Research Scientist Promotion Criteria for the School of Education

Research centers affiliated with Indiana University's School of Education conduct sustained and focused research in areas outside the boundaries of traditional academic departments. They directly contribute to the School's national and international reputation for excellence and to its long tradition of service to education communities in the State of Indiana and to the US (e.g., governmental agencies, PK-12 and higher education systems). The centers' capacity for service, productivity and success depends on being able to maintain facilities and organizations staffed by stable, well-qualified non-tenure track researchers with richly diversified and specialized competencies. Although research scientists traditionally have been employed as part of a center, there may be instances where a research scientist is employed directly by a funded research project or an academic department within the School. In such instances, the criteria delineated in this document may be used by substituting "project" or "department" for "center."

Indiana University instituted the three-tier system of research ranks (i.e., Assistant Scientist, Associate Scientist, and Senior Scientist) in 1981 to enhance the competitive recruitment and retention of doctoral level researchers. Effectively using this career ladder framework to recruit and retain high-quality research scientists necessitates transparent, appropriate, and well-defined criteria and procedures for their annual review and promotion. Supplementing the University's policy statements on qualifications for research ranks (see below), this document provides the details and context needed to ensure the validity and fairness of the promotion process, and provides well-defined criteria for promotion suited to the roles, responsibilities and expectations of research scientist positions within the School.

Several factors must be taken into consideration in the definition of valid and meaningful criteria for research scientist promotion, including the following:

Diverse missions and contexts. Each research center and institute has a distinct mission, purpose, and set of goals. The criteria for promotion must recognize the diversity of the missions and the individual's contribution to that mission.

Funding sources and scholarly products. Research centers at the School are funded by external contracts, grants, user fees, and other revenue sources that must be taken into consideration in research scientist promotion cases. The funding base for the centers has two significant implications: (1) the research scientists' commitment to promoting the mission of the center, above and beyond their individual research interests, is critical to the success and sustainability of the center, and (2) the responsibilities and expectations of research scientists whose positions are funded by external sources are limited by the conditions of the external funding, decreasing the research scientists' flexibility in pursuing individual research interests and/or devoting time to other (unfunded) endeavors. Dedication to the respective center and meeting the obligations of the funding sources, then, greatly influence many aspects of research scientists' work, including their research products and how they devote their time.

Diverse responsibilities and expectations. Promotion criteria must take into account the significant and substantive differences in responsibilities and expectations both within and between centers. The specific position responsibilities and expectations of research scientists vary greatly, even within the same research rank.

Research scientist service to the center. Promotion criteria must also take into account the critical role of research scientists' service to the center. The long-term sustainability of centers is directly dependent on the center's reputation, visibility, and ability to continue to attract new (and returning) funding sources. This requires research scientists to invest substantial time and effort into the productivity and sustainability of the center and to uphold a commitment to the center and its welfare.

A: UNIVERSITY CRITERIA

The School criteria for research scientist promotion are guided by the Indiana University policy statement on research ranks (Regulation of Research Appointments ACA- 20, effective 2-07-1981, last updated 2-02-1993; http://policies.iu.edu/policies/categories/academic-faculty-students/academic-appointment-review/Regulation-of-research-appointments.shtml). Research rank appointments are appropriate for individuals who hold the terminal degree in their field, who have some postdoctoral experience (or its equivalent), and whose primary responsibilities will be research and service. University policy outlines the following general qualifications for each of the three research ranks, stating that these qualifications are roughly equivalent to those set forth in the area of research for members of the faculty:

Assistant Scientist: Typically has completed the terminal degree in his or her discipline and, in some fields, has at least one year of successful postdoctoral research experience; is capable of original, independent research and scholarship under the direction of a senior faculty member or an Associate Scientist or a Senior Scientist.

Associate Scientist: Typically has completed a minimum of three years postdoctoral research; has begun to establish a national reputation through published work and has responsibility for carrying out independently, as principal investigator, projects of his or her own devising.

Senior Scientist: Typically has demonstrated a career of continued growth in scholarship that has brought a national or international reputation as a first-class researcher or scholar who has made substantial contributions to his or her discipline.

