

# **Public School District Needs at the Crossroads of Professional Development and Public University Partnerships: Superintendents Perceptions and the Potential Alliance Between PK-12 and Institutions of Higher Education**

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*The incorporation of professional development (PD) activities for PK-12 teachers has long served to advance competency in the profession. With changes in requirements for continued teacher certification, student performance, and state-level testing, superintendents are faced with maximizing PD opportunities of their faculty. This primary investigation considers these changes, and the perceptions of Michigan PK-12 superintendents in the identified areas of need for faculty development. This study also explores the multiple facets of PD and partnerships/collaboration with Institutions of Higher Education (IHEs) in the state. The survey instrument, developed for this study, assesses the views of superintendents across Michigan on the greatest areas of PD need for faculty by subject area and teacher performance. Findings consider the perceived roles and utility of IHEs in providing PD, degree programs, and credentialing of faculty to meet these needs. Communication and finances relating to the support of PD, in addition to district-level data, determine if other factors have an impact on identified needs. More specifically, this study examines multiple factors to establish the level of PD need, and the relationship of predictive factors, through the analysis of latent variables based on survey and demographic data.*

**Keywords:** *superintendents, professional development, higher education, teacher training, PK-20 partnerships*

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Professional development (PD) activities have long been part of the process for PK-12 educators to advance disciplinary knowledge, skills, and competencies (Avalos, 2011). Written into bargained contracts, the pursuit, and completion, of advanced degrees would, in part, assist teachers in career advancement and may reward teachers with increased compensation (Bredeson, 2011). Beyond advanced degrees, institutions of higher education (IHEs), in partnership with PK-12 public school districts, have provided PD focusing on research supported best practices through district designed learning experiences (LePage et al., 2001). Further on, as regulations for continuing education credits relaxed at the state level, districts turned inward toward 'in-house' experts, or contracted with private organizations, to meet PD needs (Brown & Militello, 2016). In addition to the examination of discipline-specific needs, this study seeks to better understand other germane PD factors such as addressing the diverse needs of learners, mental health, and relationships with IHEs.

### **Purpose and Research Questions**

With the role of PD and student success as the backdrop, the aim of this study is to explore superintendent perceptions of the need for teacher advancement in disciplinary and instructional practices and the potential role of IHEs in facilitating learning experiences. The significance of this study highlights these long-believed opportunities and notions of collaboration that have existed mostly around specific partnerships, with a specific purpose, or largely around placing teachers and working on grant-specific initiatives; however, the potential for collaboration in a more cohesive manner, based on empirical findings, provides a new backdrop for moving forward with these relationships. Advancing under the notion of this postulate sheds light on the importance of these partnerships to form symbiotic relationships that promote student success and strengthen the foundational services for PK-12 and IHEs related to PD. The primary questions guiding this research are as follows:

1. What do superintendents identify as the PD needs of teachers in public PK-12 school districts?
2. What relationships exist between the PD needs of PK-12 public school districts and other factors related to collaboration with IHEs?
3. What factors are predictive of the PD needs of districts as reported by superintendents?

### **Review of the Literature**

#### **Professional Development**

Administrators at the district level must have, and communicate, their ideas to administrators and teachers at the building level (Chen & Reigeluth, 2010). An inherent part of this communication is the idea that superintendents must have high expectations (Armour & Makopoulou, 2012). It is from these expectations for the growth in practice that PD flourishes (Williams et al., 2009).

There are a great, and varied, number of factors at play in the PD of faculty (Kubitsky et al., 2012). Superintendents must address the idea that PD is one of the key factors in the fidelity of the curriculum (Lachausse, et al., 2014). Superintendents must also be mindful of the potential issues and concerns in scaling up and implementing PD initiatives (Breault, 2013), the implications of PD on assessment (Hinchcliff, 2015), and the potential impact of various PD initiatives on both grade level and content-based instruction (Wager & Foote, 2013).

Armistead et al. (2013) indicates that the more experience a participant has as an educator, the more likely they are to only participate in PD activities that fit their current interests and focus. In addition, as PD is approached from a Community of Practice perspective, effective engagement in PD was most highly attributed to situations where there was a clear purpose, effective coaching questioning, and a solid connection between theory and practice (Kintz, et al., 2015).

While communication and engagement by administration within a given district seems to be an essential component of the development of effective PD practices, things such as available funding and standards within the PK-12 school must be considered and addressed (Neapolitan & Leving, 2011). Attebury (2018) indicated that the key in being effective lies in collaboration on, not mandating all, aspects of PD in continuing education for school librarians.

