like we didn’t get as much out of it as we did in the other courses because that course was not specific to student affairs” (p. 41). With a vast number of studies suggesting that students already hold negative beliefs and attitudes toward research methods coursework (Earley, 2014), perhaps targeting research methods curricula to student professional needs could positively shift perspectives.

Problem of Practice

To ensure that educators are prepared to engage in AER activities, education degree programs must clarify the specific AER skills and outcomes necessary for each educator type. This problem of practice arose in the context of a small, private institution on the West Coast that offers an Ed.D. program serving three different educator types: education administrators, teachers, and higher education student affairs professionals. Students enrolled in these programs are often combined into shared courses; however, are the differentiated AER needs of these various professionals being met? Are there clear differences in AER standards that can help inform curriculum to better prepare these professionals for their fields? Given this context, this study aimed to explore AER standards related to these three educator types (teachers, K-12 administrators, and higher education student affairs professionals).

Researcher Positionality

The researchers are both educators, bringing years of collective experience in university educator preparation programming and familiarity with educator preparation standards. Researcher one is a faculty member at the small, private institution who teaches all three educator types through graduate-level coursework. She is a licensed teacher and administrator and taught in a K-12 setting for 10 years. Researcher two is a Research Analyst for an educational non-profit and a doctoral student with six years of experience working in higher education. She has spent the last two years advising teacher candidates on state licensure standards and is intimately familiar with the professional standards for teachers and higher education student affairs professionals. Her work also involved sitting on the Assessment, Evaluation, and Research Knowledge Community for the National Association of Student Personnel Administrators (NASPA), a leader in the development of AER standards for higher education student affairs professionals. Together, the two researchers have adequate knowledge of the three educator types, and their associated professional standards, to accurately interpret the meaning of these three sets of standards and their relationship to assessment, evaluation, and research (AER).

Study Purpose

The purpose of this study is twofold: (a) outline the unique assessment, evaluation, and research competencies necessary for each educator type (teacher, administrator, and higher education student affairs professional); and (b) identify similarities and differences in competencies required by different educator types. Two research questions will be addressed:

1. What are the assessment, evaluation, and research competencies necessary for teachers, K-12 administrators, and student affairs professionals?
2. What are the similarities and differences between assessment, evaluation, and research competencies necessary for educators by educator type?

REVIEW OF THE LITERATURE

Teacher Competency Standards

A variety of entities have established professional standards for teachers related to assessment, evaluation, and research over the past 70 years. In 1954, the National Council for Accreditation of Teacher Education (NCATE) was founded as an accrediting body for education programs (presently CAEP, 2020). By 1990, the Standards for Teacher Competence in Educational Assessment of Students (STCEAS) were established, outlining seven standards of critical assessment skills and competencies that were necessary to incorporate into teacher preparation programs, including:

1. Choosing assessment methods appropriate for instructional decisions.
2. Developing assessment methods appropriate for instructional decisions.
3. Administering, scoring, and interpreting the results of both externally produced and teacher-produced assessment methods.
4. Using assessment results when making decisions about individual students, planning teaching, developing curriculum, and school improvement.
5. Developing valid pupil grading procedures which use pupil assessments.
6. Communicating assessment results to students, parents, other lay audiences, and other educators.
7. Recognizing unethical, illegal, and otherwise inappropriate assessment methods and uses of assessment information (National Council on Measurement in Education, 1990, p. 1)

As of 2020, the Council for the Accreditation of Educator Preparation (CAEP; formerly NCATE) has provided accreditation standards for education programs for over 60 years. The 10 InTASC Standards represent the model teaching standards and learning progressions for teachers across the country. The most recent edition of these standards was published in 2013 by the CCSO's (Council of Chief State School Officers, 2020) Interstate Teacher Assessment and Support Consortium (InTASC). Each InTASC Standard includes a list of related teacher outcomes (i.e. performances, essential knowledge, and critical dispositions). These standards are also incorporated into the Council for the Accreditation of Educator Preparation (CAEP) accreditation process for educator preparation programs nationwide.

Educational Administrator Competency Standards

The development of professional standards for educational administrators has long been led by the National Policy Board for Educational Administration (NPBEA), founded in 1989. In 1996, the first set of standards for educational administrators was developed by The Council of Chief State School Officers and approved by NPBEA, known as the *Interstate School Leaders Licensure*



Consortium (ISLLC) standards. These standards provided a model for states, districts, and organization to use when developing policies related to educational administration (NPBEA, 2018a). By 2001, a special council was appointed by NPBEA to develop standards specifically to guide program development and accreditation standards for educational administration preparation programs, called the Educational Leadership Constituent Council (ELCC) Standards (NPBEA, 2018a). Over time, these two sets of standards were revised to align with current empirical research and practices, culminating in the professional standard publications that exist today.

