Introduction

This literature review highlights central elements of the residency component of school leader preparation programs by aggregating the results of studies conducted on existing principal preparation programs. While individual programs differed in specific details and nuances, the results show a general pattern regarding key qualities of successful internships.

Methods

The search strategy was designed by the New York City Leadership Academy's (NYCLA) research team, and refined via feedback from NYCLA leadership and the George W. Bush Institute's Alliance to Reform Education Leadership (AREL) staff. Databases and search engines used in this literature review include Academic Search Complete, Proquest, Web of Science, EconLit, Google, and Google Scholar. Search results were calibrated utilizing Boolean search terms to maximize results while minimizing unnecessary searches. Specific search terms were utilized to find relevant publications. Namely, key subject phrases such as "school administrator," "school leader," or "principal" were searched alongside terms for the specific program element such as "residency," "experiential learning," "problem-based learning," "clinical experience," "internship," or "practicum." To prevent searches focusing on the medical field, which heavily utilizes clinical residency as the normal training tool for doctors, specific terminology such as "hospital" or "medical" was targeted to be excluded in search results. Further, searches were restricted to publications produced in the English language, but searches did include international publications. Titles (and abstracts, where available) of results were reviewed for relevance, and full publications were reviewed only if the result was deemed pertinent to this study.

As expected, we found a dearth of peer-reviewed papers on this subject and therefore expanded our search to publications found using the Google search engine, using the same set of search terms. Google results numbered in the thousands and we therefore decided to sort results by relevance and review only the first 30 results for pragmatic reasons.

Thirty papers met the inclusion criteria. Each of these sources was then subjected to data extraction utilizing a Data Extraction Form created by NYCLA to cull out relevant information from those papers and to assess the quality of the research. Data extracted included a description of the intervention, the objective and type of the study, a description

of the sample, the metrics included in the analyses, the results of the research, and an assessment of the quality of the research. Eleven of these 30 papers were then deemed pertinent to this study. The full data abstraction form is included as Appendix A.

Results

All studies focused on programs designed to train prospective principals, relied on perceptual outcomes, and collected data directly from program participants via survey, interview, or self-reflection mechanisms (journals, etc.). A few studies collected perspectives of superintendents and mentor principals, using similar data collection methods. Two studies looked at international preparation programs[1]; the remainder of these studies focused on preparation and training programs in the United States. Most studies focused on one particular program or within one state. Three studies look at data nationally or across several states.[2] Characteristics of the included studies are provided in Table 1.

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[1] See From Organization (2009) and Bush and Jackson (2002).
[2] See Orr (2011a), Duncan, Range, and Scherz (2011), and Orr (2011b).

Study	Relevant Objective of the Study/Hypotheses	Methods	Sample description	Residency description	Metrics used to evaluate/assess effectiveness of intervention/model	Results of evaluation/assessment of intervention/model	Quality of study
Cunningham, W.G. & Sherman, W.H. (2008). Effective internships: Building bridges between theory and practice. *The Educational Forum, 72,* 308-318.	To highlight what literature currently says should be the focus of preparation programs and what aspects should be highlighted and enhanced in modern preparation programs	Literature review	N/A	N/A	N/A	Successful internships require – (1) the intern to assume responsibility for opportunities or tasks; (2) the intern to develop knowledge and skills that are applicable across diverse settings; (3) include practice-based experiences that are aligned with the Interstate School Leaders Licensure Consortium standards or standards being used in the program of study; (4) connect theory and practice in a realistic and efficient way; (5) are feasible and sustainable within all parties' schedules; (6) provide openness and access to what is needed to complete activities; (7) and ensure that activities prepare interns to assume administrative roles with competence and confidence	Low-Med

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Diamantes, T. & Ovington, J. (2003). Storytelling: Using a case method approach in administrator preparation programs. *Educational Leadership 123*(3), 465-469.	Details ways in which case studies can help aspiring leaders develop critical analysis and problem solving skills, encourage reflective practice and deliberate action, bring reality into theory, involve students in personal learning, and promote creation of a community of learners.	Meta-analysis, descriptive; Study developed case studies as discussion-starters for limited use with graduate classes in educational administration. Complete narratives or scenarios are not given.	Literature review and perspective piece	N/A	Survey, Literature review	Case study method should be used to teach concepts of school administration to educators entering public school administration. The case-method was defined and differentiated from other terms and purposes. Various methods of instructional delivery were compared to demonstrate the advantages and disadvantages of case-based instruction. Several perspectives of case methodology, planning, and implementation were examined to further describe the methodology. Use of discussion-starters was explained.	Low
Orr, M.T. (2011a). How graduate-level preparation influences the effectiveness of school leaders: A	To assess how graduates' characteristics differed across programs, to what degree programs differed across core program attributes,	Cross-sectional, quantitative, survey Combines two conceptual models – (Model 1)	471 graduates who had completed programs 0 to 3 years prior from 13geographically dispersed institutions and	629 respondents from 17 university-based programs. Eight programs had fewer than 20 respondents, six	Comparison among programs as units of analysis using aggregate ratings of graduates' mean ratings on various variables and comparison of	Programs that are coherently organized around instructional leadership and provide challenging and work-rich field experience lead to greater perspectives of learning. Quality of internship experience was	High

