

Impact of Faculty Development Centres (FDCs) on teaching-learning skill of teachers: A Methodological Review

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Abstract

Policymakers are facing a critical challenge with regard to teacher training due to the evolving needs of today's classrooms. So, whether they are primary, secondary, or post-secondary schools of learning, Faculty Development Centres (FDC) are crucial. FDCs help to address the ever-changing demand for education. Additionally, they are designed to fulfil the faculty's duty to change society for the better through ongoing education. Since education and learning are holistic endeavours, inadequate exposure to the FDC results in educational failures, and inadequate coverage of the various FDC activities' dimensions results in subpar target achievement. Any educational institution can succeed with high-quality instruction as well as an enhanced organisational structure and learning environment. Studies have shown that there is significant impact of Faculty Development Centres (FDCs) on teaching-learning skill of teachers in terms of variables, namely, Teachers' Professional Development, Self-Efficacy and Teaching Competency. The research paper presents the methodological review and summarizes the research methods used by the researchers to determine a relationship among these variables.

KEYWORDS: Self-Efficacy, Teaching Competency, Professional Development, Faculty Development Centre.

Introduction

The "idea and practice of promoting increased faculty performance in a range of dimensions, including institutional, intellectual, personal, social, and pedagogical," is "faculty development"(AAHE). The quality of education depends on the quality of instructors and the teacher education system and therefore, professional development opportunities are crucial. It takes time and effort to improve the teacher education system's institutional efficacy. A new viewpoint on teachers' development is needed due to recent breakthroughs and modifications (Kaushal & Tagore, 2017). The purpose of this paper is to describe the research methodologies utilized to examine teachers' professional development, self-efficacy, and teaching competency and their relationships.

Literature review

Research on teacher self-efficacy, competency, and professional growth has focused on elementary and secondary school teachers. In a more focused analysis of teacher efficacy among college faculty, educators reported higher levels of teaching efficacy and competency than private university educators and public university educators than

educators at other disciplines (Chang et al., 2011). When a professor doesn't feel prepared to teach, they may doubt themselves (Cl, 2007). Some academics are overwhelmed by the pressure to be "excellent" teachers. Academics believe that mastery and being influenced by others are the biggest factors in confidence (Morris & Usher, 2011).

A Methodology Review:

1.1 Self-Efficacy

Rowbotham (2015) conducted the study through sending emails to pick a representative sample of full-time professors at a Midwest master's university for a self-selected two-group pre and post-test quasi-experimental design. By email, a full-time faculty control group was recruited. Data from the intervention group was collected at the first meeting using the Teacher Self-Efficacy (TSE) scale (Schmitz & Schwarzer, 2000), the Self-Assessment of Teaching Competencies (SATC, Melodie A. Rowbotham), and the Instructional Perspective Inventory. Surveys were again conducted at the end of the academic year for the second data point. The study was validated by instructors' assessments of the program's value and impact on classroom confidence and satisfaction. The researcher used an open-ended questionnaire to collect these numbers. This study examined how a faculty development program affects teachers' self-perceptions, professional development, and classroom satisfaction.

No significant differences were seen in scores over time or between groups, however the control and intervention groups and pre- and post-mean scores were statistically significant. In other words, neither the general nor group levels of teacher self-efficacy improve, but a faculty development program can affect how faculty members feel about teaching and raise it. In addition to intervention group qualitative survey responses, literature supports these findings (Persellin & Goodrick, 2010; Trower & Gallagher, 2010; Cl, 2007). These data confirm Bandura's (1997) self-confidence origins theory. Faculty members observed effective teaching (social modelling), discussed their own teaching methods (social persuasion), and, most importantly, helped their students to have a positive experience (emotional and physical reaction). This study found that faculty development can improve both measures since intervention group teachers reported stronger self-efficacy than control group teachers.