The NPBEA produced the *Professional Standards for Educational Leaders* (PSEL; NPBEA) to replace the ISLLC standards for general policy guidance in 2015. These PSEL Standards outline general actions that effective educational administrators should be able to take, spread across 10 standards:

1. Mission, Vision, and Core Values.
2. Ethics and Professional Norms.
3. Equity and Cultural Responsiveness.
4. Curriculum, Instruction, and Assessment.
5. Community of Care and Support for Students.
6. Professional Capacity and School Personnel.
7. Professional Community for Teachers and Staff.
8. Meaningful Engagement of Families and Community.
9. Operations and Management.
10. School Improvement.

Within each standard, specific outcomes are listed that identify what an administrator should be able to do (e.g., strategically develop, implement, and evaluate actions to achieve the vision for the school; PSEL, 2015). These standards are to be used as a “compass that guides the direction of practice directly as well as indirectly” for administrators (PSEL, 2015, p. 4).

Student Affairs Professionals Competency Standards

Student affairs professionals (SAPs) are the personnel who oversee campus operations and administration on university campuses worldwide. SAPs are employed in all functional areas across campus, from offices of admissions and athletics, career counseling to health centers, to housing and residential services, academic support services, and multicultural programming centers (Hevel, 2016).

SAP engagement in AER activities, and a call for AER competency in student affairs, has remained consistent throughout history. First emerging in 1937 when the American Council on Education (ACE) published the *Student Personnel Point of View*, scholars argued that SAPs must provide evidence of student learning outcomes using assessment and evaluation practices. This call for AER competency in student affairs remains today, with current professional competencies related to AER emerging from the joint work of the National Association of Student Personnel Administrators (NASPA) and the Association of College Personnel Administrators (ACPA) in 2015.

The NASPA and ACPA Competencies (2015) include 10 competency areas:

1. Advising and Supporting.

2. Assessment, Evaluation, and Research.
3. Law, Policy, and Governance.
4. Leadership.
5. Organizational and Human Resources.
6. Personal and Ethical Foundations.
7. Social Justice and Inclusion.
8. Student Learning and Development.
9. Technology.
10. Values, Philosophy, and History.

The Assessment, Evaluation, and Research (AER) competency includes five subareas: (a) AER terms and concepts, (b) AER values, ethics, and politics, (c) AER design, (d) AER methodology, and (e) AER interpretation. The learning outcomes associated with each subarea, measured along three competency levels, were outlined by NASPA and ACPA in 2016; this document was used in this study to identify necessary competencies for SAPs.

METHOD

This descriptive study used a two-phase design to answer the two research questions. During phase one, which answered research question one, necessary AER competencies per educator type were identified. This process included (a) completing an online search to identify the most current competencies required of each educator type; and (b) coding each competency document for items specifically related to assessment, evaluation, and research (AER). During phase two, which answered research question two, the coded competencies per educator type were further reviewed and coded for themes. Themes between educator types were compared for similarities and differences.

Phase One: Identifying and Coding AER Competencies

A thorough internet search was conducted to determine the current standards for each educator type. The current teacher standards were the *Interstate Teacher Assessment and Support Consortium* (InTASC; CCSSO, 2013) Standards. Educational administrator standards were the *Professional Standards for Educational Leaders* (PSEL; NPBEA, 2015) Standards. Finally, the *ACPA and NASPA Professional Competencies Rubric: AER Competency* (ACPA & NASPA, 2016) were for student affairs professionals.

Once the competency standards per educator type were identified, the researchers reviewed and coded the standards to identify items related to assessment, evaluation, and research. Each list of standards was transformed into an Excel document by extracting each item line by line. For the 10 InTASC standards, every individual performance, knowledge, and disposition outcome was extracted individually (174 total items). For the PSEL standards, each outcome under each standard was extracted individually (83 total items). All items in the ACPA and NASPA AER Competency were extracted individually (15 total items). This resulted in a comprehensive list of competencies per educator type in preparation for coding.