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Study	Relevant Objective of the Study/Hypotheses	Methods	Sample description	Residency description	Metrics used to evaluate/assess effectiveness of intervention/model	Results of evaluation/assessment of intervention/model	Quality of study
comparison of the outcomes of exemplary and conventional leadership preparation programs for principals, *Educational Administration Quarterly, 47,* 18-70.	to what degree programs differed on graduate outcomes of leadership learning, career intentions, commitment and beliefs, and career advancement and explore relationships among program attributes, learning, and leadership outcomes. **Research Questions:** (1) What are the characteristics of program graduates and how do they differ among the sampled programs? (2) To what degree do programs differ on their core program attributes? (3) To	captures the relationship between the content, pedagogy, and structure of leadership preparation programs and participant outcomes, (Model 2) how career interests and advancement are shaped by professional knowledge and beliefs. All program graduates were surveyed in person or by mail or email at one point in time between 2004 and 2007.	17 university-based leadership programs	programs had between 21 and 49 respondents, and three had more than 50 respondents.	graduates to test relationship between program features and graduate outcomes. **Specific Metrics: Program satisfaction with leadership preparation** – graduates were asked to rate the extent to which they would "chose the same program" if they "had the opportunity to do it over again," using a 5-point scale. **Five measures of what graduates had learned** – using a 5-point effectiveness scale – Extent to which programs (1) learned to lead	positively related with graduate intentions to become a principal soon. Having a district partner is highly positively correlated with program quality.	

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	what degree do the programs differ on their graduates' outcomes of leadership learning, career intentions, commitment and beliefs, and career advancement? (4) For the surveyed graduates, what relationship exists among program attributes, learning, and leadership outcomes?				vision and ethics, (2) learned instructional leadership, (3) learned organizational learning leadership, (4) learned management and operations, and (5) learned leading parent and community involvement. **Three measures of career-related outcomes** – (1) current intentions in seeking career advancement, (2) positive and negative beliefs about the principalship, and (3) actual career advancement. **Actual career advancement outcome** –		

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					graduates indicated one of the following – continue as a teacher, non-principal building administrator or other position, department chair, assistant principal, principal, and central office administrator.		
Jiang, B., Patterson, J., Chandler, M, & Chan, T.C. (2009). Practicum experience in educational leadership program: Perspectives of supervisors, mentors and candidates. *Educational Administration: Theory and*	To explore stakeholder (faculty, mentor, student/prospective principal) perceptions of the effectiveness of the practicum experience in the educational leadership program.

Research questions: (1) How do university | Quantitative and qualitative, cross sectional, survey, descriptive, cohort

Program candidates, university supervisors, and school mentors were surveyed to solicit their perceptions of the | 113 total responses (83 candidates, 17 university faculty, and 13 mentors. | N/A | Survey data on 17 items on survey and six open ended questions, looking at percentages, means, and standard deviations and comparisons made on ANOVA.

Program candidates, university supervisors, and school mentors were surveyed to gather perceptions | Hands-on experience and flexibility were key strengths of a practicum program across all groups. Main weaknesses were a lack of consistency. Participants viewed long hours as an additional weakness with not enough specified experiences. Difficulty accessing mentors was another weakness pointed out by participants. The role of the school mentor was indicated to be important if they assigned duties on a regular basis and was the | High |

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Practice, 15(57), 77-108.	supervisors perceive the effectiveness of practicum experience in the educational leadership program? (2) How do school mentors perceive the effectiveness of practicum experience in the educational leadership program? (3) How do program candidates perceive the effectiveness of practicum experience in the educational leadership program? (4) Do university supervisors, school mentors and program	effectiveness of leadership practicum experiences. Quantitative data was analyzed by descriptive statistics. ANOVA was used to determine if differences existed among candidates, supervisors and mentors in their perceptions of practicum experiences. All participants' responses were also analyzed by ANOVA to consider if gender, ethnicity, leadership experiences			of effectiveness of leadership practicum experiences. Quantitative data was analyzed by descriptive statistics. ANOVA was used to determine if differences existed among candidates, supervisors and mentors in their perceptions of practicum experiences. All participants' responses were also analyzed by ANOVA to consider if gender, ethnicity, leadership experiences, and school level made any difference in perceptions of practicum experiences. A	key to a quality practice experience. Day to day real activity assignments were viewed to be the most meaningful experience of the practicum activities by all stakeholders. **Specific Outcomes:** (**1**) **How do university supervisors perceive the effectiveness of practicum experience in the educational leadership program?** Supervisors regarded the practicum experiences as an effective highlight of the program. They rated highly on their school visitations as a means of providing support to candidates. Supervisors perceived the ineffectiveness of the program as having a lack of consistency between supervisors and mentors. (**2**) **How do school mentors perceive the effectiveness**	

