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RESEARCH ARTICLE

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THE LEADERSHIP CONTRIBUTION TO THE IMPROVEMENT AND DEVELOPMENT OF TEACHERS' PROFESSIONAL LEARNING

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ABSTRACT

An elevated significance on professional development (PD) has been a conspicuous component regarding the dissertation of education in correlation to the practice of teachers. The following paper portrays the effect of a collective PD drive on different teachers' ways of learning and teaching. The main aim of attention in this paper was the influence of PD and especially on the predominant controversies of leadership which arise on sustainability. This research specifies the devotion of leadership in order to make the practices in schools sustainable. This research paper takes the case study of a single school and analyses it in comparison with similar such studies conducted around the world, amongst other relevant studies, and asks how a collaborative PD impacts teachers, and by extension, their students. It looks to also identify if current PD practices are sustainable and how the most in-demand skill, leadership, contributes to this development. The study is a meta-analysis study. It was found that the teacher's teaching experience or credentials could not be used to segregate teachers in terms of ILD (independent learner development) understanding. A monotonous PD, no matter its duration, also could not contribute towards helping build this development (Early *et al.*, 2006). Instead, it was found that the common solution adopted throughout experimentation was to study control groups and identify variables that contributed most towards enhancing this development.

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INTRODUCTION

Variation in the assortment of our classrooms and the significance of the knowledge of teachers to enable these alterations is greatly involved with the presence of immense educational research capacity. Predominantly, a teacher PD desires to develop the results of students (Earley & Porritt, 2010) and promote progress in schools (Syed, 2008), in spite of the fact that it is tremendously challenging to form this relationship (Kratowill *et al.*, 2007). The problem statement defines the backbone of a research study, which is whether the leadership contributes to the improvement of teachers' development and practices from the teachers' perception. The purpose of this study is to identify whether or not leadership contributes to the improvement of teachers' development and practices from the point of view of the involved teachers. If yes, how does leadership impact this improvement? By analyzing a specific range of published research papers, books, and articles on this subject, we attempt to conclusively discern how to integrate and leverage leadership into the present and future professional development (PD) practices.

As this study seeks insights that focus on the perspective of teachers, this will be the deciding factor for drawing conclusions. This work focuses on different studies undertaken with different departments within different schools. The PD involves teachers from different sections in the schools, and see how this affect the performance of the teachers and the impact on students in the education process. For approaching the cycle of this research study was to first frame questions for review, the main research questions we want to answer throughout this study are:

- 1) What are the impact of collaborative PD sessions on teachers' teaching and learning?
- 2) What is the role of leadership in developing teachers' professional learning?

We hypothesize that conducting the collaborative PD (professional development) sessions by the subjects' coordinators to the teachers will affect the teachers' performance which in turn will affect the students' performance as well positively.

This will be due to the general human nature of being able to better process various aspects of a situation when experiencing a visual impact or play and break down of it in front of them. The interactive nature of these PD sessions further helps develop the work culture into one that is more innovative and conscious of being. Leadership in the midst of collaboration allows teachers to understand both from their own mistakes, fallacies, and choices, as well as those of their peers. In the present day, most schools have a collection of teachers that choose to exhibit behavior similar to that of individual workers rather than common resources which could produce better results if they collaborate and interact. Taking into consideration the fact that the purpose of professional development (PD) is to facilitate a learning environment for teachers where they can simultaneously learn, develop themselves, and introspect on the basis of their new learnings, it can be stated that as professional development is categorized as a learning environment, it has similar demands one can expect from a generalized study environment. Hence, the integration of leadership into this co-learning space is not only beneficial but essential to improving overall development.

The Significance of the Study: Professional development is not only an important part of teacher curriculum but a necessary one. By continuously providing teachers PD sessions where they are able to holistically or even systematically review their teaching style, changes in the industry, understand how the market is fluctuating in terms of the subjects they teach and others, is a method of pushing the teacher to become and teaching students to become market capable when they leave the classroom. Furthermore, this stresses the importance of not having stagnant teachers. The reason it is best to focus energy on the development of the current education system is owed to the fact that it is a newcomer in the country of UAE, a country that is rapidly setting benchmarks for countries around the world in terms of development.