Each list of competencies was then reviewed and coded item by item by the two researchers individually. Because the InTASC and



PSEL Standards include competencies outside of AER, items that were not related to AER were immediately discarded from further analysis. This analysis was an iterative process; if an item was related to AER, it was coded as such; the researchers followed Saldaña's (2015) In Vivo and Descriptive first-cycle coding process and assigned codes to each item that were either copied verbatim from within the item itself or described the essence of the item (e.g., "research" or "continuous improvement"). This process resulted in a continuously developing list of codes. Once all items had been

reviewed and codes assigned by each of the two researchers individually, the entire list of codes was compiled, and all items were reviewed once more for alignment with the entire code list. The final list of 18 codes is available in Table 1. This process revealed a total of 49 AER-related competencies for teachers, 32 AER-related competencies for educational administrators, and 15 AER-related competencies for student affairs professionals. A list of AER-related competencies for each educator type is presented in Tables 2, 3, and 4. These tables are further discussed in the results section.

Table 1. Codes Emerged from Competency Items: Frequency Counts and Percentages

Code	Frequency by Educator Type					
	Administrator		Student Affairs		Teacher	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Accountable/Accountability	3	9%	0	0%	2	4%
Advance Field/Advance Practice	1	3%	0	0%	2	4%
Analyze/Analysis	1	3%	1	7%	11	22%
Assess/Assessment	6	19%	12	80%	23	47%
Continuous(ly) Improve(ment)/Improve	19	59%	2	13%	8	16%
Data	4	13%	5	33%	9	18%
Decision/Decision Making	3	9%	0	0%	9	18%
Diversity, Equity, Inclusion	3	9%	1	7%	11	22%
Evaluate/Evaluation	4	13%	12	80%	9	18%
Evidence	1	3%	3	20%	4	8%
Inquiry	2	6%	0	0%	4	8%
Literature	0	0%	2	13%	0	0%
Method(s)	1	3%	1	7%	2	4%
Planning	2	6%	7	47%	10	20%
Report	0	0%	3	20%	1	2%
Research	2	6%	11	73%	3	6%
Study/Studies	0	0%	3	20%	0	0%
Theory/Theoretical Frame(works)	0	0%	1	7%	0	0%

Note. Codes with the highest percentage per educator type are bolded for emphasis.



Table 2. AER Competencies for Teachers

Standard	AER Competency
Standard 1. Learner Development	1(a) The teacher regularly assesses individual and group performance in order to design and modify instruction to meet learners' needs in each area of development (cognitive, linguistic, social, emotional, and physical) and scaffolds the next level of development.
Standard 2. Learning Differences	2(b) The teacher makes appropriate and timely provisions (e.g., pacing for individual rates of growth, task demands, communication, assessment, and response modes) for individual students with particular learning differences or needs.
Standard 3. Learning Environments	3(a) The teacher collaborates with learners, families, and colleagues to build a safe, positive learning climate of openness, mutual respect, support, and inquiry. 3(p) The teacher is committed to supporting learners as they participate in decision-making, engage in exploration and invention, work collaboratively and independently, and engage in purposeful learning.
Standard 4. Content Knowledge	4(b) The teacher engages students in learning experiences in the discipline(s) that encourage learners to understand, question, and analyze ideas from diverse perspectives so that they master the content. 4(c) The teacher engages learners in applying methods of inquiry and standards of evidence used in the discipline. 4(f) The teacher evaluates and modifies instructional resources and curriculum materials for their comprehensiveness, accuracy for representing particular concepts in the discipline, and appropriateness for his/her learners. 4(i) The teacher understands major concepts, assumptions, debates, processes of inquiry, and ways of knowing that are central to the discipline(s) s/he teaches. 4(p) The teacher appreciates multiple perspectives within the discipline and facilitates learners' critical analysis of these perspectives.
Standard 5. Application of Content	5(a) The teacher develops and implements projects that guide learners in analyzing the complexities of an issue or question using perspectives from varied disciplines and cross-disciplinary skills (e.g., a water quality study that draws upon biology and chemistry to look at factual information and social studies to examine policy implications). 5(i) The teacher understands the ways of knowing in his/her discipline, how it relates to other disciplinary approaches to inquiry, and the strengths and limitations of each approach in addressing problems, issues, and concerns. 5(k) The teacher understands the demands of accessing and managing information as well as how to evaluate issues of ethics and quality related to information and its use.
Standard 6. Assessment	6(a) The teacher balances the use of formative and summative assessment as appropriate to support, verify, and document learning. 6(b) The teacher designs assessments that match learning objectives with assessment methods and minimizes sources of bias that can distort assessment results. 6(c) The teacher works independently and collaboratively to examine test and other performance data to understand each learner's progress and to guide planning. 6(e) The teacher engages learners in multiple ways of demonstrating knowledge and skill as part of the assessment process. 6(g) The teacher effectively uses multiple and appropriate types of assessment data to identify each student's learning needs and to develop differentiated learning experiences. 6(h) The teacher prepares all learners for the demands of particular assessment formats and makes appropriate accommodations in assessments or testing conditions, especially for learners with disabilities and language learning needs. 6(i) The teacher continually seeks appropriate ways to employ technology to support assessment practice both to engage learners more fully and to assess and address learner needs. 6(j) The teacher understands the differences between formative and summative applications of assessment and knows how and when to use each. 6(k) The teacher understands the range of types and multiple purposes of assessment and how to design, adapt, or select appropriate assessments to address specific learning goals and individual differences, and to minimize sources of bias. 6(l) The teacher knows how to analyze assessment data to understand patterns and gaps in learning, to guide planning and instruction, and to provide meaningful feedback to all learners. 6(m) The teacher knows when and how to engage learners in analyzing their own assessment results and in helping to set goals for their own learning. 6(o) The teacher knows when and how to evaluate and report learner progress against standards. 6(p) The teacher understands how to prepare learners for assessments and how to make accommodations in assessments and testing conditions, especially for learners with disabilities and language learning needs. 6(q) The teacher is committed to engaging learners actively in assessment processes and to developing each learner's capacity to review and communicate about their own progress and learning. 6(r) The teacher takes responsibility for aligning instruction and assessment with learning goals. 6(t) The teacher is committed to using multiple types of assessment processes to support, verify, and document learning. 6(u) The teacher is committed to making accommodations in assessments and testing conditions, especially for learners with disabilities and language learning needs. 6(v) The teacher is committed to the ethical use of various assessments and assessment data to identify learner strengths and needs to promote learner growth.
Standard 7. Planning for Instruction	7(d) The teacher plans for instruction based on formative and summative assessment data, prior learner knowledge, and learner interest. 7(f) The teacher evaluates plans in relation to short- and long-range goals and systematically adjusts plans to meet each student's learning needs and enhance learning. 7(k) The teacher knows a range of evidence-based instructional strategies, resources, and technological tools and how to use them effectively to plan instruction that meets diverse learning needs. 7(l) The teacher knows when and how to adjust plans based on assessment information and learner responses.
Standard 8. Instructional Strategies	8(b) The teacher continuously monitors student learning, engages learners in assessing their progress, and adjusts instruction in response to student learning needs.