## **District Factors**

Federal Title funds have long been a determinant in providing training and PD to school district personnel as they strive to meet accountability requirements and improve student success. Title II, Part A, of the Every Student Succeeds Act (2015) P.L. 114-95, outlines the federal role in supporting effective instruction through funding for state and local education agencies. This funding is specific to PD for educators primarily through subgrants to local educational agencies (Sec. 2102). Although PD funding is applicable in other parts of the law, sections 2101, 2102, and 2103 include language specific to supporting effective instruction and PD. The implementation of PD has shown positive results for improving instruction, promoting high expectations for students, and for student-centered practices (Landry, et al., 2010; Blanchard LePrevost, et al., 2016; Kennedy, & Schiel, 2010).

Communication is a critical component of leadership and PD (Honig, & Rainey, 2014). The importance of intentional communication cannot be understated, and cultures of effective communication are critical in all schools (Hilliard & Newsome, 2013). Intentionality in communication focusing on PD affords leaders with the moments to plan, implement, and evaluate PD for staff at all levels (Doolittle et al., 2009).

## **PK-12 Collaboration with IHEs**

The overall body of literature examining partnerships between PK-12 schools and IHE faculty is limited (Smith et al., 2016). The limited existing literature does identify a positive benefit to both IHE faculty (or graduate students) and PK-12 classroom teachers when there is a presence of deep and meaningful collaborative efforts between IHEs and PK-12 school districts (Basile & Gutierrez, 2011; Bullough & Baugh, 2018; Burrows, 2015; Cress, Desmet, & Younker, 2020; Hudson et al., 2012; Knowlton et al., 2015; Nurenberger-Haag & Huziak-Clark, 2008; Phelps, 2018; Sandholtz, 2002; Shroyer et al., 2010; Smith et al., 2016; Tomanek, 2005; Vernon-Dotson & Floyd, 2012). Benefits to both IHE faculty and PK-12 classroom teachers exists across academic disciplines, school location, and grade level. From physical education (Phelps, 2018; Sandholtz 2002) to STEM related fields (Burrows, 2015; Hudson et al., 2012; Nurenberger-Haag & Huziak-Clark, 2008; Tomanek 2005), elementary schools (Cress, et al., 2020), middle and high schools (Knowlton et al., 2015), urban schools (Cress, et al., 2020) and rural schools (Vernon-Dotson & Floyd, 2012) all experienced positive outcomes from the creation of intentional partnerships.

Through an examination of a Professional Development School Partnership Project between 21 standalone K-12 Professional Development Schools and Kansas State University,

Shroyer et al. (2010) found that all 21 schools experienced gains in reading and 13 of the schools outperformed the state average for growth. Undergraduate students placed in the Professional Development Schools experienced demonstrated improvement in science and mathematics content knowledge, science teaching efficacy, attitudes toward science, and teaching acumen (Shroyer et al., 2010). Through the Adopt A Classroom (AAC) program, between the University of Arkansas and the Arkansas Department of Education, university faculty gained a renewed perspective on student development and K-12 faculty found benefit through innovation, collaboration, real-world connections, and rethinking teaching (Smith et al., 2016). The teaching-higher education faculty partnership, pairing 28 higher education faculty with 22 high school and middle school teachers in the state of Rhode Island over three years, found that university faculty were able to: (a) use their passion and expertise to impact content in the classroom, (b) learn about the issues PK-12 faculty face, and (c) create or revise college-level teaching materials (Knowlton et al., 2015). Knowlton et al. (2015) also found that PK-12 teachers improved their subject matter knowledge and found the partnerships to be invaluable and extremely gratifying.

## Conceptual Framework

### Transactional Relational Exchange Theory

Sheth and Shah (2003) defined transactional exchange as a short-term interaction influenced through a “one-time exchange with no commitment by customers per se beyond the limited interaction” (p. 628), while “relational exchange, on the other hand, transpires over a period of time, and exchange participants are expected to derive complex, personal, noneconomic gains and to communicate through social exchange” (p. 628). Lefaix-Durand and Kozak (2009) explained that exchanges between two parties are “contextually embedded” and that the “exchange process [is] central to understanding the nature of the exchange” (p. 1005). Thus, the governance of exchange works on a power and influence dynamic within the contract between customer and service provider when the environment is mutually beneficial.

Within the context of education, transactional exchange can be reflected as a one-off professional development (PD) activity delivered by an IHE to a group of school district teachers or as part of a for-credit graduate course delivered asynchronously online to a range of teachers representing different districts, grade levels, and disciplines. In relation to the dynamic between PK-12 teachers and IHEs, the customer (teacher or district) views the relationship between professional and IHE as transactional in nature, void of long-standing, complex, personal benefit (Mencarelli & Riviere, 2019). One-off PD activities delivered onsite, or enrollment in isolated graduate degree courses online, may address the transactional immediacy of a particular skill; however, these types of interactions are void of deriving complex, personal, noneconomic gains to improve PK-12 student achievement through social exchange (Sheth & Shah, 2003).