B: RESEARCH AND CREATIVE ACTIVITIES DEFINITIONS, EVALUATION AREAS, AND EVIDENCE

Research scientist responsibilities focus on research and creative activities. Their work divides across (1) scholarship and (2) service to the center. The following sections define each of these, describe its evaluation areas, and outline types of evidence useful in making evaluative judgments.

The appropriateness and importance of the types of scholarship and level (or type) of service vary with the expectations of a given research scientist position. Therefore, it is critical that judgments about research scientists' scholarship, as well as their center service, be made taking the nature of the individual's position (i.e., that center's mission, research scientist's allocation of effort, and the specific responsibilities and expectations of the position) into account. The following sections illustrate that there is considerable flexibility in how a research scientist can meet the criteria outlined in Section C.

B: 1: SCHOLARSHIP

B: 1: a: Scholarship Definition

Scholarship includes original inquiry and systematic analysis of problems (both practical and theoretical) contributing to the field of education through scholarship and creative effort. To align with the roles and responsibilities of research scientists in its centers, the School's definition of research and creative activities recognizes and values research scientists' diverse forms of scholarship, relying on three of the four types of scholarship defined by Boyer (1990):[1]

Scholarship of discovery. This includes all activities that extend knowledge through the discovery or collection of new information. The scholarship of discovery includes, but is not limited to, the typical label of basic or original research (e.g., primary empirical research, historical research, theory development and testing, methodological studies, and philosophical inquiry and analysis).

Scholarship of application. This includes all activities that relate knowledge in academic disciplines to communities outside academia, including the discovery, evaluation and communication of research findings. The scholarship of application focuses on using research findings and innovations to address real world, societal problems.

Scholarship of integration. This includes all activities that are primarily interdisciplinary and interpretive, focusing on making connections across disciplines, across topics within a discipline, or across time. The scholarship of integration includes the interpretation of one's own research so that it is useful beyond one's disciplinary boundaries and can be integrated into a larger body of knowledge.

B: 1: b: Scholarship Evaluation Areas

The evaluation of research and creative activity involves the examination of a number of areas, including, but not limited to, the following:

Productivity. Research scientists may demonstrate productivity in one or more areas of scholarship (i.e., scholarship of discovery, application, or integration) depending on the responsibilities and expectations of the position. Productivity occurs in the activities themselves (e.g., number, size and/or scope of research projects completed by the research scientist) and/or the products of these activities (e.g., reports, publications, presentations). The amount of mentoring and/or advising graduate students and other academic staff (e.g., research associates, more junior research scientists) on components of the research process (e.g., skill development training, developing reports and/or papers, and other creative activities) may also be considered to the extent that such activity is an expectation or responsibility of the research scientist position.

Quality. The quality of a candidate's scholarship (including the conceptualization, design, implementation, analyses, findings, implications, and/or writing) is an important component of the assessment of scholarly contribution. Quality includes the extent to which the activity's purposes, goals and objectives are clear; the activity reveals a high level of relevant knowledge, discipline-related expertise/skills and reflective understanding; and appropriate

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[1] Boyer, E. (1990). *Scholarship reconsidered: Priorities for the professoriate*. Princeton, NJ: The Carnegie Foundation for the Advancement of Teaching.

use of methods for the research activity including demonstrating integrity in the research process. Quality may also include the extent to which the activity and outcomes are presented appropriately and effectively to various audiences. Discipline-specific or professional standards in a given field should also be considered in judging quality.

Impact. Impact includes the influence of a research scientist's scholarship on the field or discipline, and/or the effect on key stakeholders or environments (e.g., changing teachers' practices; influencing education policy; informing key education decisions and improvement initiatives; guiding the development of best practices). Assessment of impact may include the breadth and reach of the impact, the extent to which the work can affect and be accessed by diverse stakeholders (both academic and/or practical), and/or the ways in which the scholarship has influenced and/or informed education policies and practices. Impact on the scholarly development of graduate students and other academic staff (e.g., research associates, more junior research scientists) resulting from mentoring and/or advising may also be considered to the extent that this type of research activity is an expectation or responsibility of the research scientist position.

