

Examining the Relationship Between Higher Education and PK-12 Districts and Schools: Perceptions of Superintendents and Principals

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Institutions of higher education (IHEs) and PK-12 schools and districts often operate within their own systems to promote student success while sharing a common interest in the professional development (PD) of educators. While collaboration does occur, these systems largely function independently, often without a unified set of goals, leaving significant opportunities for improvement. This study examines the perceptions of principals and superintendents regarding school and district PD needs and their potential collaboration with IHEs. Using a non-experimental design, the research employs quantitative analyses of survey data alongside qualitative insights. The findings reveal distinct PD needs across schools and districts, highlighting differences between principals and superintendents, as well as the interconnected nature of PK-12 challenges. Additionally, participants emphasize the importance of IHE faculty learning from PK-12 educators and provide valuable insights into potential avenues for collaboration at the school and district levels.

Keywords: superintendents, principals, teachers, professional development, higher education, partnerships

The pursuit of a master's degree has long been part of the Professional Development (PD) process for PK-12 educators (Capps et al., 2012). Written into some bargained contracts, the pursuit and completion of a master's degree would, in these districts, ensure teachers transition to higher levels of certification within the state's structured licensure system and potentially be rewarded with pay increases (Campbell & López, 2008). These finite academic experiences between educators and institutions of higher education result in a financial benefit for both parties, yet fall short within the co-creation of pedagogical values, or transformational models of academic development (Authors, 2023a).

With ongoing changes in the certification landscape and the advent of non-traditional routes to certification for educators (Bowling & Ball, 2018), the future role that graduate degree programs play in PK-12 educator development is in question. There is also a concern about what is lost in terms of quality and experiential opportunities when educators no longer pursue advanced educational programming as part of the certification process. Furthermore, incentives for educators to pursue advanced educational programming are further eroded as salary increases for completed graduate degrees are negotiated out of bargained contracts. This loss in exposure to advanced educational programming extends beyond just those educators in PK-12 districts, university faculty are also impacted.

Faculty employed at Institutions of Higher Education (IHEs), are typically required to conduct research and participate in scholarly and creative activities that advance the profession. Furthermore, IHE faculty are also encouraged to identify new educational strategies and methods that positively impact practitioners and applications within the profession. Moreover, advanced educational training bridges theory and practice and allows practice to inform theory development. Ultimately, it is the PK-12 student who may benefit from educators who are exposed to new ideas, concepts, and pedagogical approaches; however, PK-12 educational systems and IHEs may also benefit from these partnerships.

Examples of PD extending beyond traditional graduate courses include IHEs providing collaborative opportunities through district partnerships (Crawford et al., 2008). Crawford et al. (2008) explained that these partnerships allow districts to identify: (a) a PD area of need, (b) an internal expert to the district best suited to deliver the PD activities, and (c) a way for staff in the district to complete continuing education requirements for certification maintenance. Through the learning experience, the IHE may provide oversight by structuring the PD activities to mimic a graduate level course. Vetting credentials of the instructor, reviewing and approving the PD syllabus, and awarding graduate credit to teachers for participating in the PD activities are all facilitated by the IHE. These district partnerships may be entirely transactional and, when graduate credit is no longer needed for teacher recertification, these PD partnerships may cease.

The perceived relevancy of what is gained through the graduate degree learning process is what is at stake. The purpose of this article is to identify the perceptions of Michigan PK-12 school and district leaders' PD needs and the perceived benefits of partnering with postsecondary institutions to address those PD needs. Through an understanding of PK-12 school, and district, leaders' perceptions, IHE decision makers can establish graduate education and collaborative PD activities as a conduit to deeper connections between systems and create transformational relationships for stakeholders.

Research on school-university partnerships, especially related to programs that change teaching practices, has traditionally been qualitative and occurs after implementation. Tools were not reused or validated, and very little research has examined the pre-implementation phase when needs are assessed (Sarmiento-Marquez et al., 2023).