Transactional Relational Exchange Theory relies on relationships in which there is an exchange between two parties where both *transactional* and *relational* exemplify differences based on the meaning and depth of the relationship (Lefaix-Durand & Kozak, 2009). In educational leadership, and teacher training programs, IHEs have relied heavily on transactional relationships through the provision of degrees, certifications, and coursework in exchange for tuition and a commitment on the part of the student to complete certain requirements to improve their practice. While this system has served many, IHEs are undergoing an awakening (Newfield, 2016) that is

nudging them to examine the services they provide and become more in tune with the needs of school districts.

**Relationship Exchange Model for Academic Partners (REMAP)**

Patrick and Dionne (in press) discussed the ways that PK12 districts and IHEs create, maintain, and revise their relationships. Their work supports and expands Harmeling et al. (2015) as they identified specific events that transform relationships, referred to as exchange events, and illustrated how these events can reformulate relationships within an educational context. When PK-12 district leaders and IHEs form a new relationship to address a specific issue, such as PD, the result is a reformulation of the existing relationship. Over time, the relationship between the district and the IHE will evolve from transactional in nature to one that is ultimately transformational for both parties. Ideally, through the establishment of these mutually beneficial relationships, transformation theory can build into a shared sense of purpose and commitment to common goals (Merriam, 2004). Evidence of similar outcomes are found when Shroyer et al. (2010) identified the concepts of collaborative reconstruction and simultaneous renewal amongst university and participating public schools resulting in the enhancement of a teacher education program.

The REMAP conceptual framework, as shown in Figure 1, provides an example specific to the relationship between IHEs and PK-12. The traditional offering of degrees, certifications, endorsements, and coursework to PK-12 teachers and leaders by IHEs represents a transactional engagement in which there is an exchange between the student and the IHE based on monetary agreements and completion requirements for credits or credentials. Sustained interactions evolving beyond this transaction form the relational aspect between the same entities. As complex and personal gains through social exchange deepen and evolve, transformational relationships begin to form. Purposeful and shared commitments to goals signify a transformational relationship in which meaningful integrated systems exist.

**Figure 1**

*PK-12 and Higher Education Example for Relationship Exchange Model for Academic Partners (REMAP)*



## Methodology

### Sample

The instrument was distributed to 497 superintendent email addresses retrieved from a publicly available state-level database (CEPI, 2018). The return rate and individual response rate for each question is approximately 25%. The respondents included 123 superintendents from across the state of Michigan of which 22.8% (N=28) were female and 77.2% (N=95) were male who report having a doctorate degree at a rate of almost 19% (N=23). The majority of districts, 54.1% (N=66) are considered *rural* while 25 are considered *suburban* (20.5%), 22 (18%) are considered *town*, and nine (7.4%) are considered *city* according to state data locale categories.

### Instrumentation and Data Collection

The superintendent survey, designed specifically for the purposes of this study, included a face validation process with five superintendents from across the state, in varying district types, to ensure validity of questions prior to distribution, via email, to superintendents. Data were collected using Qualtrics®XM. The cross-sectional survey (Appendix) contained questions about the perceptions of superintendents with respect to needs in the areas of curriculum design and implementation, management of the learning environment, cultural diversity, data literacy, communication, PD, and connections with higher education for multiple levels of staff. Question responses include a combination of Likert scale (i.e. *Strongly Disagree, Disagree, Neither Agree nor Disagree, Agree, or Strongly Agree*) and rank-order responses.

### Data Analysis

Descriptive statistics were organized to perform an initial analysis of results. Three levels of analyses were then conducted to provide statistical explanations of the relationships between variables. These analyses include: (a) an exploratory factor analysis to determine latent variables (factors) based on manifest variables from the Superintendent Survey, (b) a correlation analysis to determine relationships among factors, and (c) multiple regression analysis, including only significant correlations as variables, to determine if factors are significant predictors of outcome variables.

## Results

### Research Question 1

The first research question sought to determine what superintendents identify as PD needs of teachers in public PK-12 school districts. An analysis of descriptive variables that includes the needs of teachers, the needs of the district related to PD, and discipline-specific needs of elementary teachers was completed.

**Professional Development Needs of Teachers.** Superintendents most highly agreed that the majority of teachers need to increase their overall knowledge around understanding of learner diversity and data literacy while research methodologies and effective use of classroom management skills was agreed with least. Participants also ranked their perceived areas of greatest

need. Instruction, classroom management, learner diversity, and data literacy needs are the four most critical areas identified. Table 1 is organized by ranking of each component based on *area of greatest need* and needs related to *increasing overall knowledge* for teachers.