Creativity/Innovation. Innovative and creative activities include the development and/or application of knowledge to develop new methodologies, instruments, analyses and/or research products. Examples of innovative and creative scholarly activities include, but are not limited to, developing survey items and measurement instruments, designing methodology, designing new reports, innovative contributions to analyses or report production, and new uses of statistics or methodology.

Intellectual Independence/Research Autonomy. Intellectual independence or research autonomy is the degree to which a research scientist independently directs the research and its processes (e.g., research design/methodology, data collection, data analyses, report writing and dissemination). Although this can take the form of serving as a principal or co-principal investigator or project director of funded research, intellectual independence and research autonomy may also be demonstrated for specific components of the research project or process without official leadership designation. Intellectual independence and research autonomy does not preclude collaborations and/or consultations with colleagues and peers (which are common and encouraged), but does entail the research scientist having the authority to make critical decisions related to the research design and implementation with only routine communication with a senior staff member (e.g., Senior Scientist, center director). This may also entail the candidate having the autonomy to communicate directly with funders, clients, and key stakeholders (as appropriate) and independently to resolve problems or issues that may arise during the research process. At its highest levels, intellectual independence also includes providing intellectual leadership at the center, School, or University in their research and scholarly endeavors (including teaching and mentoring graduate students when this is an expectation of a given position).

B: 1: c: Scholarship Evidence
Evidence will vary depending on the type of scholarship and the responsibilities and expectations of the position. The scope, size, and nature of the candidate's scholarly activity (or portfolio of research activities) provide evidence of scholarship. Candidates must summarize in writing the scholarship (this can be done as part of the personal statement or in a separate document), along with relevant accompanying documentation, that specifically addresses how

each research activity meets relevant evaluation areas (e.g., quality, impact). As needed and appropriate, the center director, clients and/or relevant colleagues may provide documentation that validates evidence provided by the candidate regarding research and creative activities. Scholarly activities include research design and implementation; development of survey items/measurement tools, methodologies, or designs; report design; report production processes; creation of resources and tools to advance the application of research; data collection or management; and analytic contributions. Scholarly activities may also include substantive mentoring or advising of graduate students and other academic staff, to the extent that this type of research activity is an expectation or responsibility of the research scientist position.

Evidence may also include:

Scholarly products. In many instances, scholarship may result in products of many forms, including but not limited to: articles, books or chapters, publication of agency or government reports; special analysis reports; technical reports; the development of new technology or tools; web-based publications or reports; webinars; and/or presentations, demonstrations or invited speeches. Although a publication in a peer-reviewed journal, for example, is evidence of scholarship, the expectation of this form of evidence should be limited to instances where publications of that type are an explicit expectation of a given position and/or is an allowable expenditure for the research funding of a given position. To varying degrees by center and position, research scientists work on and lead projects where certain types of products or dissemination methods are extremely unlikely or expressly prohibited due to, for example, the funding conditions or the research scientist's role/time allocation. Assessment of scholarly products should take into consideration the purposes and context of the research project, as well as the intended audience.

Grant proposals submitted and/or awarded. In some positions, seeking competitive grants and contracts are an essential responsibility, and success in this endeavor—particularly when the grants are highly competitive and peer-reviewed—shows achievement in scholarship. In these instances, the same evaluation areas (e.g., productivity, quality, intellectual independence) should be considered in assessing grant proposals submitted and/or awarded. Submitted proposals that are not awarded, but are high quality and/or serve a longer-term strategic purpose, should be recognized and rewarded in addition to funded proposals.

Other Evidence. Other evidence may be appropriate based on the allocation of effort of the candidate, and the specific expectations of the research scientist position. Examples of other evidence include documentation of mentoring and/or advising graduate students, recognition of the candidate's expertise and scholarship by others (e.g., awards and honors), and research consultation. Solicited and unsolicited letters, as appropriate, may also be included as evidence of research and creative activity, such as letters from mentees or groups who have benefitted from the applied scholarship of the candidate.

B: 2: CENTER SERVICE

B: 2: a: Center Service Definition
Service to the center and its central mission/purpose is a primary responsibility of all research scientists. The School recognizes that the reputation, stature, and long-term sustainability of its centers are highly dependent upon the broad array of services performed by research scientists.