Purpose and Research Questions

The purpose of this study was to investigate the potential role of IHEs in meeting the PD needs of PK-12 public schools and districts through traditional and non-traditional educational programming. Superintendent and principal perceptions of professional development (PD) needs, collaboration with public universities, and IHE program offerings were examined. These perceptions were investigated to better understand the role of IHEs in supporting PK-12 districts and the relationships between the two sectors. While there are examples of collaborative efforts between PK-12 and IHEs (Crawford et al., 2008), limited literature is available on the specific needs of PK-12 school districts and the perceived benefits of the relationships and program offerings with IHEs. Furthermore, there are limited studies examining the perceptions of both principals and superintendents especially when considering the juxtaposition of their positional observation of need. This research is driven by the following research questions:

1. To what degree do PK-12 school and district leaders report PD needs by factor and how do these perceptions differ among principals and superintendents?
2. To what degree do various factors related to collaboration between IHE and PK-12 schools and districts predict needs as perceived by PK-12 leaders?

Review of Literature

A mutually beneficial relationship between IHEs and PK-12 schools and districts can exist if the relationship provides opportunity for both members to contribute to their own institutional goals and educational preparation (Council for Accreditation of Educator Preparation, 2021). Specifically, partnerships need to make sure all participants make a significant contribution, capabilities of all participants are valued, and there is specific mutual benefit (Loucks-Horsley et al., 1996; Bohannon et al., 2024). Having shared goals is also extremely important and can be a motivating force for collaboration (Bush, 2017). Even when PK-12 and higher education partnerships are sought, larger structural barriers can make such arrangements difficult to sustain (Kerschen & Layher, 2024). No longer can IHE partners simply expect to be an expert imparting knowledge in a one-way flow of ideas. Instead, IHE and PK-12 partnerships need to focus on solution-oriented work that originates at the school-level (Tomanek, 2005).

One example of PK-12 and IHE collaboration is offering early college access. This partnership allows both parties to meet the current public demand for increased college access and completion (Duncheon & DeMatthews, 2023) ultimately increasing student graduation and university enrollment rates (Domina & Ruzek, 2012). Additionally, programs at universities focus on partnerships in order to spread knowledge of the teaching profession and provide

experiences for high school students to experience the profession firsthand (Kerschen & Layher, 2024).

Another form of PK-12 and IHE collaboration is in professional development (Shroyer et al., 2007; Holen & Yunk, 2014). In collaborative PD, IHE faculty and exposed to practitioners in the field, creating reciprocal benefits. This allows IHE faculty to gain knowledge related to PK-12 academic standards, which helps with understanding prerequisite content exposure (Knowlton et al., 2015). Agriss et al. (2018) discusses this and described an example of collaborative professional development where the Common Core State Standards were examined in detail by both PK-12 teachers and IHE faculty with the goals of examining learning expectations through the lens of student experience in a wide range of classroom settings. Additionally, PK-12 teachers can learn from the research that the faculty have conducted (Knowlton et al., 2015; Savick & Watson, 2024). However, many times, there is a disconnect between practices at the PK-12 level and the knowledge developed in IHE research. Bryk et al. (2011) refers to this as a research and design issue and advocates that IHE and PK-12 collaboratively wrestle with the question of what social arrangements are needed to enable positive changes in the classroom related to research.

It is also important that the professional development needs of district leaders and principals are taken into consideration. Westberry & Horner (2022) found that when school leaders are asked about professional development needs, responses are remarkably similar and include concepts such as opportunities outside of a traditional graduate degree, focus on practical application, and learning with their peers in a community of practice. Additionally, principals and school leaders prefer continuous learning opportunities rather than one-time experiences to help with sense-making when implementing new learning (Sahlin, 2025).

When developing partnerships, IHE partners must first seek to understand the motivations and needs of partner districts (Wepner, et al., 2021). IHE partners must also understand that the roles of PK-12 school leadership are vast, and include responsibilities such as manager of instruction, coordinator of services, and human relations (including those from outside the school) (Duncheon & DeMatthews, 2023). In order to manage the relationship effectively, school leaders need a say in what is being offered so that they effectively achieve their own goals.

Conceptual Underpinnings

The conceptual framework guiding this study is grounded in the evolving relationship between PK-12 education systems and institutions of higher education (IHEs). Historically, these relationships have centered on transactional exchanges such as coursework, degree programs, certifications, and endorsements. While these interactions have served both parties well, they are typically short-term in nature and lack deeper institutional commitment. In contrast, transformational relationships offer the potential for sustained, long-term collaboration built on shared goals and mutual investment. As Sheth and Shah (2003) note, transactional exchanges are often limited in scope and duration, whereas relational exchanges are characterized by ongoing engagement and commitment.