**Table 1**

*Comparison of Needs Related to Increasing Knowledge and Ranked Needs for Teachers*

Areas of Greatest Need	Rank	Rank Based on Mean	Increasing Overall Knowledge	Mean
Instruction	1	1	Understanding of learner diversity	3.95
Classroom Management	2	2	Understanding of data literacy	3.91
Learner Diversity	3	3	Effective use of technology in the classroom	3.76
Data Literacy	4	4	Ability to effectively instruct	3.66
Curriculum Design	5	5	Understanding of curriculum design	3.58
Cultural Diversity	6	6	Understanding of cultural diversity	3.56
Technology	7	7	Understanding of pedagogy	3.54
Leadership	8	8	Effective classroom management skills	3.46
Research Methodologies	9	9	Understanding of research methodologies	3.13

**District improvement needs.** Participants were asked to indicate their level of district need for improvement in several areas. Mental health, parent training, and managing inclusive classrooms are reported as the three highest areas of need. Superintendents express the highest need for improvement in mental health above all other areas (N=78) with over three fourths (76.5%) reporting that it was a *very high* or *high* need. Almost 60% (N=66) report managing inclusive classrooms as a *very high* to *high* need in their district and 55% (N=61) report parent training as a *very high* or *high* need. School community relations and test scores are the lowest reported needs with technology integration also reported as less of a need. Table 2 shows these needs in order of highest mean.

**Table 2**

*Need for Improvement as Reported by Superintendents*

District Needs	N	Mean	SD
Mental health	111	4.19	.792
Parent training	110	3.72	.890
Managing inclusive classrooms	111	3.62	.905
Technology integration	111	3.48	.952
Test scores	110	3.39	1.024

**Discipline-Specific needs for elementary teachers.** Almost 94% (N=104) of superintendents report that there is *some need*, *high need*, or *very high need* for mathematics training of elementary school faculty, over 95% (N=104) report the same level of need for training in reading while almost 92% reported the same level of need for language arts (N=100). Similarly, respondents reported that there is *some need*, *high need*, or *very high need* for training in science at a rate of almost 95% (N=104). Similar data for social studies (77.4%, N=86) and history (65.7%, N=73) indicate a need for training in all areas for elementary faculty. Table 3 includes descriptive statistics for these disciplines.

**Table 3**

*Discipline-Specific Needs for Elementary Faculty*

Discipline	N	Mean	SD
Mathematics	111	4.05	.961
Reading	111	3.98	.904
Language Arts	109	3.71	.936
Science	110	3.67	.920
Social Studies	111	3.10	1.018
History	111	2.83	1.026

**Research Question Two**

Research question two sought to determine which relationships exist between the PD needs of PK-12 public school districts and all other factors in the study. To answer this question, an exploratory factor analysis was performed and these factors were then analyzed to determine statistical correlations.

**Factor analysis.** Factor analysis included a three-part process to create factors for district needs, communication, and all other variables based on manifest variables from the instrument, with a minimum factor loading coefficient of .500. A principal component extraction method utilizing Varimax rotation yielded several factors included in Table 4. Bartlett’s test of sphericity (>0.001) and Kaiser-Meyer-Olkin Measure of Sampling Adequacy (.684) were performed and all nonredundant residuals with absolute values greater than .05 is below 50% for all factors. Questions were transformed into means excluding questions that did not meet the threshold for minimum factor loading. Cronbach’s Alpha ( $\alpha < .70$ ) was used to verify reliability for all factors. State data in Table 4, includes district fund balance as a percentage of expenditures (CEPI, 2019a) and is used to represent district funding. Teacher-to-student ratio represents Full Time Equivalency (FTE) district student count data which is divided by district FTE teacher data (CEPI, 2019b; CEPI, 2019c), and Socioeconomic Status (SES) data (CEPI, 2019c) which includes percentage of Free and Reduced Lunch district data.

**Table 4***All Factors and Reliability Results Based on Superintendent Survey*

District and teacher need factors	$\alpha$	IHE collaboration and internal factors	$\alpha$	State data
Curriculum and instruction	.818	Certifications and endorsements	.913	Fund balance as a percentage of expenditures
ELA and mathematics for elementary teachers	.890	Degree programs	.927	Teacher-to-student ratio
Science and social needs for elementary teachers	.834	Partnership benefit with IHEs	.765	SES
		Dependence on Title funds	.886	
		District ability to fund PD	.901	
		IHEs learning from PK-12 personnel	.832	
		Communicating of needs	.876	
		Communication frequency	.726	

**Correlations.** To examine the second research question, a bivariate correlation utilizing Kendall's Tau Coefficient test was conducted to provide valuable information about the relationships between all factors included in Table 4.

All factors correlate with at least one other factor in a significant way (Table 5). District fund balance as a percentage of expenditures, correlates with dependence on Title funds to provide PD and teacher ratio but, none of the district need factors. Dependence on Title funds correlates with ability to support PD and curriculum and instruction.