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	candidates differ significantly in their perceptions of the effectiveness of practicum experience in the educational leadership program? (5) Do gender, ethnicity, leadership experiences and school level make any difference in supervisors', mentors' and candidates' perception of the effectiveness practicum experience in educational leadership program?	and school level made any difference in their perceptions of their practicum experiences.			survey instrument gathered candidates' perceptions of their practicum experience and respondent demographic information, participants' perceptions of the extent to which they agreed with the effectiveness of practicum activities. These were classified into six themes for evaluation: (1) course requirements, (2) quality of assignments, (3) assistance to candidates, (4) reflections to journals, (5) supervisors' school visits, and (6)	of practicum experience in the educational leadership program? Mentors regarded the strength of the program was the quality of candidates' assignments. Mentors regarded the lack of consistency in program requirements from different supervisors as a major weakness. (3) How do program candidates perceive the effectiveness of practicum experience in the educational leadership program? Participating program candidates perceived real life experiences and flexibility as the major strengths in the program. Candidates identified ineffectiveness to include lack of communication between candidates and supervisors, lack of consistency in the requirements, less than helpful school visits by supervisors, and delay in	

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					compliance with ELCC standards. The last part of the survey consisted of 7 open-ended questions. Two other instruments were constructed to reflect the same items from the perspectives of university supervisors and the school mentors.	assigning supervisors to candidates in every semester. **(4) Do university supervisors, school mentors and program candidates differ significantly in their perceptions of the effectiveness of practicum experience in the educational leadership program?** Eight key findings – (1) the perceptions of effectiveness of practicum experiences among the supervisors, mentors and candidates did not significantly differ; (2) the three groups considered hands-on experiences involving real world activities as the strength of the program; (3) all three groups considered the lack of consistency in practicum requirements among different supervisors as a major weakness; (4)	

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						supervisors identified themselves as serving a most significant role in guiding candidates. However, mentors and candidates did not perceive supervisors' roles favorably; (5) mentors prided themselves as performing an enormous task of ensuring candidates' exposure to leadership experiences. Both supervisors and candidates considered the role of a mentor in assignment of leadership duties to candidates to be important; (6) a significant difference was observed between perceptions of supervisors and mentors in the quality of practicum assignments; (7) a significant difference between perceptions of supervisors and candidates in the requirement of candidates' reflection of	

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						practicum experiences in journals; (8) a significant difference between the perceptions of supervisors and candidates as related to the value of the school visits by supervisors. **(5) Do gender, ethnicity, leadership experiences and school level make any difference in supervisors', mentors' and candidates' perception of the effectiveness of practicum experience in educational leadership program?** No significant difference.	
Copland, M.A. (2000). Problem-based learning and prospective principals' problem-framing ability. *Educational Administration*	To explore how problem-based learning can impact the efficacy of a principal preparation program Study tests the hypothesis that greater exposure to	Quasi-experimental, cohort, survey, quantitative, descriptive Three cohorts were tested on five scenarios, in a consistent order, during	18 students enrolled in the Stanford University Prospective Principals Program (SUPPP), who were all prospective principals. Three	N/A	Comparison of three cohorts receiving different doses of problem-based learning. Comparison was across problem-framing abilities of each cohort and across several	Administrators' problem-solving ability can be taught and developed in a preparation program. Problem-based learning helps principals improve problem-solving ability by teaching them to use prior knowledge to frame problems in a familiar way and help them to solidify a	High

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Quarterly, 36(4), 585-607.	problem-based preparation experiences is associated with greater problem-framing ability among prospective principals.	one sitting in the same university classroom, after receiving different levels of exposure to problem-based learning (PBL).	cohorts were admitted to the program in successive years (n = 6 students per cohort).		indicators in three different categories. The 18 participants were individually presented with five problem scenarios and responded to the following questions – (1) How has the problem been defined in this scenario? (2) Employing what you know and believe about solving problems in practice, reflect on how this problem has been framed. (3) If faced with this situation in practice, would you reframe the problem? If so, how?	way of thinking about problems. A significant main effect was found for exposure to PBL. Significant mean differences were present across cohort groups on the dependent variable, problem-framing ability. Thus, the results suggest that, within this particular preparation setting, greater exposure to PBL is associated with greater ability to frame problems.	