This study is specifically informed by the Relationship Exchange Model for Academic Partners (REMAP) conceptual framework (Authors, 2023a), which outlines a relational

continuum that emphasizes the progressive development of commitment, trust, and common goals. As organizations deepen their commitment to shared objectives, trust builds, and the nature of the relationship shifts from transactional to transformational. This progression aligns with similar findings in the business literature, where such sustained collaborations are described as relational exchange (Lefaix-Durand & Kozak, 2009).

Traditional offerings by IHEs, such as degrees, certifications, endorsements, and coursework, are examples of transactional relationships with PK-12 educators, structured around the fulfillment of requirements in exchange for credits or credentials, typically within a defined fee structure. The REMAP framework, however, provides a lens through which these partnerships can be reimagined. It encourages a move beyond limited, one-time interactions toward enduring, collaborative relationships that drive systemic change and align with the long-term goals of both PK-12 and higher education institutions.

Methodology

Sample and Data Sources

This quantitative non-experimental study builds on previous research conducted by Authors (2020) and Authors (2023b) utilizing survey results from two populations including superintendents ($N = 123$) and principals ($N = 629$). This study utilized survey data results from two instruments and includes specific variables common within both sets of data combined.

The survey instruments were validated utilizing cognitive interviews and content validity. Validation involved five school administrators from across the state and was further confirmed through exploratory factor analyses. Additionally, reliability analyses were conducted to ensure internal consistency among items. The instrument was distributed via email, and data was collected using Qualtrics®XM. Two cross-sectional surveys (Appendices A and B) contained questions about the perceptions of school district superintendents and principals with respect to their perceived PD needs and several other variables addressing relationships with IHEs. Question responses for both instruments were built using a Likert scale (i.e. *Strongly Disagree, Disagree, Neither Agree nor Disagree, Agree, or Strongly Agree*).

Data analysis

Combined data sets were compiled and coded for each population (superintendent=1, principal=2) with missing variables excluded. Respondents that fully or partially completed the survey were included in analyses. Data were analyzed utilizing a three-part process including: (a) analysis of descriptive and Mann-Whitney test statistics, (b) bivariate analysis using Kendall's Tau with paired observations, and (c) a series of OLS multiple regression models.

Variables

Constructs used in analyses for this study include latent variables created by conducting exploratory factor analyses (EFA) in two phases. First, six need factors (See Table 1) were created by conducting an EFA through a principal component analysis extraction method

utilizing Varimax rotation and Kaiser Normalization (Bartlett's Test of Sphericity > 0.001) assuring a minimum threshold for factor loading of < 0.500, sampling adequacy (KMO = 0.810), and acceptable reliability levels ($\alpha < .67$). Second, three school factors and five collaboration factors emerged from EFA assuring sampling adequacy and reliability (KMO = .776, $\alpha < .86$). All factors are included in Table 1.

Results

Research Question One

To address research question one, the degree do PK-12 school and district leaders report PD needs by factor and how do these perceptions differ among principals and superintendents, descriptive statistics and Mann-Whitney test results were analyzed. Whole child and learning from PK-12 demonstrate the highest means among all three groups of factors. Additionally, English Language Arts (ELA) and mathematics, along with diversity, are reported as higher need factors. The ability for IHEs to learn from PK-12 is perceived by PK-12 leaders as the highest collaboration factor while certifications and endorsements along with master's degrees are also perceived high among collaboration factors. Conversely, communication and Title dependence are reported among the lowest of all factors.

Mann-Whitney results for school factors reveal some significant differences between superintendents and principals (Table 1). Superintendents report higher levels of need for all factors with the exception of the whole child variable. Mann-Whitney results estimating the differences between principals and superintendents indicate that there is a statistically significant difference between the need factors of pedagogy, ELA/mathematics, the whole child, and technology between groups in the sample. Superintendents report higher ability to support PD than principals in a significant manner ($p = .042$). Dependence on Title funds also shows a significant difference ($p = .006$), with superintendents again reporting higher dependence than principals. With regards to collaboration factors, the only notable significant difference ($p = .032$) is that principals report higher emphasis on certifications and endorsements than superintendents.