Similar to how the school curriculum is designed to have maximum efficacy in terms of educating the students across all grades, the professional development (PD) curriculum must be catered towards teachers. By designing the curricula such that it maximizes impact not only on teachers but this impact can be seen carried forward in terms of better student learning, the purpose of professional development is completed (Good & Weaver, 2003).

METHODOLOGY

Literature research: The study is a meta-analysis study. We initially established authorization to place the publications Research criteria which would be used for the review, the articles have to be (a) published in authenticated journals in 1997 or later (b) has been focused on the role of leadership and teachers' development (c) has to be empirical or ostensibly experimental. Then we have put all the articles that match our criteria in two ways: First, the papers that were reviewed earlier on the significant role of leadership in teachers' progress were collected. Second, the educational resources were searched from 1997 to 2020 using the keywords: leadership, PDs, teachers' development. And last we get the results of these articles and get our conclusion out of it. A detailed array of research studies focusing on the subject of professional development (PD) for teachers were studied. They were selected by using Google Scholar as a search engine to

limit results to only scholarly articles and the keywords PD, professional development, teachers, collaboration, innovation, and learning. The time frame used to ensure that content is relevant and up to date is 23 years from 1997- 2020. This extended time frame also helped us analyze how professional development for teachers has improved and changed over the years, the degree to which it has been able to impact teachers—both beginner and experienced, and current fallacies in the methodologies utilized & overall design. The multiple variables that set these studies apart from one another were subject specificity, the objective of professional development, comparative analysis, effects of innovation in professional development, how collaborative PD can be profitable and utilized to facilitate teacher learnings for the implementation of new curricula, teaching styles, student learning styles, activities, and more. The research studies utilized to gain an in-depth understanding of the topic have been assessed in terms of the quality of the study. This was done by validating it against a series of questions. First, was this research study peer-reviewed? Peer-reviewed journal publications are subjected to stricter scrutiny than their non-peer-reviewed counterparts. This encourages authors to adhere to a high level of academic standard in terms of reporting data, drawing conclusions. How many times has it been cited? Does it ask important questions and provide the setting and is there a description of the population of interest, explanation of the process used to select participants, key definitions (concepts and variables), descriptive statistics for main variables, and analytic techniques. Second, are there any potential threats to the validity of the study?

Example: construct the adequacy of the measurement of the theoretical concept of the topic chosen by the researcher (West, 2019). Each study was compared against this rigorous set of metrics in the effort to maintain an academic standard quality of study for this research. These questions helped narrow down the material found relevant to the topic of study and further helped to maintain the accuracy and relevancy of the subject.

Literature Review

The UAE has developed and reinstated itself as a sustainable nation committed to the United Nations Sustainable Development Goals (UN SDGs). In doing so, it has realized the importance of an inclusive and innovative education system that is aligned with its vision for the federation. By focusing on skills that empower individuals to be able to understand and apply their in-classroom learning, the UAE has developed an education system that beats its counterparts which are more syllabus focused, hence, converting the education system into a learning process essential to educate the youth of today in matters that will allow them to become the leaders of tomorrow. Hence, professional development (PD) for teachers is an important area of focus. Professional development is required for teachers across all subjects, however, on analyzing various papers that focused towards professional development in categorical manners, i.e., science, math, humanities & arts, business, etc., it was found that math and science teachers, due to the complexity of the subject and comparatively lower support against pressure is provided for learning, there need to be specialized sessions for math and science teachers so that they may better understand the ILD objectives and implications (Wilson, 2013). Furthermore, teachers who collaborated to bring together ideas for a co-