Partnership benefit with IHEs is correlated with all need factors along with certifications and endorsements and degree programs. Degree programs, and certifications and endorsements are correlated with all content area needs as well as each other.

Curriculum and instruction need also correlates with dependence on Title funds, and the communication of PD needs to principals.

**Table 5***Bivariate Correlation Coefficient Results for all Factors*

Factors	1	2	3	4	5	6	7	8	9	10	11	12	13
Curriculum and instruction													
ELA and mathematics	.255**												
Science, social studies	.131	.314**											
Partnership benefit with IHEs	.200**	.308**	.221**										
Certifications and endorsements	.085	.162*	.158*	.183*									
Degree programs	.131	.135	.239**	.177*	.346**								
IHEs learning from PK-12	.083	.050	.031	.053	.111	.030							
Ability to support PD	.024	.044	-.038	-.054	.046	-.082	.028						
Dependence on Title funds	.235**	.118	.110	.054	-.068	.089	.136	-.183*					
Communication of needs	.132*	.098	.069	.129	.104	.079	.119	.010	.132				
Communication frequency	-.041	-.081	.014	-.067	-.001	-.024	.037	.057	.079	.100			
Teacher to student ratio	.076	.043	.076	.082	-.080	.004	-.042	-.080	.067	.028	-.263**		
Fund balance as a percentage of expenditures	-.065	-.031	-.036	-.008	.068	.041	.061	.088	-.143*	-.049	.047	-.199**	
SES	.048	-.004	-.117	-.036	-.073	-.018	.058	-.043	.260**	.078	.261**	-.085	-.025

Note. \*\*. Correlation is significant at the 0.01 level (2-tailed). \*. Correlation is significant at the 0.05 level (2-tailed).

**Research Question Three – Teacher and District Needs**

To examine the predictive factors of PD needs, multiple linear regression analyses utilizing only factors that exhibited a significant correlation according to Kendall’s Tau Coefficient test results was performed with confirmation of observed linearity, homoscedasticity, collinearity statistics, and multicollinearity (All variance inflation factors are 1.2 or less).

Partnership benefit with IHEs, dependence on Title funds, and communication of needs are all significant predictors of curriculum and instruction needs. Multiple regression analysis results (Table 6) reveal that 16.1% (Adjusted R<sup>2</sup>) of the variance can be explained by the predictor variables and that all three factors were statistically significant,  $F(3,108) = 8.109, p = .000$ .

**Table 6***Multiple Regression Results for Curriculum and Instruction Needs*

Predictors	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	2.148	.325		6.614	.000
Partnership benefit with IHEs	.218	.077	.250	2.845	.005
Dependence on Title funds	.156	.063	.221	2.492	.014
Percentage of time communicating needs	.166	.079	.188	2.095	.039

Note:  $p < .05$

These results indicate that as the need for curriculum and instruction support and PD increases, the perceived benefit of partnering with IHEs also increases. Dependence on federal

Title funds is also a predictor of this need, meaning that there are potential opportunities for collaboration, specifically for districts that are dependent on Title funds for PD. The percentage of time superintendents spend communicating with principals about educational issues predicts the increase in perceived need for curriculum and instruction indicating that communication is critical to PD efforts.

With mathematics and ELA as the outcome variable, 15.5% (Adjusted R<sup>2</sup>) of the variance can be explained by the predictor values,  $F(2,108) = 11.116, p = .000$ . With regards to science and social studies, 11.9% (Adjusted R<sup>2</sup>) of the variance can be explained by the predictor,  $F(3,107) = 5.950, p = .001$ . Table 7 provides combined regression analysis results.

**Table 7**

*Content Area Needs for Districts Combined Regression Results*

Content Area Needs	Predictors	Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
Mathematics and ELA	(Constant)	2.073	.423		4.901	.000
	Partnership benefit with IHEs	.413	.1	.372	4.121	.000
	Certifications and Endorsements	.114	.091	.113	1.251	.214
Science and social studies	(Constant)	1.305	.465		2.808	.006
	Partnership benefit with IHEs	.305	.107	.266	2.849	.005
	Certifications and endorsements	.092	.102	.088	.897	.372
	degree programs	.169	.108	.154	1.569	.120

Note:  $p > .05$

Partnership benefit with IHEs is a predictor for all content areas. This signifies that as the level of need for content area supports increase, so does the perceived benefit of partnering with IHEs for PD and supports.

**Limitations**

These data were collected and analyzed prior to the COVID-19 pandemic. While the results provide insight regarding PD needs and relationships between PK-12 and IHEs, these needs may change as a result of the pandemic; however, the need for ongoing PD and the opportunities to collaborate might well be exacerbated as school districts and IHEs navigate the complex nature of education in the future.

## Discussion

This study provides valuable statistical information for both PK-12 educators and IHEs. Critical insight into the needs of PK-12 school districts, as reported by superintendents, is gained and exposes real potential for transformational relationships between PK-12 and IHE educators. As both populations continue the quest to facilitate student success, the timing for forging these transformational relationships is paramount.