Research Question Two

To address research question two, the degree do various factors related to collaboration between IHE and PK-12 schools and districts factors predict needs as perceived by PK-12 leaders, researchers performed bivariate correlational analyses utilizing Kendall's Tau given the non-normal distribution of data (Shapiro-Wilk > .05) and twelve multiple linear regression models. As seen in Table 2, all need constructs are positively correlated in a significant manner. Pedagogy correlates moderately with ELA/mathematics and technology, suggesting that strong pedagogical practices align with an emphasis on these areas. ELA/mathematics also correlates with social studies/science, implying a need to focus on core subjects within schools and districts. Whole child need has modest positive relationships with other variables, particularly ELA/mathematics, suggesting the importance of supporting students in a holistic manner. Overall, these correlations suggest that emphasis in one educational area is often related to

other needs, reflecting a potential opportunity for a holistic and integrated approach to educational priorities within school and districts.

Table 1

Descriptive and Mann-Whitney Results

	Superintendent			Principal			Combined			U	Z	Sig.
	M	N	SD	M	N	SD	M	N	SD			
Need factors												
Pedagogy (.80)	3.56	123	0.833	3.26	629	0.860	3.31	752	0.863	31208	-3.40	<.001
ELA/Mathematics (.88)	3.92	111	0.844	3.60	534	0.883	3.66	645	0.884	23045	-3.70	<.001
Science/SS (.82)	3.19	111	0.871	3.06	533	0.844	3.08	644	0.849	26682	-1.70	.097
Whole Child (.71)	3.62	111	0.634	3.78	536	0.665	3.75	647	0.662	25110	-2.60	.009
Diversity (.78)	3.76	123	0.855	3.65	627	0.907	3.66	750	0.899	36715	-0.90	.389
Technology (.67)	3.63	123	0.829	3.33	627	0.902	3.38	750	0.896	31315	-3.30	<.001
School/district factors												
Communication (.86)	2.18	116	0.748	2.03	558	0.679	2.05	674	0.693	28999	-1.77	.077
Support PD (.94)	3.19	112	0.756	2.98	533	0.894	3.02	645	0.874	26335	-2.04	.042
Title dependency (.92)	2.65	112	0.935	2.38	538	0.979	2.43	650	0.976	25217	-2.75	.006
Collaboration factors												
Doctorate (.89)	2.61	111	0.941	2.73	541	0.868	2.71	652	0.881	27982	-1.15	.250
Certs./End. (.92)	3.55	112	0.846	3.73	543	0.806	3.70	655	0.815	26664	-2.15	.032
Learn from PK-12 (.90)	4.22	112	0.558	4.28	538	0.606	4.27	650	0.598	27079	-1.80	.072
Partnership (.70)	3.48	114	0.755	3.49	548	0.632	3.49	662	0.654	30139	-0.60	.551
Master's (.79)	3.65	112	0.690	3.69	535	0.781	3.68	647	0.765	28634	-0.75	.452

Note: Cronbach's alpha statistics in parentheses. U= Mann-Whitney U statistic. ELA= English language arts, SS= social studies, Certs./End.=Certifications and Endorsements, Sup=superintendent.

Table 2
Kendall's Tau Results for Need Constructs

	1	2	3	4	5	6
Pedagogy	-- 752					
ELA/Math	.272** 644	-- 645				
Science/SS	.202** 643	.351** 644	-- 644			
Whole child	.197** 646	.275** 645	.225** 644	-- 647		
Diversity	.261** 750	.131** 643	.122** 642	.136** 645	-- 750	
Technology	.255** 749	.182** 645	.172** 644	.177** 647	.213** 748	-- 750

Note. Pairwise N includes below correlation coefficients. * $p < .05$, $p < .01$.

To estimate the degree to which academic need factors and collaboration factors could predict instructional need, six OLS multiple regression models, utilizing block entry were analyzed. As observed in table 3, partnership consistently emerged as a significant and positive predictor across models one through six, particularly in ELA/mathematics. Additionally, the role of principal was a significant predictor in models one through four and interestingly, the ability to support PD had a significant negative association with pedagogy. Similarly, Title dependency showed a significant positive influence in models four and six.