1	Rosenfeld, M., & Rosenfeld, S., 2008	exploratory-descriptive and retrospective study	234 teachers	Interventionist beliefs of teachers about students (“By intervening, I can help a learner with difficulties”).	Professional Development (PD) course used for sensitizing teachers to ILD (individual learner differences) via five learning/cognitive styles tools was valid and reliable.	The duration of the professional development (28 hrs. vs. 56 hrs.) & the quantity of teaching experience were independent factors in determining and developing the teachers' interventionist beliefs about students	A mediated, collaborative, and constructivist professional development will be able to sensitize teachers towards ILDs (individual learning differences) and increase effective teacher beliefs about students (Rosenfeld & Rosenfeld, 2008).
2	Wilson, S., 2013	exploratory-descriptive and retrospective study	2 control groups	Interventions that take a systemic approach to reform hold promise for improving PD effectiveness.	The Next Generation Science Standards are reasonable and valid.	The factors associated with considerable developments in teacher practice & knowledge, along with students' science achievements must be further developed.	The U.S. educational system's complexity continuously prevents experts from identifying methods to support teachers. A reform or systemic intervention is required to overcome this (Wilson, 2013).
3	Hardin, B., & Koppenhaver, D., 2016	Survey Research design	267 teachers for grades 6 — 12	Design and develop new PD to increase teacher engagement and participation.	The teacher survey is based on the most popular (15) inquiries during PD.	Flipped model results in 50% expenditure decrease, and majority approval from engaged teachers.	A flipped model was identified to be a better model design for professional development due to its integration of both online resources and face-to-face. This further allowed teachers to concentrate without the interruptions faced in conventional PD environments.
4	Gibson, S., & Brooks, C. (2012)	exploratory-descriptive and retrospective study	In the 2009-10 school year, elementary teachers in a Canadian school district were handling the implementation of a new curriculum for social studies. This move came 3 to 5 years after the school had a formal experience of a district-level professional development program.	Effectiveness of locally designed PD programs in the implementation of a new curriculum.	The study is done after 3 to 5 years, post establishment of a program for professional development. By utilizing this time gap, this study is valid and reasonable.	There is a need for a more intentional focus on the use of technology in order to expand digital networks to enhance future PD curricula change programs.	For professional development to be effective, it must be based on teachers' needs; involve active learning, collaboration, and modeling; be supported by a culture of learning in schools; and considerate of teacher resistance to change.
5	Fitzgerald, M., & Theilheimer, R. (2012)	Survey Research design	Three participating programs, Aster, Begonia, and Crocus Centers. Each of these programs employed approximately 30 to 68 teachers & assistants at multiple branches. Out of the 104 teachers approached, 67 teachers responded.	Understand what teachers want from professional developmental activities.	The study conducted involves 3 top rank Head Start programs which keep the study valid and reasonable.	There is a need for a shared philosophy amongst the staff members, healthy relationships, and trust amongst colleagues for the smooth operation of the teaching unit as a whole system rather than individual members.	Specific strategies can help foster supervisory support, clarity of policies and procedures, and staff autonomy. This, in turn, helps enhance the professional development program and its efficacy as observed in top-class programs. The creation and maintenance of programmatic mechanisms through which staff members are able to communicate with each other provide clarity and support. Leadership is clearly an important factor here (Fitzgerald & Theilheimer, 2012).

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6	Good, J., & Weaver, A. (2003).	Survey Research design	112 teachers	In-service centers are responsible for maintaining professional standards amongst currently employed teachers.	Data from the National Staff Development Council is valid and reasonable.	Even within the constraints of a professional development center, it is possible to continue to develop skills and remain updated as long as there is a disciplined manner of approach.	Professional development is an essential parameter for retaining high-quality teachers. Though this may provide to be a challenge with current practices, it allows teachers to remain updated with current standards (Good & Weaver, 2003).
7	Coenders, F., & Verhoef, N. (2018)	exploratory-descriptive and retrospective study	Two high school teacher teams participated, chemistry & a multidisciplinary team of one experienced & one beginner teacher.	Teachers from both teams went through 5h the Lesson study cycle twice.	The Extended Interconnected Model for Professional Growth is valid and reasonable.	Lesson Study contributed to both experienced & beginning teachers' PCK development.	The combination of two phases of the study: <i>development phase</i> where participants are introduced to and interact with new pedagogies, participate in discussions that focus on the students' perspective of learning, design, and prepare a lesson plan for class usage. This is to be followed by a <i>class enactment phase</i> where the enactment of the designed lesson takes place, observation of students occurs, and the subsequent salient results are discussed with a revision to the lesson plan (Coenders & Verhoef, 2018).
8	Kazemi, E., & Hubbard, A. (2008)	exploratory-descriptive and retrospective study	N/A	Coevolution of participation between classroom practice and PD	The examination is based on quantitative & qualitative research done by other researchers.	The current unidirectional outlook of evaluating the efficacy of professional development to teachers, i.e., in terms of teachers' perception is incomplete. This evaluation needs to be multi-variable in order to address each aspect of the professional development curriculum design.	It is the need of the hour to study and understand how teachers comprehend primary artifacts, depictions, & enactments in the context of professional development and how their participation in both their classroom and PD co-evolves over time in order to improve upon the design (Kazemi & Hubbard, 2008).
9.	Early, D., Bryant, D., Pianta, R., Clifford, R., Burchinal, M., & Ritchie, S. <i>et al.</i> (2006).	exploratory-descriptive and retrospective study	237 pre-kindergarten classrooms with more than 800 children were randomly selected among 6 states that had well-established state-funded pre-kindergarten programs.	The association between teachers' education, major, and credentials with classroom quality or children's academic gains.	Data from the National Center for Early Development and Learning's (NCEDL) Multi-State Study of Pre-Kindergarten is valid and reasonable.	There is some link in terms of measures of education, classroom quality, and children's outcomes, however, this link is not substantial enough to be further pursued.	Gains in children's math skills across the pre-k year are linked to the teacher's education (regardless of its operationalizing) and the CDA credential is linked to children's gains in basic skills; however, education, training, and credentialing are not consistently related to classroom quality or other academic gains for children (Early, <i>et al.</i> , 2006).