Standard	AER Competency
Standard 9. Professional Learning and Ethical Practice	9(c) Independently and in collaboration with colleagues, the teacher uses a variety of data (e.g., systematic observation, information about learners, research) to evaluate the outcomes of teaching and learning and to adapt planning and practice.
	9(d) The teacher actively seeks professional, community, and technological resources, within and outside the school, as supports for analysis, reflection, and problem-solving.
	9(g) The teacher understands and knows how to use a variety of self-assessment and problem-solving strategies to analyze and reflect on his/her practice and to plan for adaptations/adjustments.
	9(h) The teacher knows how to use learner data to analyze practice and differentiate instruction accordingly.
	9(k) The teacher knows how to build and implement a plan for professional growth directly aligned with his/her needs as a growing professional using feedback from teacher evaluations and observations, data on learner performance, and school- and systemwide priorities.
	9(l) The teacher takes responsibility for student learning and uses ongoing analysis and reflection to improve planning and practice.
Standard 10. Leadership and Collaboration	9(n) The teacher sees him/herself as a learner, continuously seeking opportunities to draw upon current education policy and research as sources of analysis and reflection to improve practice.
	10(a) The teacher takes an active role on the instructional team, giving and receiving feedback on practice, examining learner work, analyzing data from multiple sources, and sharing responsibility for decision making and accountability for each student's learning.
	10(c) The teacher engages collaboratively in the school-wide effort to build a shared vision and supportive culture, identify common goals, and monitor and evaluate progress toward those goals.
	10(f) The teacher engages in professional learning, contributes to the knowledge and skill of others, and works collaboratively to advance professional practice.
	10(h) The teacher uses and generates meaningful research on education issues and policies.
	10(p) The teacher actively shares responsibility for shaping and supporting the mission of his/her school as one of advocacy for learners and accountability for their success.
	10(s) The teacher takes responsibility for contributing to and advancing the profession.
10(t) The teacher embraces the challenge of continuous improvement and change.	