Next, six additional models were conducted using the non-academic outcome variables whole child, diversity, and technology. Partnership again emerged as a consistently significant and positive predictor across all three domains and in all models with the exception of Model 10. While the role of superintendent and principal varied across models, learning from PK-12 educators showed a modest but significant positive effect in the whole child domain. In the Diversity domain, Title dependency and communication emerged as significant predictors for the whole child outcome with communication also being a statistically significant predictor of diversity (Model 10).

Additionally, each regression model exhibited an increase in adjusted R^2 as additional school/district variables were added, meaning that more overall variance was explained improving the model.

Table 3*Multiple Regression Results for Academic Need Factors (Unstandardized Coefficients)*

	Pedagogy				ELA/mathematics				Science/SS			
	Model 1		Model 2		Model 3		Model 4		Model 5		Model 6	
	B	SE	B	SE	B	SE	B	SE	B	SE	B	SE
(Constant)	2.702**	0.335	2.642**	0.362	2.106**	0.334	1.857**	0.362	1.501**	0.331	1.258**	0.361
Sup./principal	-0.300**	0.087	-0.261**	0.086	-0.326**	0.086	-0.283**	0.086	-0.161	0.086	-0.112	0.086
Partnership	0.282**	0.052	0.246**	0.052	0.467**	0.052	0.437**	0.052	0.326**	0.052	0.303**	0.052
Master's	-0.001	0.053	-0.007	0.052	0.035	0.052	0.028	0.052	-0.001	0.052	-0.011	0.052
Doctorate	0.033	0.042	0.025	0.041	-0.015	0.041	-0.022	0.041	0.073	0.041	0.07	0.041
Certs./end	-0.003	0.046	-0.003	0.045	0.011	0.046	0.016	0.046	0.053	0.046	0.05	0.046
Learn from PK-12	0.027	0.055	-0.003	0.055	0.091	0.055	0.068	0.055	0.079	0.054	0.038	0.055
Support PD			-0.104**	0.038			-0.031	0.038			-0.016	0.038
Title dependency			0.083	0.034			0.171**	0.034			0.138**	0.034
Communication			0.197	0.047			0.037	0.048			0.087	0.047
Adjusted R ²	.060		.105		.142		.178		.089		.117	

Note. * $p < .05$, ** $p < .01$

Table 4*Multiple Regression Results for Non-Instructional Need Factors (Unstandardized Coefficients)*

	Whole child				Diversity				Technology			
	Model 7		Model 8		Model 9		Model 10		Model 11		Model 12	
	B	SE	B	SE	B	SE	B	SE	B	SE	B	SE
(Constant)	1.815**	0.25	1.491**	0.262	2.979**	0.359	3.072**	0.397	2.96**	0.343	3.033**	0.377
Sup./principal	0.159*	0.065	0.226**	0.062	-0.100	0.093	-0.089	0.094	-0.297**	0.089	-0.284**	0.090
Partnership	0.343**	0.039	0.312**	0.038	0.137**	0.056	0.108	0.057	0.280**	0.053	0.256**	0.054
Master's	0.029	0.039	0.013	0.037	0.065	0.057	0.071	0.057	0.035	0.054	0.030	0.054
Doctorate	-0.012	0.031	-0.024	0.030	0.089*	0.045	0.085	0.045	0.046	0.043	0.036	0.043
Certs./end	0.006	0.035	0.002	0.033	-0.017	0.050	-0.011	0.050	-0.054	0.047	-0.058	0.047
Learn from PK-12	0.084*	0.041	0.033	0.040	-0.003	0.059	-0.017	0.060	-0.017	0.056	-0.037	0.057
Support PD			-0.028	0.027			-0.076	0.041			-0.076	0.039
Title dependency			0.163**	0.025			0.011	0.037			0.037	0.035
Communication			0.155**	0.034			0.108*	0.052			0.131**	0.049
Adjusted R ²	.133		.220		.021		.028		.059		.072	

Note. * $p < .05$, ** $p < .01$.