A research scientist's service to the center can take a variety of forms and directions, such as participation (or leadership of) a center committee, working group or task force; substantive involvement in a center initiative or project that contributes to the mission of the center (e.g., self-study of the center; developing a strategic plan; developing new organizational infrastructure); substantive project management roles (e.g., project design, project recruitment, report production, supervision of project staff, management of the project budget); performing integral administrative functions of the center (e.g., budget management; recruitment of personnel; personnel supervision and management of graduate students, academic staff, professional and support staff); personnel allocation/appointments; and grant and contract oversight. Service to the center may also include external activities that directly support the mission of the center, such as representing the center at School and/or University meetings, committees and/or events; representing the center at non-University events, meetings, conferences for the purposes of promoting the center and/or developing new business; outreach to relevant organizations and agencies; informing the needs of member organizations; and developing and/or maintaining projects and/or relationships with funders, clients, and key stakeholders. These efforts and other center service activities are considered in promotion decisions to the extent that they contribute to the mission of the center.

Where demonstrably useful to the center, research scientists may include service to the School, University, profession and/or public in their dossiers. This additional service may include teaching or contributing to the instructional program of the School or University as appropriate.

B: 2: b: Center Service Evaluation Areas
The evaluation of service involves the examination of a number of areas, including, but not limited to, the following:

Quantity, diversity and/or quality. Assessing service to the center includes judging the quantity, diversity and/or quality of service activities the research scientist engages in related to the mission of the center (e.g., number of service activities, scope of activities, range and diversity of activities). The number of service activities needs to be considered alongside the individual's depth of involvement and the quality of the service. This category includes the level of professional competence and/or expertise demonstrated for the performance of the service. The extent to which a candidate works collaboratively with others in pursuit of the center's mission and the flexibility demonstrated by the candidate in engaging in diverse service activities that meet the needs of the center should also be considered.

Effectiveness/impact of service. Assessing service to the center also includes an examination of the effectiveness of the service, the overall impact of service, and the significance of the service to the welfare, productivity and sustainability of the center.

Leadership and initiative. At the promotion to Senior Scientist level, assessing service to the center also includes the research scientist's initiative in taking on, creating, or designing new service activities to meet the needs of the center. Assessment also include the candidate's independent administrative leadership for the center, as well as leadership on service activities both within (e.g., serving as chair of a committee; spearheading a new initiative) and outside the center (e.g., sustaining projects over time, maintaining relationships with funders and clients, developing new funding streams and/or successfully leading funded

proposals, informing the needs of member organizations, and formally representing the center to external entities).

Other service. Additional activities external to the center may also be considered in evaluating service. Service to the School, University, profession and/or public may be considered, such as: administration within the School, University, or to professional organizations; service on School or University committees and faculty governance boards, commissions, task forces, and councils; service to any level of public or private educational institutions or professional organizations; service to government or public interest groups; teaching, training and development endeavors; reviewing proposals and papers for conferences, funding competitions, and other professional organizations. To count toward promotion, a case should be made for such service benefiting the center.

B: 2: c: Center Service Evidence
Evidence will vary depending on both the type of center service and the responsibilities and expectations of the position. The scope, size and nature of the service activities provide evidence of service to the center. Candidates must summarize in writing the service activities (this can be done as part of the personal statement or in a separate document), along with any relevant accompanying documentation, that specifically addresses the nature of the service activity, effectiveness/impact of the service, and for promotion to Senior Scientist, the leadership and initiative demonstrated in the delivery of the service. A procedure for validation of the service activities by the center director, peers and/or others may be used as appropriate.

Evidence may also include:

Service products. Depending on the type of service activity, products may be developed such as reports, articles, tools or other materials. For example, service products may include strategic plans, self-study documents, committee reports, website tools, promotional materials, etc. To the extent that a research scientist's service results in physical products, these may also be included as evidence.

Other evidence. External letters, awards or recognitions, and other documents demonstrating service activity and quality, may also be included as evidence of service.