Table 3. AER Competencies for K-12 Administrators

Standard	AER Competency
Standard 1. Mission, Vision, and Core Values	b) In collaboration with members of the school and the community and using relevant data, develop and promote a vision for the school on the successful learning and development of each child and on instructional and organizational practices that promote such success
	c) Articulate, advocate, and cultivate core values that define the school's culture and stress the imperative of child-centered education; high expectations and student support; equity, inclusiveness, and social justice; openness, caring, and trust; and continuous improvement
	d) Strategically develop, implement, and evaluate actions to achieve the vision for the school
Standard 2. Ethics and Professional Norms	b) Act according to and promote the professional norms of integrity, fairness, transparency, trust, collaboration, perseverance, learning, and continuous improvement
	a) Act ethically and professionally in personal conduct, relationships with others, decision-making, stewardship of the school's resources, and all aspects of school leadership
Standard 3. Equity and Cultural Responsiveness	g) Act with cultural competence and responsiveness in their interactions, decision making, and practice
Standard 4. Curriculum, Instruction, and Assessment	b) Align and focus systems of curriculum, instruction, and assessment within and across grade levels to promote student academic success, love of learning, the identities and habits of learners, and healthy sense of self
	f) Employ valid assessments that are consistent with knowledge of child learning and development and technical standards of measurement
	g) Use assessment data appropriately and within technical limitations to monitor student progress and improve instruction
	a) Implement coherent systems of curriculum, instruction, and assessment that promote the mission, vision, and core values of the school, embody high expectations for student learning, align with academic standards, and are culturally responsive
Standard 6. Professional Capacity of School Personnel	c) Develop teachers' and staff members' professional knowledge, skills, and practice through differentiated opportunities for learning and growth, guided by understanding of professional and adult learning and development
	d) Foster continuous improvement of individual and collective instructional capacity to achieve outcomes envisioned for each student
	e) Deliver actionable feedback about instruction and other professional practice through valid, research-anchored systems of supervision and evaluation to support the development of teachers' and staff members' knowledge, skills, and practice
	f) Empower and motivate teachers and staff to the highest levels of professional practice and to continuous learning and improvement
Standard 7. Professional Community for Teachers and Staff	c) Establish and sustain a professional culture of engagement and commitment to shared vision, goals, and objectives pertaining to the education of the whole child; high expectations for professional work; ethical and equitable practice; trust and open communication; collaboration, collective efficacy, and continuous individual and organizational learning and improvement
	d) Promote mutual accountability among teachers and other professional staff for each student's success and the effectiveness of the school as a whole
	e) Develop and support open, productive, caring, and trusting working relationships among leaders, faculty, and staff to promote professional capacity and the improvement of practice
	h) Encourage faculty-initiated improvement of programs and practices.



Standard	AER Competency
Standard 8. Meaningful Engagement of Families and Community	j) Build and sustain productive partnerships with public and private sectors to promote school improvement and student learning
Standard 9. Operations and Management	c) Seek, acquire, and manage fiscal, physical, and other resources to support curriculum, instruction, and assessment; student learning community; professional capacity and community; and family and community engagement.
Standard 10. School Improvement	b) Use methods of continuous improvement to achieve the vision, fulfill the mission, and promote the core values of the school
	c) Prepare the school and the community for improvement, promoting readiness, an imperative for improvement, instilling mutual commitment and accountability, and developing the knowledge, skills, and motivation to succeed in improvement
	d) Engage others in an ongoing process of evidence-based inquiry, learning, strategic goal setting, planning, implementation, and evaluation for continuous school and classroom improvement
	e) Employ situationally-appropriate strategies for improvement, including transformational and incremental, adaptive approaches and attention to different phases of implementation
	f) Assess and develop the capacity of staff to assess the value and applicability of emerging educational trends and the findings of research for the school and its improvement
	g) Develop technically appropriate systems of data collection, management, analysis, and use, connecting as needed to the district office and external partners for support in planning, implementation, monitoring, feedback, and evaluation
	h) Adopt a systems perspective and promote coherence among improvement efforts and all aspects of school organization, programs, and services
	i) Manage uncertainty, risk, competing initiatives, and politics of change with courage and perseverance, providing support and encouragement, and openly communicating the need for, process for, and outcomes of improvement efforts
	j) Develop and promote leadership among teachers and staff for inquiry, experimentation and innovation, and initiating and implementing improvement
	a) Seek to make school more effective for each student, teachers and staff, families, and the community