Ball (2011) examined instructors' collective, individual, and self-efficacy characteristics. The study was carried out in metropolitan periphery school district in San Antonio, Texas. The researcher collected data from 714 teachers. The goal was to examine teacher efficacy, trust, and collective efficacy in relation to the district and campuses to inform mentoring programming and development/retention of novice or experienced teachers in this urban fringe school district. This study combined the Teachers' Sense of Efficacy Scale (TSES), Omnibus T-Scale (OTS), and Collective Efficacy Scale (CEScale) into a single 81-item survey. The Omnibus T-Scale subscales of trust in the principal, colleagues, clients, and collective efficacy between schools, as well as student engagement, instructional strategies, classroom management, and the Teachers' Sense of Self-Efficacy Scale, were examined using a multivariate analysis of variance. The dependent variables vary per school. However, later research showed that all schools except one had a higher faith in student performance score than 84% of the standardized school sample. Teacher survey responses on principal trust, client trust, and group efficacy varied by gender. Trust was above average, self-efficacy below, and collective efficacy typical.

Pan (2014) examined how gender, socioeconomic background, and academic preparation affected Madrasa teachers' self-efficacy, professional competency, and interactions. The sample includes 200 randomly selected West Bengal madrasa instructors. The sample is divided by gender, socioeconomic status, and education. Data analysis uses descriptive and inferential statistics. The Passi and Lalitha (1994) general teaching competency measure evaluates teachers. Rating scale has 7 points. 21 objects are in the tool. Instructor self-efficacy is assessed using Schwarzer et al.'s measure (1995). Teacher self-efficacy and professional competency vary by gender, socioeconomic level, and academic background, the study found. Male teachers are more skilled and effective than female ones. The study found that instructors with greater experience (over five years) have stronger self-efficacy and professional competence. A substantial association was found between Madrasa instructors' professional competency and self-efficacy. The findings of this study help managers and educational

administrators evaluate instructors' teaching-learning processes.

Bhullar (2019) investigated how secondary school teachers' self-efficacy affects their teaching. The Teacher Efficacy Scale (TES) and General Teaching Competence Scale (Passi & Lalitha, 2011) were administered to 200 Amritsar secondary school teachers. Secondary school teachers' self-efficacy and teaching competence were examined using a descriptive survey. The study's goals were to assess secondary school teachers' proficiency in light of the institution, investigate their self-efficacy, and examine the relationship between self-efficacy and instructional proficiency.

The results showed significant disparities in secondary school teaching ability and self-efficacy between government and private schools. Secondary government school instructors had lower self-efficacy and teaching competency than private school teachers. Additional research shows a strong positive correlation between secondary school students' teaching proficiency and self-efficacy. Teacher self-efficacy was substantially correlated with instructional presentation, closure, and performance. Secondary school teachers' self-efficacy is minimally correlated with administration, pre-instructional planning, and teaching skill.

Noben et al. (2021) utilize mixed methods to assess how a five-year professional development program for university teachers changed their teaching and self-confidence. For the quantitative investigation, participants completed pre and post-surveys. The pre-survey used the Teachers' Feeling of Efficacy Scale (TSES) (Tschannen-Moran & Hoy, 2001), which has 26 questions on a 7-point scale from "not at all certain" to "absolutely certain." A dependent sample t-test was performed using Rstudio version 1.2.5033 to compare participants' self-evaluations before and after the program. These polls show that the program increased participants' confidence in their talents. Ten participants completed the qualitative component, which included three reflection assignments and an interview. Teachers have a dominant vision of teaching at all three stages, and in over half of the subsample, this vision moved from teacher-focused to learner-focused. Over time, students' perceptions of their ability and the teaching process have gone through three stages of growth. Educators can grow in three ways: growth, which involves an increase in self-efficacy and a shift toward student-focused teaching; confidence, which involves an increase in self-efficacy but no change in teaching; and no development. However, educators along the three growth routes were similar. Professional development workshops did not improve teaching skills for instructors who were confident in their abilities.