C. PROMOTION CRITERIA

C: 1: CRITERIA FOR PROMOTION TO ASSOCIATE SCIENTIST
For successful promotion to Associate Scientist, a candidate must be rated excellent in research and creative activity (inclusive of scholarship and service to the center). Excellence in research and creative activity for promotion to Associate Scientist includes evidence of the following:

1. The candidate is beginning to establish himself or herself as an expert in his or her respective discipline, field or area of practice through sustained productivity and high quality work in one or more areas of scholarship (i.e., scholarship of discovery, application, or integration). The productivity and quality of competitive contracts and grants and/or mentoring graduate students and other academic positions should also be considered as part of this criteria category in instances where these types of scholarship are a responsibility or expectation of the position.

2. The candidate is beginning to show <u>intellectual independence and research autonomy</u> through leadership in designing and implementing substantive research projects and, if appropriate, being designated as a principal investigator/project director or co-principal investigator/co-project director. The candidate increasingly provides intellectual leadership and shows research autonomy for one or more aspects of the research process (e.g., design, data collection, data analyses, report writing, dissemination of findings). The candidate increasingly demonstrates the capability to independently and effectively interface with external audiences (e.g., clients, funders) and deal with research problems and/or issues that may arise during the research process. The intellectual independence/research autonomy in designing, writing and submitting competitive contracts and grants also should be considered in instances where this type of scholarship is an expectation of the position.

3. There should also be clear evidence that the candidate is contributing to the scholarship of discovery, application, and/or integration with work that has significant <u>impact</u> and/or work that shows noteworthy <u>creativity/innovation</u>.

4. The candidate demonstrates commitment to the center, as evidenced by the <u>quantity, diversity, and quality</u> of service activities the research scientist engages in related to the mission of the center (e.g., number of service activities, scope of activities, range and diversity of activities). The number of service activities needs to be considered alongside the individual's depth of involvement and the quality of the service activity. The research scientist demonstrates a high level of professional competence and/or expertise in the performance of the service to the center.

5. The research scientist's service to the center is <u>effective</u>, and has a positive <u>impact</u> on the development and/or sustainability of the center. There is evidence that the service contributes to the welfare, productivity and/or sustainability of the center.

C: 2 CRITERIA FOR PROMOTION TO SENIOR SCIENTIST
<u>For successful promotion to Senior Scientist, a candidate must be rated excellent in research and creative activity</u> (inclusive of scholarship and service to the center). Excellence in research and creative activity for promotion to Senior Scientist should include evidence of the following:

1. The candidate is an established expert in a discipline, field, or area of practice through consistent and sustained <u>productivity</u> and high <u>quality</u> work in one or more areas of scholarship (i.e., scholarship of discovery, application, or integration). There is evidence of the research scientist having a national and/or international reputation in his or her respective discipline, field, or area of practice resulting from strong productivity and high quality work and/or evidence that the research scientist contributes through their productivity and high quality work to the national and/or international reputation of the projects the research scientist works on or leads. The productivity and quality of competitive contracts and grants, and/or mentoring graduate students and other academic positions, also should be considered as part of this criteria category in instances where these types of scholarship are a responsibility or expectation of the position.

2. The candidate consistently demonstrates <u>intellectual independence/research autonomy</u>, and regularly provides intellectual leadership for multiple aspects of the research process (e.g.,

methodology design, data collection, data analyses, and dissemination of findings). The candidate independently designs and implements substantive research projects as a principal investigator/project director or co-principal investigator/co-project director, and provides intellectual leadership and/or mentoring of others at the center, School, or University in their research and scholarship endeavors.

3. There should also be clear evidence that the candidate has a sustained and distinguished record of contribution to the scholarship of discovery, application, and/or integration with work that has significant <u>impact</u> and/or work that shows noteworthy <u>creativity/innovation</u>. There should be evidence of major accomplishments, substantive contributions, and/or leadership over a period of years to at least one area of scholarship

4. The candidate demonstrates a consistent commitment to the center, as evidenced by the <u>quantity, diversity, and quality</u> of service activities the research scientist engages in related to the mission of the center (e.g., number of service activities, scope of activities, range and diversity of activities). The breadth, depth and quality of service activities demonstrates professional competence and/or expertise in the performance of the service. The candidate has lead one or more complex, special assignments critical to center operations.