Table 4. ACPA and NASPA Assessment, Evaluation, and Research Competency Rubric

	Competency Level: Foundational	Competency Level: Intermediate	Competency Level: Advanced
Subarea 1: AER Terms and Concepts	Be able to differentiate between assessment, program review, evaluation, planning, and research.	Use AER terminology consistently when participating with colleagues in assessment, program review, evaluation, planning, and research	Lead and teach others assessment, program review, evaluation, planning, and research.
Subarea 2: AER Values, Ethics, and Politics	Explain institutional and divisional AER procedures and policies with regard to ethical assessment, evaluation and other research activities.	Contribute actively to the development of a culture of evidence at the department level by providing AER training, advocating for funding, and incorporating AER in practice.	Create a culture of evidence in which AER is central to practice and that training happens across the organization.
Subarea 3: AER Design	Design program and learning outcomes that are clear, specific, and measurable; informed by theoretical frameworks and aligned with organizational outcomes, goals, and values.	Prioritize program and learning outcomes with organization's goals and values.	Lead the conceptualization and design of ongoing, systematic, high-quality, data-based strategies at the institutional, divisional, and/or unit-wide level to evaluate and assess learning, programs, services, and personnel.
Subarea 4: AER Methodology	Differentiate among methods for assessment, program review, evaluation, planning, and research.	Design data collection efforts that are ongoing, sustainable, rigorous, unobtrusive, and technologically current.	Design and integrate ongoing and periodic data collection efforts such that they are sustainable, rigorous, as unobtrusive as possible, and technologically current.
Subarea 5: AER Interpretation	Articulate, interpret, and apply results of AER reports and studies, including professional literature.	Effectively manage, align, and guide the utilization of AER reports and studies.	Lead the design and writing of varied and diverse communications of assessment, program review, evaluation, and other research activities that include translation of data analyses into goals and action.

Note. Samples taken from ACPA and NASPA professional competencies rubrics, 2016, p. 13-16.

Phase Two: Theming the Competency Codes

The coding process of the data included a systematic approach (Miles & Huberman, 1994) of multiple steps taken by the researchers. First, each researcher individually reviewed all AER competency items individually and assigned the codes of assessment, evaluation, and/or research to each standard they identified as related to one of these AER competencies. Standards were coded with these AER codes if they included specific language related to the code (i.e., assess, assessment, evaluate), or if the

intended outcome of the standard was related to AER (i.e., report). The second phase of coding included each researcher reviewing all of the AER competency items and their assigned codes again using Saldaña's (2015) descriptive coding to capture the essence of each item. The researchers attempted to identify similarities in necessary competencies between educator types, the researchers, assigning themes to items to group them with commonalities. Unlike the first phase of coding, which aimed to identify whether an item was related to AER or not, this second phase aimed to capture a more detailed



description of the item, with codes emerging such as “leading change,” “culturally responsive instruction,” and “teacher/educational research advocacy.” Although similar to the first list of codes, this second list contained a more detailed description of the competency items; this process resulted in a total of 14 final codes. Saldaña’s (2015) *pattern coding* was used to identify patterns within these codes, resulting in three emergent themes: Student Learning, Continuous Improvement and Change, and Decision Making. Frequency counts were calculated to determine how often each code appeared within each set and across the various standards.

To identify differences between necessary competencies by educator type, the researchers compared the phase one and phase two codes by educator types, identifying differences both in the codes and the frequency of codes between educator types.

RESULTS

Necessary AER Competencies by Educator Type

The document analysis and coding process revealed a total of 49 AER-related competencies necessary for teachers within the InTASC (2013) Standards, 32 AER-related competencies necessary for educational administrators within the PSEL (2015) Standards, and 15 AER-related competencies necessary for student affairs professionals within the ACPA and NASPA (2016) Professional Competencies Rubric.

Teachers

Necessary AER competencies for teachers were identified across all 10 of the InTASC Standards:

1. Learner Development.
2. Learner Differences.
3. Learning Environments.
4. Content Knowledge.
5. Application of Content.
6. Assessment.
7. Planning for Instruction.
8. Instructional Strategies.
9. Professional Learning and Ethical Practice.
10. Leadership and Collaboration.

The full list of AER competencies, presented in Table 2, emphasizes the necessity of teacher competency in assessing student learning, identifying and establishing student learning outcomes, and modifying instruction to successfully engage all learners within the school environment. The term *assessment* was common in the teacher competency literature, more so than other terms such as evaluation or research.

K-12 Administrators

Necessary AER competencies for K-12 educational administrators were identified across nine of the 10 PSEL Standards:

1. Mission, Vision, and Core Values.
2. Ethics and Professional Norms.
3. Equity and Cultural Responsiveness.
4. Curriculum, Instruction, and Assessment.

5. Professional Capacity of School Personnel.
6. Professional Community of Teacher and Staff.
7. Meaningful Engagement of Families and Community.
8. Operations and Management.
9. School Improvement.