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Shoho, A.R., Barnett, B.G., & Martinez, P. (2012). Enhancing "OJT" internships with interactive coaching. *Planning and Changing, 43*(1/2), 161-182.	To explore impact and experiences that the internship and mentoring process have on participants and what links exist between program preparation and participant learning.	Survey, cohort, quantitative, qualitative, case-study, observation, longitudinal.	19 program graduates from 2 cohorts and a sample of their mentors and host principals	A one-year, full-time paid residency and coaching for the first three years of participant's principalship by a coach who is a recently retired principal with a transformational student achievement record. From September through December resident is beginning action on residency goals, conducting classroom observations related to goals,	Subjective assessment of impact and analysis of interviews	Mixed results depending on program participant engaged in. Small sample size makes it hard to evaluate properly. Three elements effective in managing the coaching process – (1) individual meeting between the Director of Leadership Coaching and individual coach, (2) two-hour meeting of coaches led by Director of Coaching that focuses on a wide range of issues that grow out of the patterns and concerns that the Director of Coaching picks up from the individual meetings with coaches, (3) problem-solving meeting that serves to expose what all coaches are doing with their residents and principals.	Low

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				meeting with mentor daily, meeting monthly with the coach and mentor principal to evaluate performance, participating in three full-day Friday sessions to vet written progress report on residency goals. From January through March resident is focused on completing residency goals, building relationship with network chief, completing principal			

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				eligibility application, and taking the eligibility assessment. From April through June the resident is completing residency goals and applying for principal jobs. From January through August, coaches continue to meet with residents to prepare them for eligibility and for job search. Mentor principals are doing the same.			

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Tanner, C.K., Keedy, J. L., & Galis, S. A. (1995). Problem-based learning: Relating the "real world" to principalship preparation. *The Clearing House, 68*(3), 154-157.	To explore how problem-based learning can impact participant satisfaction and learning to increase principal efficacy. **Study Goals:** (1) Conceptualize problem-based learning, (2) provide a rationale for this strategy, and (3) use a real example from a course in problem-based learning taught at the University of Georgia.	Descriptive	N/A	N/A	N/A	Problem-based learning can narrow the gap between participants and administrators. Students who learn through problem-based materials report higher levels of satisfaction with preparation programs. PBL characteristics include – (1) The problem (a "real world" problem) is the starting point, (2) knowledge that students should acquire is organized around problems, not disciplines, (3) students, as a group and individually, assume the major responsibility for their own instruction and learning, (4) much of the learning occurs within the context of small groups rather than lectures. The instructor presents the student with the problem (for example, the system	Low

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						and style of communication in a school district), but he or she does not specify resources for the problem's solution. Students are on their own: they must define what they need to learn and find the appropriate resources. Students in PBL rely heavily on oral modes of communication. They prepare written memos and work in situations that require face-to-face communication. The PBL environment also allows for an emotional tone that resembles actual situations. Students encounter emotional problems when working with people in PBL settings just as practicing administrators do. When projects go awry, PBL students acquire insights into how they deal with	

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						frustration and disappointment. After students used the PBL materials in the leadership class, student evaluations were much more positive than those formerly received on traditional methods of teaching. Students gave significantly higher evaluations of "value of the course," "relevance," and "performance of the professor." Our experience leads us to conclude that the professor should get formal training in PBL before attempting to use it in the classroom. Mentoring would be an accept-able alternative training method.	
Huang, T., Beachum, F.D., White, G.P., Kaimal, G., FitzGerald, A.M., & Reed,	To highlight the need for full-time job-embedded internship programs and propose what a	Descriptive, qualitative, case-study. Generally, recruit	1 Program; 19 participants 19 program graduates from two cohorts and	Internship consisted of 100 days over two years for ALs and 50 days in one year for	Survey and in-depth interviews Dependent measures – (1) participants'	Program participants rated the usefulness of support from their cohort colleagues at 4.47 out of 5. Program participants perceived that the program content	Low-Med