To better understand superintendents' views on doctoral degree programs, we analyzed variables related to the perceived importance of such degrees for faculty, staff, and administrators. Data collection captured whether participants held a doctoral degree, with responses coded for analysis (0 = no doctorate, 1 = doctorate). As expected, participants with doctoral degrees were significantly more likely than those without to view doctoral programs as an important part of the professional development process for administrators (see Table 5), $U(N_{\text{doctoral degree}}=19, N_{\text{no doctoral degree}}=88) = 549, z = -2.427, p = .015$. Results demonstrate that superintendents did not report doctoral programs as an important part of the PD process for faculty and staff; however, they do perceive doctoral degrees as an important part of the PD process for administrators working in PK-12 districts.

Table 5
Doctoral Degree Programs and Importance for PD

	Faculty	Staff	Administrators
Mann-Whitney U	712	678	549*
Z	-1.06	-1.36	-2.43

Note: * $p < .05$, ** $p < .01$ (2-tailed). Grouping Variable: No_Dr_v_Dr. $\alpha = .904$

Results from the current study revealed that learning from PK–12 educators and whole child support were among the highest-rated needs. Superintendents reported significantly higher needs in several areas, including pedagogy, ELA/mathematics, and technology, though principals emphasized certifications and endorsements. Additionally, pedagogy, ELA/mathematics, and technology were positively correlated in a significant manner, suggesting important relationships among multiple variables. Furthermore, partnership was a consistent and significant predictor of instructional and non-instructional needs across models, particularly in ELA/mathematics, whole child, and diversity. Analysis of perceptions toward doctoral programs revealed that superintendents with doctorate degrees were significantly more likely to view such programs as vital professional development for administrators, though not necessarily for faculty or staff.

Limitations

Data for this study were collected prior to the COVID-19 pandemic. Additional research to provide insights into the needs of PK-12 educators and their relationships with IHEs will be critical in identifying needs and opportunities for both PK-12 and IHEs. Further studies of this nature will assist in identifying the impact of crisis on the field in general and potentially provide insights into strategies for managing and addressing significant disruptions to the PK-12 education systems and the role IHEs might play in being responsive to those needs ultimately maintaining and increasing relevancy. Another limitation of this study is the difference in sample sizes among the two populations. Given that there are many more principals than superintendents in public education, it stands to reason that discrepancies in return rates for surveys will exist.

Discussion

Summary of Findings

This article gains insights from principals and superintendents about their school or district PD needs and how they can work with IHEs to address those needs. Previous literature identifies early college access and collaborative PD as ways that IHEs have worked with K-12 educators, but previous attempts have met with varied success. This study is informed by the REMAP framework, which focuses on the idea that more meaningful relationships between academic partners can be beneficial for both parties. Statistical analysis of survey data collected from superintendents and principals was used to identify potential areas where IHEs could partner with K-12 leaders to provide PD or other support.

Building on the tenets of REMAP, the outcomes of this study represent an important first step for IHEs in developing a deeper understanding of the needs of PK–12 district administrators. Viewed through the lens of co-construction, the study offers valuable insight into the key areas where PD support from IHEs can strengthen teacher performance and improve district outcomes. In this study, results indicate the highest reported needs for principals and superintendents combined are learning from PK–12 educators and supporting the whole child, while ELA/mathematics and diversity are also viewed as significant priorities. In contrast, communication and Title funding dependency show the lowest means for both groups combined. Superintendents generally report higher needs than principals, except in the whole child domain and among collaboration factors. Significant differences between the two groups were found in the constructs of pedagogy, ELA/mathematics, whole child, technology, the ability to support PD, Title fund dependency, along with certifications and endorsements. All need constructs were positively correlated as displayed in Table 2. With regards to multiple regression results, partnerships consistently emerged as a predictor of need across factors. Additionally, superintendents with doctoral degrees significantly valued doctoral programs as professional development for administrators but did not view them as beneficial for faculty or staff.

This study provides valuable insights into the needs of PK-12 public schools and districts and their perceptions about collaboration with IHEs and is consistent with previous research in this area (Authors, 2020; Authors, 2023b). Additionally, this research presents significant information related to the importance of the perceived benefit of PK-12 partnering with IHEs to meet their needs and the mutual benefits of collaboration (Loucks-Horsley et al. 1996; Bohannon et al., 2024) and to better understand PK-12 districts (Wepner, et al., 2021). Superintendents and principals agree on many of the needs and relationship variables examined in this study indicating consistency with regards to needs and perceptions about partnerships with IHEs among both groups. There are also areas where these two groups differ, indicating that there are opportunities for collaboration specific to the building or district. These findings can inform IHE programming and outreach efforts to public schools and districts and ideally contribute to transformational partnerships (Authors, 2023a). Most importantly, this study lays the groundwork for IHEs to initiate meaningful conversations with PK–12 administrators. While district leaders can confirm or clarify specific areas of need within their school systems, the findings from this study offer IHEs a valuable starting point for

collaboration and engagement. Furthermore, by referencing this study and similar studies (Authors, 2020, 2023a, 2023b), IHE leaders demonstrate a commitment to understanding the needs of PK–12 districts, reinforcing the co-constructed principles of REMAP.