AER competencies for administrators emphasized decision making, especially the ethics behind decision making and the impact of decision making on school culture and student learning. One of the main aims of AER work for administrators is to lead continuous improvement efforts at the school and community level.

Student Affairs Professionals

Necessary AER competencies for student affairs professionals spanned the entire AER Competency as outlined by the ACPA and NASPA (2016) Professional Competency Rubric, including:

1. AER Terms and Concepts.
2. AER Values, Ethics, and Politics.
3. AER Design.
4. AER Methodology.
5. AER Interpretation.

AER competencies for these professionals emphasized assessment, evaluation, and research throughout the text, with a specific emphasis on advocacy (i.e., advocating for AER-driven change and funding for AER projects) and utilizing AER to lead change and achieve the mission of the higher education institution.

AER Competency Similarities between Educator Types

The results of the phase one and phase two coding process resulted in three emergent themes in the necessary AER competencies for all educators: Student Learning, Continuous Improvement and Change, and Decision Making.

Student Learning

Present among all three educator AER competencies was a theme of supporting student learning, either through teaching, services, programming, or leadership. Teachers, administrators, and student affairs professionals are expected to understand multiple methods and approaches to student learning assessment, develop student learning objectives and outcomes, evaluate student learning outcomes against identified rubrics or standards, and continuously adjust practice to support student learning. Themes of accountability, using AER to promote equity, and supporting diverse learners were present in all three documents.

Continuous Improvement

Educators of all three types are called to engage in AER as a way to continuously improve educational outcomes for students, for families, and for the wider community. Continuous improvement includes working closely with internal and external stakeholders to identify goals and achieve those goals, leading school-wide change efforts that align with school vision and strategic plans, modifying services and instruction as a way to improve learning outcomes for students, and engaging in professional development opportunities to continuously grow as a professional and align with best practice in



the field. Knowledge of specific techniques and methods are critically important to continuous improvement, including knowledge of research methodologies and knowledge of technological systems to collect, manage, and interpret data.

Decision Making

Similar to the theme of continuous improvement, a final theme of decision making was present among the three educator types. Teachers, administrators, and student affairs professionals are expected to use AER as a means of making data-driven decisions that align with current literature, acknowledge trends in school data, and support the vision of the school. Ethics were an important part of this theme; for all educators, it is necessary to utilize assessment, evaluation, and research techniques to explore the impact of school instruction, services, and programs and ensure that equitable student learning is being achieved.

AER Competency Differences between Educator Types

Differences in competencies in educator types also began to emerge when comparing the data, displayed in Tables 2, 3, and 4, and analyzing the codes that emerged during phase one and phase two.

AER Methods

The AER competencies identified within each educator competency document highlighted specific AER methods that were most essential for each educator. For example, teachers are expected to constantly measure student learning through multiple methods of assessment, communicate those assessment results to students, and then use assessment results to inform changes to their classroom instruction. This method of assessment is much different than the administrator, who is asked to assess school personnel, school-wide student achievement, and alignment of school outcomes with the greater vision of the district. Different still is the student affairs professional who may evaluate a program within their department one day, and then assess the impact of a program on university-wide retention the next. Interestingly, few items within any of the competency documents clearly articulated expectations for educator knowledge of specific research methods (i.e., qualitative or quantitative analysis) or furthering the field through publication or grant-funded projects. The competencies seem to focus on the daily work of educators and their practical use of AER methods during the workday.

AER Context

Each educator type engages in AER within a different school context; teachers spend most hours in the classroom, while administrators move from school to district and community locations. Student affairs professionals, depending on functional position, may engage in AER work through a cross-divisional group or as a standalone assessment professional. Administrators, often representing the mission of the school, are expected to communicate and lead school change efforts; student affairs professionals may do the same, depending on their role within the institution. While teachers must be prepared to communicate student data to parents and families directly, administrators should be prepared to communicate school trends, outcomes, and initiatives to a wide

range of stakeholders. The timeline of AER engagement also seems to differ by educator type: Student affairs professionals are often measuring the impact of programs on student outcomes each semester, while teachers are measuring student learning daily, and administrators are measuring outcomes continuously according to strategic plans.

Using AER to Impact Change

Expectations about how each educator will use the results of AER differ as well. Student affairs professionals are asked to use the literature as a foundation to develop and adjust new programs for students, having clear assessment and evaluation plans to measure impact along the way. Program outcomes often must be communicated to school leaders and outside stakeholders, possibly even presented on a university website. Similarly, administrators are expected to continuously collect school data and develop reports to share with school, district, and community stakeholders. Administrators are leaders of change and are expected to translate AER results into actionable steps. Teachers are also change agents but are less likely to report AER outcomes to outside stakeholders. Instead, teachers must be intimately familiar with translating student learning assessment into actionable change within the classroom, resulting in better learning outcomes for all students.