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P. (2012). Preparing urban school leaders: What works? *Planning and Changing,* *43(*1/2)*, 72-95.*	successful program might look like. **Specific Research Questions:** (1) What are the characteristics of program graduates at program entry? (2) How well does the preparation program reflect the core quality program features? (3) How well do the graduates do as a result of the program in terms of satisfaction, participant learning, and sense of preparedness at the exit of the program? (4) What design features are most conducive to developing the capacity of urban	exemplary teacher leaders or non-instructional staff with teaching experience and leadership potential and prepare them to lead the district's most disadvantaged high schools. Three discrete groups were created – (1) Aspiring Leaders (AL) program that provides leadership preparation and principal certification through rigorous	a sample of their mentors and host principals.	DLs. Internship designed to immerse participants in a variety of urban educational leadership settings and put them in contact with trained and experienced host principals and mentors.	program satisfaction, (2) leadership learning, and (3) sense of preparedness. Program satisfaction – 5-point Likert scale survey instrument anchored by definitely yes and definitely no, assessed program satisfaction by asking participants the likelihood they would choose the same program if provided the same opportunity. Participants' leadership learning – survey instrument asked participants to rate the effectiveness of the	emphasized: how to lead instruction (4.22), how to lead with vision and ethics (4.39), how to lead organizational learning (4.27), how to lead management and operations (4.18), how to engage parents and community (4.39), and how to advocate for children and public education in the larger political and social context (4.37). Similarly, host principals (4.11), and mentors (4.05) also contributed to participants' positive learning experience. **Graduate Outcomes** - Graduates felt well prepared for virtually every aspect of effective principal practice including readiness to lead with vision and ethics, readiness to lead instruction and organizational learning to engaging parents and	

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	school leaders as measured by participants' self-perception of learning in key leadership domains and the ratings from the National Association of Secondary School Principals (NASSP) Assessment Center?	coursework and two years of intensive site experiences, (2) Developing Leader (DL) program that provides intensive leadership development to individuals with principals' certification by using intensive site experiences, (c) Emerging Leaders (EL) program that provides intensive leadership development that is aligned to state mandated job-embedded			program in preparing them to do the following: (1) develop and sustain a learning-centered vision and lead ethically, (2) create a coherent educational program and provide instructional feedback and professional development opportunities to help teachers improve, (3) engage staff in school decision making, use data to lead change and monitor school progress, and create a collaborative learning organization, (4)	community, and managing school operations. Graduates performance however in NASSP's Assessment Center did not validate their self-perception. Except for oral communication (20.03), participants were in need of great improvement in almost all the other areas. **Link Between Program Features & Graduates' Sense of Preparedness** - with the exception of cohort structure, none of the program features was consistently associated with participants' sense of preparedness in the core leadership areas, or confidence in placement and performance. A similar pattern exists between cohort structure and participants' satisfaction measured by the likelihood	

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		induction support, and mentoring for those in their first two years as an assistant principal or principal. Participants from both the AL and DL groups are asked to work in teams and design a school restructuring plan based on their research on the real data of one of the most challenging schools in the district.			manage various physical resources and handle disciplinary issues, and (5) work with parents and community. Leadership learning was also measured by the candidates' performance in the NASSP's Assessment Center. The NASSP's Assessment Center uses various simulation activities to measure participants' authentic performance in 10 leadership skill dimensions – (1) setting instructional directions, (2) teamwork, (3) sensitivity, (4)	a participant would choose the same program if given the opportunity ($p < .05$). In addition, a much stronger relationship emerged between cohort and participants' sense of preparedness in core leadership dimensions: lead with vision and ethics ($p < .01$), lead instruction ($p < .01$), lead organizational learning ($p < .01$), and lead management ($p < .01$). In terms of the effect of the content foci, the emphasis on how to lead management had a moderate association ($p < .05$) with how well graduates felt prepared to lead parent and community engagement. Similar magnitude of association was also found between the content focus on organizational learning and participants' self-perceived	

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					judgment, (5) organizational ability, (6) results orientation, (7) oral communication, (8) written communication, (9) development of others, and (10) understanding own strengths and weaknesses. Independent measures – (1) graduate characteristics at program entry, (2) program organizational structure, and (3) leadership preparation program features consisting of curriculum focus and use of active learning strategies.	preparedness in leading instruction ($p < .05$). The bivariate analysis between curriculum content and other program features and graduate performance at the NASSP's assessment center revealed three significant relationships – (1) between support from mentors and how well the graduate felt prepared to set instructional direction ($p < .05$), (2) between mentor support and graduates' level of judgment ($p < .05$). (3) a negative relationship between the usefulness of cohort support and how well the participant understood his/her own strengths and weaknesses ($p < .01$).	