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10	Bowman, B. T. (1989)	exploratory-descriptive and retrospective study/causal study	N/A	Implications and impact of self-reflection as an element of professionalism.	The database from the American Psychological Association is valid and reasonable.	Self-reflection or introspection is important for a teaching professional to develop themselves and their teaching skills.	A combination of personal and scientific knowledge is crucial for sound professional practices especially in terms of early childhood education. There is an utmost need for empathy, subjective understanding, compassion, and self-knowledge in the professional education of reflective practitioners.
11	Grossman, P., Wineburg, S., Woolworth, S. (2001)	exploratory-descriptive and retrospective study	22 English & social studies teachers (along with a special education & ESL teacher) were surveyed over 2 1/2 years. They were chosen from an urban high school.	Creation of an interdisciplinary curriculum through a professional development project model for the teacher community in the workplace.	The authors' experience in tandem with that of the schools is valid and reasonable.	The model of the professional community highlights the relationship between teachers' opportunities to engage in rich discourse and provide similar opportunities for all students.	Cultivating communities of learners among teachers can re-culture high schools by creating a valuable creative space where ideas matter to both students & teachers. When Students observe teachers engaging in the same activities—reading and discussing the text, they will understand it is more than a syllabus to be completed. This also facilitates teaching standards amongst all teachers (Grossman, Wineburg, Woolworth, 2001).
12	Lefstein, A., Vedder-Weiss, D., & Segal, A. (2020)	exploratory-descriptive and retrospective study	N/A	Attention towards daily informal conversation which is embedded deep into work. This will aid in the identification of how teachers learn from one another in unseen ways.	The qualitative method of studying a wide range of published research articles on the same is valid and reasonable.	There is a need for the creation of a coherent conceptual framework for teacher talk that is pedagogically productive.	The education field needs to pay more focused & systematic attention to teacher on-the-job discourse as well as learning outcomes based on internal (teacher) teachings rather than external teachings (Lefstein <i>et al.</i> , 2020).
13	Tegos S., Demetriadis S., Karakostas A. (2015).	exploratory-descriptive and retrospective study	43 students collaborated in small groups to accomplish 3 different tasks.	Create communicative interventions to facilitate dialogue and expressions.	The prototype CSCL system with LC mode interventions is a valid and reasonable model to work with.	By creating communicative interventions that serve to facilitate explicit reasoning and thus, more productive dialogue, it is possible to increase performance.	The use of a conversational agent in facilitating communication amongst peers and teacher-student is pivotal to deciding how a student excels (Tegos, Demetriadis, Karakostas, 2015).
14	Dudley, P., (2013)	exploratory-descriptive and retrospective study	3-4 case pupils from each class, 4 teachers from two LS groups	Facilitate discourse in order to create a collaborative approach to lessons and focusing on pupil learning rather than that of teachers'.	The recorded observation sessions of teachers during discourse regarding Lesson Study plans are valid and reasonable methods of data collection.	Social and cultural capital resources and vivid data from research lessons were combined. This resulted in the creation of motivating conditions enabling collective access to imagined practice and joint development of micro-practices.	Teaching and pupils' learning is improved upon when discourse interactions about teacher learning in Lesson Study (LS) contexts as teachers plan and discuss research lessons take place (Dudley, 2013).
15	Bredeson, P. (2000).	exploratory-descriptive and retrospective study	48 structured interviews were conducted with teachers, other school administrators, & principals on the role of school principals in the professional development of teachers.	Principal support for teachers' learning in schools	The survey method is valid and reasonable as all variables are clearly defined and outlined.	It was determined that school principals exercise a significant influence on teacher professional development.	Principals, as busy administrators, have the opportunity to create substantial impact towards teacher learning in schools by (1) acting as an instructional leader & learner; (2) creating a learning environment; (3) direct involvement in the content, design, & delivery of professional development; & (4) examination of professional development outcomes (Bredeson, 2000).