The results of these unique partnerships support Lowery et al. (2018) who stated “Benefits reached to the students in the classroom, the classroom teachers, the university faculty, the teacher candidates as developing educators, and the community at large” (p. 107). They go on to discuss mutual trust and commitment in addition to transformational concepts. Illustrating benefits that transcend transactions, they reported that “These partnerships represent unique spaces in which the best opportunity for educational innovation as well as personal satisfaction and professional growth can occur” (p. 108).

As these partners move beyond transactions, improve trust, and develop integrated systems built around common goals, the findings from this study can provide valuable information about meeting the needs of PK-12 school districts and opportunities for IHEs to be responsive to those needs in a meaningful way.

PK-12 and IHE educators have collaborated for many years to some degree but, these relationships have been largely transactional in nature. For instance, educators would take coursework, complete degree programs, or pursue certifications through IHEs to advance their careers and, ideally, gain valuable skills and knowledge to improve practice based on the needs of the individual educator. IHEs have historically provided these services, yet, superintendents and district leaders, writ large, have been void from influencing the development of these credit bearing offerings.

As PK-12 education and IHEs change the nature in which they provide services, and public resources become scarcer, it is critical to examine potential relationships. To provide PK-12 educators more targeted PD, IHEs need to redefine the services they offer and be responsive to the needs of districts. In an era of highly available PD options through professional organizations, transactional experiences will persist. However, through application of the REMAP model through the communications between PK-12 districts and IHE’s, the development, and delivery, of more meaningful PD, based on district needs, provides greater opportunity for increased student performance.

Past examples of meaningful partnerships between PK-12 educators and IHE faculty have yielded positive results for both parties involved (Basile & Gutierrez, 2011; Bullough & Baugh, 2018; Burrows, 2015; Cress, Desmet, & Younker, 2020; Hudson et al., 2012; Knowlton et al., 2015; Nurenberger-Haag & Huziak-Clark, 2008; Phelps, 2018; Sandholtz, 2002; Shroyer et al., 2010; Smith et al., 2016; Tomanek, 2005; Vernon-Dotson & Floyd, 2012). Using school improvement plans, student achievement data, and in-class observations, collaborative efforts between superintendents and IHE faculty can identify, and develop, meaningful PD experiences for PK-12 teachers. However, in many cases, the concept and purpose of these partnerships are university led.

## **Implications for District Leaders and Future Research**

District leaders need to initiate conversations with IHE's and insert themselves into the dialog to explore collaborative opportunities that ensure the learning activities are relevant and focused for both districted designed PD and credit-based educational experiences. These finding indicate that superintendents are interested in meaningful relationships between their districts and IHEs in their state, as reflected in the REMAP (Authors, 2021), and also have expressed a clear understanding of the type of PD they need from IHEs. Outcomes from such collaborative efforts may improve student success through the advancement of intentional practices for PK-12 teachers and deepen IHE faculty understanding of today's students that can be translated to teacher preparation programs at their institutions.

While this study includes superintendent perceptions of PD need and PK-12 district relationships with IHEs, additional research with other key populations will prove helpful in a more thorough understanding of the concepts in this research. For example, replicating this study with other populations such as: (a) principals, (b) charter schools, (c) private schools, (d) public and private university faculty and administrators, (e) PK-12 faculty, and (f) state departments of education may reveal valuable insights with respect to these relationships and the needs of specific populations. Additionally, performing this study across multiple states may yield valuable information about generalized findings to a broader population and examining non-academic needs such as mental health and addressing student diversity can contribute to the literature on improving outcomes for students beyond academics exclusively.

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## Appendix

### CMU Superintendent Survey

#### Start of Block: Teaching and Learning

Q30

Faculty in the College of Education and Human Services at Central Michigan University are eager to better understand the specific skill sets and knowledge base that your faculty and staff need in order to advance your district's success. The entire survey should take approximately 10-15 minutes of your time to complete. All data collected will be kept strictly confidential and only reported in the aggregate. By choosing to participate in this survey, you are providing consent to be a part of this study. At any point in time, you can withdraw your responses from this study by contacting the Master of Arts in Education at CMU, MAEd@cmich.edu or by calling (989) 774-3144. Research findings will be shared with you if you choose to participate.

Q1 The following nine (9) questions will ask about areas where the majority of teachers in your district need to increase their overall knowledge.

Please indicate your level of agreement with the following statements: Strongly Disagree, Disagree, Neither Agree nor Disagree, Agree, or Strongly Agree.