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					Participants from each cohort were asked to complete the survey upon their exit of the program.		
Anast-May, L., Buckner, B. & Geer, G. (2011). Redesigning principal internships: Practicing principals' perspectives. *The International Journal of Educational Leadership Preparation, 6*(1).	Explore how internship experiences and activities enable future leaders to assume responsibilities of a principal	Case-study, interview, qualitative, descriptive Open, semi-structured interviews of currently practicing principals to reveal perspectives regarding the types of experience and activities that an internship should include in order to adequately	47 Prek-12 principals from a large, county-wide school district in a southeastern state who worked in schools ranging from 500 to 1,800 students with experiences from 3 to 20 years.	Twenty-four principals responded that their internship was one semester in length; one responded that it was more than one semester; Twenty-two reported that their internship was more than one but less than two semesters in length.	Coding of interviews taken of participating principals to see comparative patterns regarding the types of experience and activities that internships should include in order to prepare future principals.	Several themes emerged repeatedly from the interview data as experiences or activities that internships should include, based on principals' input. These included: planning change in areas of curriculum and teaching, supporting cultures of learning and using data to support continuous school improvement. Aspiring principals need opportunities to lead change efforts, build relationships with staff, and utilize data to support school improvement efforts.	Low

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		prepare future principals.					
Devlin-Scherer, W. & Devlin-Scherer, R. (2003). The principal internship portfolio. *Journal of Research for Educational Leaders, 2*(3), 5-32.	To identify activities that were considered effective in participants' structured learning experiences and determine to what extent the activities completed during internship experience required prospective principal to focus on instructional and managerial leadership tasks and to collaborate with educators to improve student learning.	Survey, cohort, quantitative, qualitative, observation. Activities of principal interns were categorized into three groups for analytical purposes – (1) Program evaluation, (2) program implementation, and (3) program management.	28 portfolios across 2 programs with 56 observations of teachers.	Two university-based programs in Connecticut and Massachusetts. Interns undertook a semester-long internship in which interns were expected to (1) conduct a program evaluation; (2) apply program implementation skills; (3) refine classroom observation and teacher conferencing	5 point Mean scale of collaboration in principal internship activity categories by school level and ranking of activities	Significant differences among principals according to grade level of school. Interns' roles should be split among instructional and managerial leadership activities. Systemic organization problems have caused some problems among interns. Learning experiences need to focus on instructional leadership to affect change leading to student learning. **Principal Activity Categories:** **(1) Program evaluation outcomes –** Elementary and middle school interns focused on program and	Med-High

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				skills; (4) perform managerial responsibilities; (5) complete a reflective paper focused on the activities conducted during the internship; (6) compile a principal internship portfolio; (7) attend seminars; and (8) participate in school-based conferences with a university supervisor and a practicing administrator mentor.		curriculum evaluation more than high school interns. **(2) Program implementation –** high school interns were the most active in presenting professional development workshops, Elementary and middle school interns centered their attention on basic curriculum areas. **(3) Managerial leadership** – Overall, 38% and 16% of the activities in managerial leadership were devoted to meetings and scheduling, respectively. Elementary school interns collaborated most frequently. Interns indicated that interdependence among different roles causes a change in ways principals carry out their responsibilities.	

Study	Relevant Objective of the Study/Hypotheses	Methods	Sample description	Residency description	Metrics used to evaluate/assess effectiveness of intervention/model	Results of evaluation/assessment of intervention/model	Quality of study
Gray, D. & Lewis, J. (June 13, 2011). Preparing instructional leaders. National Council of Professors of Educational Administration.	To explore the effect of new instructional leadership-focused programs relate to principal success rates and explore participant perceptions and present data obtained from four distinct assessments.	Quantities, survey, across one cohort

One-semester internship for aspiring school leaders to observe, participate-in, and lead teachers in activities to improve student achievement. University of Southern Alabama College of Education identified 12 distinct items that require joint efforts by school districts and the College in planning, | 16 prospective administrators who were current teachers comprised the first cohort, Thirty-eight of forty nine applicants admitted to the redesigned program in the first six cohorts had already earned a Master of Education, the remaining 11 wanted a Master of Education Degree, | Full-semester residency in a local school working under the supervision of a mentor principal. The residency gave aspiring school leaders an opportunity to see leadership in action and to reflect upon differing styles of leadership. | 5 point Mean scale to assess resident, principal mentor, and observer mean score on leadership skills and performance of the resident on perceptual survey

Mentors were asked to complete a Resident Performance Evaluation that included each of the 18 authentic ability statements in the residency. Residents' leadership skills were evaluated with The Leadership Practices Inventory® (LPI), a series of on-line surveys that | The paper makes several suggestions including a need to ensure adequate formative feedback from mentor principals to participants and a need for mentors to meet with their participants early in the residency period to identify meaningful school activities to focus on. Mentor principals should also be made to attend mandatory orientations. Residents should be assigned to schools where the best principals practice, and inappropriate sites that do not create value for participants should be avoided.