curriculum or even main curriculum that would be a new design can better provide students a holistic learning environment. Additionally, this also helps the teachers improve upon themselves and think in a nuanced manner. This will help them create an enriched learning environment for all students regardless of learning type, disability, and more.

Evidence Summary: To accurately depict the evidence taken from supporting research publications & books, we created an evidence summary:

DISCUSSION

Interpreting Data: Professional development is an umbrella term used for describing any activity that helps educators reflect upon their teaching methods and growth as teachers. This is inclusive of a range of activities such as workshops, one-on-one conversations, and even clean up days. Professional development that supports responsive relationships amongst teachers facilitates the ideal learning environment for maximizing the impact of leadership skills. The learning cycle is interactive, consisting of a balance between both practice and knowledge. This is especially important for teachers that introduce concepts to students earlier on in the learning stage. The principle must further have a complete understanding of professional study and dispositions stemming from cumulative classroom observation and direct engagement in teaching. The key findings from the multiple articles, studies, and books that were cross-referenced for the duration of this research study are that a collaborative environment is not only healthy for learning but essential for understanding key takeaways that may otherwise be blind sighted due to the design of curriculum, environment, and lack of teacher engagement with peers (Bredeson, 2000). In its many forms, professional development (PD) can afford to bring an opportunity to the table for members of the teaching staff to learn together. In doing so it purposely builds inter-team relationships.

Conclusion

I found that the teacher's teaching experience or credentials could not be used to segregate teachers in terms of ILD (independent learner development) understanding. A monotonous PD, no matter its duration, also could not contribute towards helping build this development (Early *et al.*, 2006). Instead, it was found that the common solution adopted throughout experimentation was to study control groups and identify variables that contributed most towards enhancing this development. These variables were identified to be a collaboration, analysis of salient results from application, subject address of literacy learning & instruction for their subjects, and interruption-free learning. Teachers set an example for their students. By exhibiting behavior that insinuates a blatant dislike or lack of interest for their job, educators, especially teachers, teach the students to similarly lack excitement. A good teacher is priceless simply because their enthusiasm can make the dulllest of subjects seem exciting. However, this seemingly effortless task takes much more effort than is visible at first glance. It involves clearly understanding student behavior, facilitating communication amongst peers, teachers, and student-teacher, value creation, and more. By immersing themselves and creating an inclusive learning environment, teachers are able to similarly immerse

their students in the learning of the subject rather than the rote memorization often required to understand multiple theories (depending greatly based on the grade level of a student). This excitement is not limited to face to face teaching, rather, much like any other skill requires introspection, excellence, enthusiasm, skill, and more, Leadership can further facilitate the creation of programmatic mechanisms for communication which fosters communicative clarity, teamwork, and more. By doing so, teachers will understand quite quickly what they think of and process in terms of daily basis teaching. In turn, this encourages the teacher to improve and redesign the teaching methods. A prime example of this is the popular online science educator, Bill Nye. He is advertised by how understanding he is of the long term benefits of understanding how chemicals to function. He is depicted as an elementary students' teacher who enjoys bringing his knowledge to the table. The interest he generates compared to that generated by a teacher coming into class everyday will quite obviously share a difference. To overcome this, however, it is possible to create a friendly environment for teachers so that they are able to pass on this genuine or portrayed interest in the subjects they teach. By focusing on the maintenance of an academic standard in terms of teaching practices and methods for teachers in a manageable manner, schools will see children outperforming themselves due to the broader understanding the teachers will be able to show towards students. This patience and enthusiasm will encourage students to work harder to gain a similar satisfaction or happiness from the subject as the teacher is. If nothing else, the subject is at least considered to be taught well, despite the import of external validating factors.

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