**The majority of teachers in my district need to increase their:**

	Strongly disagree (1)	Disagree (2)	Neither agree nor disagree (3)	Agree (4)	Strongly agree (5)
Understanding of curriculum design (1)	•	•	•	•	•
Ability to effectively instruct (2)	•	•	•	•	•
Understanding of pedagogy (3)	•	•	•	•	•
Effective classroom management skills (4)	•	•	•	•	•
Effective use of technology in the classroom (5)	•	•	•	•	•
Understanding of learner diversity (6)	•	•	•	•	•

Understanding of cultural diversity (7)	•	•	•	•	•
Understanding of data literacy (8)	•	•	•	•	•
Understanding of research methodologies (9)	•	•	•	•	•

**Q2 Please rank order from 1 to 9 (with 1 being the most important) the areas of greatest need for teachers in your district:**

- \_\_\_\_\_ Classroom Management (1)
- \_\_\_\_\_ Cultural Diversity (2)
- \_\_\_\_\_ Curriculum Design (3)
- \_\_\_\_\_ Data Literacy (4)
- \_\_\_\_\_ Leadership (5)
- \_\_\_\_\_ Learner Diversity (6)
- \_\_\_\_\_ Instruction (7)
- \_\_\_\_\_ Research Methodologies (8)
- \_\_\_\_\_ Technology (9)

Q4

Please indicate your level of agreement with the following statements: Strongly Disagree, Disagree, Neither Agree nor Disagree, Agree, or Strongly Agree.

**IHEs in the State of Michigan should do more to assist my district in effectively implementing school improvement plans by offering professional development activities.**

- Strongly disagree (1)
- Disagree (2)
- Neither agree nor disagree (3)
- Agree (4)
- Strongly agree (5)

**Q5 IHEs in the State of Michigan should do more to assist my district in effectively implementing school improvement plans through content delivered in master's degree programs.**

- Strongly disagree (1)
- Disagree (2)
- Neither agree nor disagree (3)

- Agree (4)
  - Strongly agree (5)
- 

**Q6 My district has an impactful relationship with local IHEs in the State of Michigan.**

- Strongly disagree (1)
  - Disagree (2)
  - Neither agree nor disagree (3)
  - Agree (4)
  - Strongly agree (5)
- 

**Q7 My district is able to meet the increased professional development demands for new teachers.**

- Strongly disagree (1)
  - Disagree (2)
  - Neither agree nor disagree (3)
  - Agree (4)
  - Strongly agree (5)
- 

**Q8 Traditional credit-bearing graduate course work can meet the professional development needs of my district.**

- Strongly disagree (1)
  - Disagree (2)
  - Neither agree nor disagree (3)
  - Agree (4)
  - Strongly agree (5)
- 

**Q9 Traditional professional development offerings (e.g.: in-services, conferences, etc.) can meet the professional development needs of my district.**

- Strongly disagree (1)
  - Disagree (2)
  - Neither agree nor disagree (3)
  - Agree (4)
  - Strongly agree (5)
- 

Q10 Please indicate your frequency of communication in the following questions:

**On average, how frequently do you communicate with your building level principals by email?**

- Multiple times a day (1)
  - Once a day (2)
  - Every couple of days (3)
  - At least once a week (4)
  - Less than once a week (5)
- 

Q12

**On average, how frequently do you communicate with your building level principals face-to-face?**

- Multiple times a day (1)
  - Once a day (2)
  - Every couple of days (3)
  - At least once a week (4)
  - Less than once a week (5)
- 

**Q11 When communicating with your principals (by email or face-to-face), what percentage of time do you spend on the topics listed below?**

	0%- 20% (1)	21%- 40% (2)	41%- 60% (3)	61%- 80% (4)	81%- 100% (5)
Professional Development for Teachers, Administrators, and Staff (1)	•	•	•	•	•
Classroom Management (2)	•	•	•	•	•
Cultural Diversity (3)	•	•	•	•	•
Curriculum Design (4)	•	•	•	•	•
Data Literacy (5)	•	•	•	•	•
Leadership (6)	•	•	•	•	•
Learner Diversity (7)	•	•	•	•	•

Instruction (8)	•	•	•	•	•
Research Methodologies (9)	•	•	•	•	•
Technology (10)	•	•	•	•	•

Q13

Please indicate your level of agreement with the following statements: Strongly Disagree, Disagree, Neither Agree nor Disagree, Agree, or Strongly Agree.

**IHEs in the State of Michigan should do more to help assess the effectiveness of teaching and learning in my district.**

- Strongly disagree (1)
- Disagree (2)
- Neither agree nor disagree (3)
- Agree (4)
- Strongly agree (5)

**Q14 IHEs in the State of Michigan should do more to assist with school community relationships.**

- Strongly disagree (1)
- Disagree (2)
- Neither agree nor disagree (3)
- Agree (4)
- Strongly agree (5)

Q15 The following four (4) questions will ask about the benefit of your district collaborating with IHEs in the State of Michigan.