Practices Inventory® (LPI) data revealed that residents made statistically significant gains in performance in the Five Practices of Exemplary Leadership (Model the Way, | High |

Study	Relevant Objective of the Study/Hypotheses	Methods	Sample description	Residency description	Metrics used to evaluate/assess effectiveness of intervention/model	Results of evaluation/assessment of intervention/model	Quality of study
		implementing, and evaluating the program. Aspiring leaders submitted a portfolio of information and completed a structured interview with school district administrators and program faculty. Mentors were asked to work collaboratively with residents to select activities at the school that would give them opportunities for leadership.			includes a self-assessment, a manager/principal evaluation, and 360 degree feedback. Each resident completed the LPI once during the first two weeks of the semester and again near its conclusion. Furthermore, ALSDE requires anyone seeking licensure to pass a discipline-based PRAXIS examination.	Inspire a Shared Vision, Challenge the Process, Enable Others to Act, and Encourage the Heart) from the beginning of the residency to its conclusion. Evidence gathered demonstrates that the most effective way to train aspiring school leaders is through extended assignments in schools, where they experience the intensity of the principal's day and the complexities of leadership that come with working with students, teachers, and parents to improve student learning.	

<u>**Review of the Literature**</u>

Through these sources, three program aspects were identified as quintessential to the residency experience in improving participants' abilities as prospective principals: problem-based learning, real-world application, and constructive feedback. Evidence of the influence of each of these residency elements is provided in the following sections.

<u>**Problem-Based Learning**</u>

Problem-based learning can be an effective way to teach and enhance problem-solving abilities because these methods enable principals to "practice" ways of thinking about problems in order to solve them (Copland, 2000). Superintendents have reported that principals often lack the ability to apply theories to practice and note this as a weakness in principal preparation programs (Marco, Witmer, Foland, Vouga, and Wise, 2011).

The job of the principal requires leaders to understand, frame, and solve a wide range of school problems and challenges. Copland (2000) notes that previously the field of educational administration relied on extrapolations from studies of problem-based learning's effectiveness in medical education. Copland's own quasi-experimental study analysis found that greater exposure to problem-based learning is associated with greater problem-framing ability among aspiring principals. While his sample size was small, he did find that problem-solving ability could be taught and developed. The exposure to problem-based learning helped principals to use prior knowledge and frame problems in a familiar way to solidify a way of thinking about problems.

Tanner, Keedy, and Galis (1995) conclude "problem-based learning's major contribution is that it narrows the gap between the experience of a student and that of an administrator" (p.

157). In other words, problem-based learning lets students experience the real-world, rapid work pace of an administrator that does not come to life in a traditional classroom setting.

Tanner et al. (1995) draw on the information-processing theory (Barrows 1984; Coles 1990) when determining how to structure problem-based learning successfully. This theory holds that past learning affects what a student learns now, and therefore, it is important to activate the student's prior knowledge when using problem-based learning. Problems must be realistic as well so that the students can transfer new information easily when a related real problem arises. Finally, having students work in small groups to discuss problem-based learning challenges helps students to understand and remember new information.

Anast-May, Buckner and Geer (2011) go further and identify the three instrumental problem-based learning activities that aspiring leaders should engage in: leading change efforts, building/maintaining relationships with staff, and using data to improve school efforts. Tanner et al. (1995) found that students who practiced problem-based learning reported high levels of satisfaction regarding their preparedness.

<u>Real-World Application</u>

It is not easy to design a rigorous residency program that gives aspiring leaders real leadership experience. Darling-Hammond, LaPointe, Meyerson, Orr, and Cohen (2007) note that, "Efforts to provide field-based practicum experiences do not consistently provide candidates with a sustained hands-on internship in which they grapple with the real demands of school leadership under the supervision of a well-qualified mentor" (p. 6).

Cunningham and Sherman (2008) summarize elements of successful internships, including requiring the intern to assume responsibility for authentic opportunities or tasks, ensuring that the intern develops knowledge and skills that are applicable across diverse settings, and including practice-based experiences that are aligned to standards. Anast-May et al. (2011) conclude that aspiring principals need opportunities to get hands-on experience leading change efforts in curriculum and teaching practices; lead and facilitate efforts to shape a positive school culture and build relationships with staff; and utilize data to support school improvement efforts.

Based on their literature review, Diamantes and Ovington (2003) advocate for the use of the case method to help teach concepts to school administrators. They cite research by Kowalski (2001) who argues that the case method bridges theory with practice; helps principals to develop critical thinking, problem solving, and decision-making skills; and gives opportunities to practice reflection.

As a result of their survey of resident principals, Gray and Lewis (2011) recommend that principals and residents meet and plan early to identify meaningful school activities to develop the residents' skills. Developing hasty residency assignments may result in a lack of rigor or authenticity.

Devlin-Scherer and Devlin-Scherer (2003) sought to identify effective learning activities and concluded that the focus of the residency should be on instructional leadership activities (such as teacher classroom supervision and leading professional development sessions) as these are directly associated with improved student learning. However, they recommend balancing instructional leadership with managerial leadership, as principals require both skill sets.