5. The candidate's service to the center is consistently <u>effective</u>, and regularly has a positive <u>impact</u> on the development and/or sustainability of the center. There is strong evidence that the research scientist's service activities have resulted in substantive contributions over a period of years to the welfare, productivity and/or sustainability of the center.

6. The research scientist regularly demonstrates <u>leadership and initiative</u> in his or her service to the center. The research scientist regularly identifies opportunities for furthering the mission of the center, and takes the initiative to develop solutions to operational and/or organizational problems. The candidate has a history of providing independent administrative leadership for the center.

D: SEQUENTIAL LEVELS OF REVIEW AND EXTERNAL LETTERS

D: 1: SEQUENTIAL LEVELS OF REVIEW
Promotion dossiers for Associate Research Scientist and Senior Scientist are prepared by the scientist and are informed by these School of Education Research Scientist Promotion Criteria. The candidate's promotion dossier is reviewed at three levels to ensure comprehensive and rigorous peer review of achievements and promise. At each level, the appropriate review committee writes a substantive report evaluating the candidate's performance in Research/Creative Activity and Service/Engagement, votes for a recommendation, and submits the report and vote to the appropriate administrator (Center Director, Dean, Vice Provost). Then the appropriate administrator provides a separate substantive evaluation and recommendation.

1. <u>Center Level</u>. The candidate's center will conduct the initial level of review. The Center Promotion Advisory Committee (CPAC) will be appointed by the Center Director, with approval from the Executive Associate Dean, and should include at least five members. At least 60% of the committee should be comprised of tenured faculty members familiar with research scientist roles and responsibilities in the respective center and the remaining members should be rank-eligible research scientists (i.e., at the rank the candidate is seeking

or higher). Given the wide variation in the representation of research scientists in the centers, some latitude is provided in the nature and make-up of the CPAC. It is expected that the CPAC include rank eligible research scientists from the candidate's center (except those serving on promotion committees at the School or University levels) and rank eligible research scientists from other centers as needed. Only in instances where there are fewer than two rank eligible research scientists from across the School's centers would tenured faculty members familiar with research scientist roles and responsibilities in the respective center make up significantly more than 60% of the CPAC membership. If the research scientist is employed outside of a Center then the research scientist's supervisor would work with the Executive Associate Dean to form a CPAC following the guidelines listed herein.

2. <u>School of Education Level</u>. The second level of review will be conducted at the School level by the Promotion and Tenure Committee (PTC) and the Dean.

3. <u>Campus Level</u>. The third level of review will be conducted by the Bloomington Campus Promotions Advisory Committee and the Vice Provost for Faculty and Academic Affairs.

Committee members at each level of review are only eligible to vote if they have been "materially engaged" in the review process, as evidenced (for example) by their familiarity with the candidate's dossier or attendance at meetings where the case is discussed. No proxy voting is allowed. Voting is by secret ballot (secrecy should be maintained to the extent allowable by law). Votes must be reported in the candidate's dossier.

D: 2: EXTERNAL LETTERS

Promotion dossiers should contain three to six external review letters from qualified individuals not employed by Indiana University. External reviewers should be a balanced mix from a list of potential reviewers submitted by the candidate and a list prepared by the Center Director. Given the diversity of center purposes, and the varied roles and expectations of research scientists, external reviewers can be research scientists, tenured faculty, and reputable scholars/researchers at peer institutions or organizations (e.g., state and federal agencies, non-profit foundations, and other education, evaluation, or policy organizations that are similar in size, scope, and responsibilities to the candidate's center). Note, the use of tenured faculty members should occur only when they understand the role of the research scientist and center. External reviewers for research scientists should not have a significant, on-going relationship–scholarly, commercial, personal, familial, or financial–with the candidate. Determinations related to qualifications and appropriateness of external evaluators will be made by the Center Director, with approval from the Executive Associate Dean.

External referees must be sent: (a) the candidate's job description and center description, (b) the Research Scientist Promotion Criteria, (c) the candidate's c.v., (d) the candidate's statement, and (e) no more than 4 artifacts that provide evidence of the candidate's research and creative activity.

E: REAPPLICATION FOR PROMOTION

Unsuccessful candidates for promotion may reapply in a subsequent year.