Please indicate your level of agreement with the following statements: Strongly Disagree, Disagree, Neither Agree nor Disagree, Agree, Strongly Agree.

**My district can benefit by partnering with IHEs in the State of Michigan to increase:**

	Strongly disagree (1)	Disagree (2)	Neither Agree nor Disagree (3)	Agree (4)	Strongly Agree (5)
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The effectiveness of my faculty. (1)	•	•	•	•	•
Student success, as defined by my district. (2)	•	•	•	•	•
The number of students enrolled in my district. (3)	•	•	•	•	•
The number of pathways for students from my district to complete a postsecondary degree program. (4)	•	•	•	•	•

Q16 Please indicate your level of agreement with the following statements: Strongly Disagree, Disagree, Neither Agree nor Disagree, Agree, Strongly Agree.

**My district believes certifications and endorsements (not required for practice) are an important part of the professional development process for:**

	Strongly Disagree (1)	Disagree (2)	Neither Agree nor Disagree (3)	Agree (4)	Strongly Agree (5)
Faculty (8)	•	•	•	•	•
Staff (9)	•	•	•	•	•
Administrators (10)	•	•	•	•	•

**Q18 My district believes Master's degree programs are an important part of the professional development process for:**

	Strongly Disagree (1)	Disagree (2)	Neither Agree nor Disagree (3)	Agree (4)	Strongly Agree (5)
Faculty (8)	•	•	•	•	•
Staff (9)	•	•	•	•	•
Administrators (10)	•	•	•	•	•

**Q19 My district believes Education Specialist (Ed.S.) degree programs are an important part of the professional development process for:**

	Strongly Disagree (1)	Disagree (2)	Neither Agree nor Disagree (3)	Agree (4)	Strongly Agree (5)
Faculty (8)	•	•	•	•	•
Staff (9)	•	•	•	•	•
Administrators (10)	•	•	•	•	•

**Q20 My district believes doctoral degree programs are an important part of the professional development process for:**

	Strongly Disagree (1)	Disagree (2)	Neither Agree nor Disagree (3)	Agree (4)	Strongly Agree (5)
Faculty (8)	•	•	•	•	•
Staff (9)	•	•	•	•	•
Administrators (10)	•	•	•	•	•

**Q21 University and college professors in teacher education programs can learn from the employees (faculty, staff, administrators) in my district.**

	Strongly Disagree (1)	Disagree (2)	Neither Agree nor Disagree (3)	Agree (4)	Strongly Agree (5)
Faculty (8)	•	•	•	•	•
Staff (9)	•	•	•	•	•

Administrators  
(10)



Q22

Please indicate your level of dependence with the following statement: Not at all dependent, Somewhat dependent, Very Dependent, Extremely dependent.

**How dependent is your district on title funds to provide professional development for:**

	Not at all dependent (1)	Somewhat dependent (2)	Very dependent (3)	Extremely dependent (4)
Faculty? (8)	•	•	•	•
Staff? (9)	•	•	•	•
Administrators? (10)	•	•	•	•

Q23

Please indicate your level of extent in the following questions.

**To what extent is your district able to financially support the professional development needs of:**

	Very little (1)	Little (2)	Somewhat (3)	Great (4)	Extreme (5)
Faculty? (8)	•	•	•	•	•
Staff? (9)	•	•	•	•	•
Administrators? (10)	•	•	•	•	•

**Q24 To what extent does your district's ability to offer quality professional development impact your ability to attract and retain talent?**

- Very little (1)
- Little (2)

- Somewhat (3)
- Great (4)
- Extreme (5)

Q25 Please indicate your level of interest for the following question.

**My district is interested in pursuing external, non-governmental, grant funding for the purposes of professional development.**

- No interest (1)
- Little interest (2)
- Some interest (3)
- A lot of interest (4)
- Extremely interested (5)

**Q26 Please indicate your district's level of need for discipline specific training for your elementary faculty:**

	Very high need (1)	High need (2)	Some need (3)	Little need (4)	No need (5)
History (1)	•	•	•	•	•
Language Arts (2)	•	•	•	•	•
Math (3)	•	•	•	•	•
Reading (4)	•	•	•	•	•
Science (5)	•	•	•	•	•
Social Studies (6)	•	•	•	•	•

**Q27 Please indicate your district's need for improvement in the following areas:**

	Very high need (1)	High need (2)	Some need (3)	Little need (4)	No need (5)
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Managing inclusive classrooms (1)	•	•	•	•	•
Mental health (2)	•	•	•	•	•
Parent training (3)	•	•	•	•	•
School community relations (4)	•	•	•	•	•
Technology integration (5)	•	•	•	•	•
Test scores (6)	•	•	•	•	•

**Q29 How do you think IHEs in the State of Michigan can best collaborate with your district?**

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**Open answer:**