A cross-sectional, quantitative study by Orr (2011b) found that graduates rate their principal preparation programs highly in terms of real-world elements, such as having an instructional leadership focus and content, being challenging and reflection rich, using student-centered instructional practices, and fostering high-quality internships. The study also found that the quality of the internship experience positively influenced the likelihood that graduates would become principals. This finding is echoed by Cunningham and Sherman (2008) who found that interns gain confidence through hands-on practice and applications and are consistently more motivated to obtain administrative positions.

In a survey by Jiang, Patterson, Chandler, and Chan (2009), residents, supervisors, and mentors all rated hands-on activities as the most meaningful element of the residency because these brought to life the role of the principal.

Constructive Feedback

The most valuable aspects of mentor-mentee relationships have included the availability of seasoned mentors for feedback and general support (Asbury and Hackmann, 2006). A review of the literature by Cunningham and Sherman (2008) highlights the critical role of the mentor principal in providing honest and immediate feedback and coaching to the resident. Gray and Lewis (2011) recommend increasing formative feedback to residents to identify areas of focus and improvement earlier.

Other Elements

Four other program elements were sporadically mentioned in this body of research as essential to the learning experience of program participants. First, effective internship programs often involve close interaction with districts, frequently with districts where participants

originally come from. Cunningham and Sherman (2008) note that district-university collaborative relationships are key to improving the preparation of future leaders. Orr (2011b) finds that district relationship with the program leads to higher participant perception of program quality.

Second, cohort models were found to be the most effective residency support structure. For example, Huang et al. (2012) state, "Cohort structures stood out as the most appreciated program feature in relation to program outcome features" (p. 84). Presence of this structure was positively linked to participant perception of readiness for a number of core aspects of the role of principal, self-efficacy, and satisfaction with the program.

Third, a literature scan by Cunningham and Sherman (2008) identified the importance of the residency connecting theory to practice. They state, "[Residencies] serve as the vital link between theory and practice. Universities and school district personnel work together to identify administrator mentors who, along with university instructors, guide planned practical experiences. Internship experiences begin with activities with which leadership aspirants are familiar and gradually build toward activities that require increasing amounts of knowledge, skill, and responsibility" (pp. 314-315).

Finally, one study found that a focus on the instructional leadership aspect of the school leader's role was instrumental in participant success. Devlin-Scherer and Devlin-Scherer (2003) report that there is value in creating opportunities for aspiring leaders to grow in both instructional and managerial aspects of the job.

Limitations

Findings are based largely on perceptual data, collected and reported only on single cases (programs) or similarly small samples, and few trends across studies exist.

Appendix A: Data Abstraction Form

Citation of Study/Paper (title, author, date) Click here to enter text.

Source (database/website/search engine) Click here to enter text.

Description of intervention/residency model:
  Description of participants Click here to enter text.
  Leadership development need model is designed to address Click here to enter text.
  Description of full program (coursework + residency? on-boarding + residency?) Click here to enter text.
  Description of alignment between residency and other program components (all focused on specific leadership dimensions, etc.) Click here to enter text.
  Dose of residency (length, full-time/part-time, number of hours, etc.) Click here to enter text.
  Decisions related to residency placements (job-embedded or external site, known mentor, etc.)
  Description of mentors Click here to enter text.
  Decisions related to selecting and training mentors Click here to enter text.
  Description of mentors' role and work in supporting resident Click here to enter text.
  Description of the resident's experience in the residency Click here to enter text.
  Description of residency oversight (who outside of the school supervises the mentee's growth and PD experiences? Who administers the program?) Click here to enter text.
  Intervention reach (# of participants, # of mentors, # of schools, etc.) Click here to enter text.
  Intervention history (year began, etc.) Click here to enter text.
  Other pertinent context Click here to enter text.

Objective of the Study/Hypotheses Click here to enter text.

Type of study (choose all that apply)
  ☐ Meta-analysis   ☐ Observation
  ☐ Descriptive   ☐ Survey
  ☐ Cohort   ☐ Cross-sectional
  ☐ Longitudinal   ☐ Quasi-experimental
  ☐ Qualitative   ☐ Experimental
  ☐ Quantitative   ☐ Case-Study

Sample (Description and Ns) Click here to enter text.

Metrics used to evaluate/assess effectiveness of intervention/model Click here to enter text.

Results of evaluation/assessment of intervention/model Click here to enter text.

Quality of study (your assessment)
  ☐ Low=Perspective piece, sloppy methodological decisions
  ☐ Medium=Thoughtful, published paper with well-defined purpose and methods. Not peer-reviewed or in academic journal
  ☐ High=Peer-reviewed and published in academic journal

Comments (yours) Click here to enter text.

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