While previous literature has addressed how PK-12 teachers can learn from IHE faculty (Knowlton et al., 2015; Savick & Watson, 2024), results of the current study expose a clear message from school and district leaders in our sample that there is a need for IHEs to listen more closely to them as practitioners and that they welcome collaboration to help meet their goals. Findings from this research illuminate the significant opportunity that exists for collaboration and the potential building of long-term transformation relationships between PK-12 educators and IHEs.

Implications for Practice and Future Research

Results from this research provide a picture of PD needs and collaboration potential between IHEs and PK-12 schools and districts while also highlighting the difference and similarities evident in statistics from the sample. This study is, however, limited in that these data were collected within one state and at one point in time for each sample. PD and collaboration needs may change over time depending on staffing and specific needs related to practice for schools and districts.

Furthermore, additional qualitative data in the form of focus groups and interviews would provide explanatory evidence of the factors included in this study. This research addresses the broader implications of how the PK-20 system can work more collaboratively to address issues in public education and more specifically, meet the needs of PK-12 schools and districts. Findings from this study highlights themes related to the role of higher education in the provision of PD in PK-12 education and it is apparent that there is a critical opportunity to partner and support meeting specific PD needs for PK-12 educators. Customization of supports are critical, and these findings provide a framework for public universities to begin development of an increased role in providing relevant PD for PK-12 public schools in specific areas of need. IHE's cannot, however, provide PD programs to PK-12 public schools from a one-size fits all perspective. Identifying areas of need through co-constructed goals will allow the PD to be relevant and ultimately more effective.

Additionally, a future survey of IHE leaders and administrators will offer valuable insight into how they perceive and understand the PK–12 system and its individual districts. Gaining a clearer picture of the perspectives held by deans, department chairs, and faculty within colleges, schools, and departments of education will help reveal how closely their views align with the needs identified by PK–12 administrators. Moreover, the survey results will clarify whether PK–12 leaders' perceptions of IHE awareness and responsiveness to their needs are accurate, either confirming or challenging those beliefs.

The potential relationships between IHEs and PK-12 public schools can take many forms, from loose partnerships to formal PD processes. A systematic approach that includes degree programs built around school and district issues might provide avenues for transformational relationships. For example, IHEs working with students to identify district issues, developing solutions, and evaluation protocols could all serve to enhance the application of coursework while embedding the principals of leadership and instructional practices into IHE programs.

Furthermore, faculty embedded with PK-12 educators can leverage their knowledge and expertise to provide supports while gaining valuable exposure to the new generation of PK-12 students which have evolved since IHE faculty taught in a PK-12 classroom. Faculty working in higher education need to better understand this type of learner and the impact of these changes on educator preparation programs. This experience can inform research for the faculty member, creating a symbiotic relationship between faculty and PK-12 educators to focus and solve local issues.

Conclusion

As local schools and districts rise to meet the challenges of improving outcomes for students and IHEs continue to strive for high levels of relevance, the collaboration between PK-12 and IHEs will likely continue to gain importance. This research is consistent with previous literature (Shroyer et al., 2007; Holen & Yunk, 2014) and demonstrates that the potential for meaningful collaboration, as perceived by PK-12 educational leaders, is evident and that opportunities are abundant for meeting the PD need of schools and districts. Further information is needed to better understand the perspectives of leaders in public postsecondary institutions on potential partnerships, but district and building leaders can be proactive in attempting to establish needed partnerships. Furthermore, it is imperative that IHEs understand the motivations and needs of partner districts (Wepner, et al., 2021). This call for collaboration between IHEs and public education leaders represents an opportunity to support PK-12 educators, IHEs, and students.

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