DISCUSSION

It is clear that the broader field of Education recognizes the need for AER competencies across all educator types. However, the findings of this study highlight the need for higher education institutions to differentiate how these competencies are taught across various programs. Our findings indicate that the similarities between programs included Student Learning, Continuous Improvement and Change, and Decision Making. In programs that combine graduate students, such as EdD programs, these competencies can be given prevalence in course curriculum and discourse. Key differences in AER competencies across standards tended to be in the area of assessment, which could be addressed in programs by providing specific content-level assessment courses or assignments within courses that address various assessment preparation needs. It is critical that instructors in these courses are aware of the differences, so they can differentiate appropriately.

Additional key differences found in our analysis involved the AER context and AER intended outcomes across the competencies for the three educator types. Due to the diversity in context experienced by each educator type, the need to tailor student learning is necessary to adequately prepare educator professionals. To address these challenges, programs can utilize real world data in course-based learning, such as engaging in district-based research projects to prepare teachers and administrators and partnering with institutional research to help prepare higher education student affairs professionals. Research indicates that university-district partnerships that are transformational in nature can effectively support graduate student researcher development while also benefiting school districts, who are often underfunded in the research department (Ralston et al., 2016). While this study affirms the existence of differentiated standards, it provides unique insight into the similarities and differences across standards that can contribute to how and what graduate students learn as budding researchers.



Implications

The implications of this study are both practical and theoretical. First, the results of this study outline the exact AER-related competencies necessary for teachers, K-12 administrators, and student affairs professionals. Previously, this content comparison did not exist, suggesting that both education programs and educators may have been unaware of the competencies necessary across educator types, or perhaps educational leaders are not able to remain continuously abreast of changes to evolving standards when they transition from one type to another (i.e., if a teacher becomes a principal). This unfamiliarity is a major concern, as it suggests that educators may not be obtaining competency in an area that is critically important to their work (ACPA & NASPA, 2016; Banta & Palomba, 2015; DeLuca et al., 2015; Hamrick & Edwards, 2017; InTASC, 2013; PSEL, 2015). These results can be directly translated by education program directors and faculty into curriculum development for education AER courses.

Second, the similarities and differences identified between necessary AER competencies by educator type suggest that not all educators should be treated the same within the AER classroom and curriculum. It may be that the current method of AER teaching, which often uses a one-size-fits-all instructional approach and curriculum, is not serving our educators well. As mentioned previously, Earley's (2014) review of research methods found that overall, students tend to hold negative beliefs and attitudes about research in general. Studies within education research literature also suggest that educators are not prepared to engage in AER activities, with low AER competency cited among student affairs professionals (Herdlein, 2004; Schroeder & Pike, 2001; Sriram, 2011; Waple, 2006; Young & Janosik, 2007), and only half of teachers identifying as a teacher-scholars (Mullen, 2000). Education practitioners also often have a hard time translating education research into practical action, an additional barrier to engaging in the AER classroom (Price, 2019). The results of this study could be used to restructure AER courses specifically for each educator type, or in the case of the mixed educator classroom, allow the instructor to provide differentiated instruction that supports all educator types.

Limitations

The results of this study should be considered in light of its limitations. The researchers used one competency document per educator type to identify AER-related competencies. It is possible that a meta-analysis of the literature in combination with the coding of the competency document would have revealed additional AER-related competency items. This deeper analysis is suggested for future research to further elaborate on the competencies necessary for each educator type. It is also possible that the competency documents, although the most prominent in the field for each educator type today, are missing important competencies that have emerged in the literature since their publication. Again, future research should include a review of the literature to complement the results found by coding the competency documents.

CONCLUSION

In conclusion, this descriptive study provides important implications for policy and practice. It appears that higher education programs would better meet the needs of their diverse educators when curriculum and instruction directly align with needed

competencies in their particular fields. While there are similarities in the required assessment, evaluation, and research competencies across teachers, administrators, and student affairs professionals, the differences in how these AER competencies are applied in practice should be considered in higher education coursework. The similarities across competency standards within the three educator types highlight the value of student learning, continuous improvement, and ethical decision making. However, the differences in AER methods, context, and the intended outcomes of AER competencies for each educator type suggest a need for differentiation in preparing competent AER professionals for their particular professional careers. These education professionals work to meet the individualized needs of their school communities; higher education institutions should also work to meet the individualized needs of these learners.

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