Postareff et al. (2007) examined how pedagogical training for Helsinki University professors affected teaching approaches and self-efficacy beliefs (measured by Approaches to Teaching Inventory and motivating strategies). 200 teachers in the study were classified into four groups by pedagogical training. Keith Trigwell and Michael Prosser created the Approaches to Teaching Inventory (ATI). Sari Lindblom-Ylänne, Paul Ashwin, and Keith Trigwell created the second inventory addition. Instructor control techniques and motivation to teach are examined. All scales use 5-point Likert scales. A two-way ANOVA with a main effect model was used to determine the influence of pedagogical training on each scale, holding teaching experience constant. Results showed that pedagogical training affected conceptual transformation, student-focused approach, and self-efficacy beliefs. The study found slight changes to teaching approaches and self-efficacy views. Before benefits appear, training takes at least a year. Shorter training seems to worsen teachers' confidence issues. After controlling for teaching experience, the results still showed pedagogical training's distinct benefit.

Boeve-de Pauw et al. (2022) conducted a longitudinal quantitative study at four compulsory schools in a Swedish municipality to see how teachers' self-efficacy and instructional practices evolved for education for sustainable development. The teachers received ESD lesson plan materials throughout a three-year professional development program. The curriculum included five sessions to help instructors comprehend ESD concepts, intricacies, and obstacles. The study was tried to answer whether - over time, ESD professional development affect teachers' self-efficacy; improvements reported by teachers in their ESD practices after participating in the ESD professional development program and whether ESD-related instructional practices affect educator self-efficacy over time.

A questionnaire was administered at five intervals, carefully timed to coincide with program milestones. Teachers'

ESD self-efficacy and practices were assessed in the questionnaire. Instructors' confidence in teaching sustainable development was assessed using a 12-item, 5-point scale. The scale was 1 = disagree, 2 = slightly disagree, 3 = agree nor disagree, 4 = rather agree, and 5 = agree. The association between instructors' ESD self-efficacy and self-reported ESD practices increased during training. These findings emphasize the necessity for continued ESD integration opportunities for teachers. The findings warn against using self-efficacy as an outcome metric in premature professionalization efforts.

Ibrahim (2018) examines self-efficacy beliefs and science inquiry teaching effectiveness in Malaysia. The SETSIS self-efficacy measure for educators utilizing scientific inquiry skills was created and validated in this thesis. Knowledge efficacy (KE), personal teaching efficacy (PTE), and result expectancy belief comprise this study's conceptual framework. KE symbolizes scientific research certainty. Using science inquiry expertise and knowledge to support process-content education, the KE scale measures self-confidence. The concept of "personal teaching efficacy" (PTE) measures a teacher's confidence in using scientific inquiry methods in the classroom. OBE scale measured pre-service teachers' belief that stimulating pupils' scientific curiosity will boost classroom performance. A multi-method research methodology created the 72-item, 5-point SETSIS instrument. SETSIS was piloted in Malaysia with 325 aspiring teachers from 13 teacher training programs using a cross-sectional survey. All three components contributed significantly with reliability coefficients above 0.9, according to factor analysis. The SETSIS met item discrimination, dimensionality, validity, and the Rasch rating scale model, however it needs harder affirmative items to identify high self-efficacy levels. The models to predict sample knowledge and teaching practice performance were established, although modest correlations were validated by concurrent validation using an independent knowledge exam and teaching practice rating. Utilizing the three SETSIS criteria, the findings suggest new teacher self-efficacy concepts for pre-service teachers. The SETSIS components help measure pre-service teachers' belief component in teacher education, according to empirical research. The study reveals that these criteria can be used in different ways to evaluate student instructors' topic knowledge and teaching skills.

Naqvi's (2014) dissertation examines self-efficacy and its implications on teachers, students, and context-based teaching and learning. A private institution in Lahore, Pakistan, uses case studies and qualitative methods to evaluate instructor and student self-efficacy. Over 16 months, this study collected data from in-depth semi-structured teacher interviews, student focus groups, and classroom observations. The study examines teacher and student perceptions using methodologies and sample triangulation. Both teachers and students benefit from self-efficacy, according to the study. Teachers with high self-efficacy are more resilient, competent, and determined. These beliefs can boost pupils' self-efficacy, making them more productive and instilling the same traits. Current higher education teaching and learning environments are characterized by the reciprocal effect of teachers' self-efficacy on students'. The learners' experiences show that self-efficacy improves learning. Positive self-efficacy sources outnumber negative ones. Though negative influences affect teachers and students, their resilience keeps them dedicated and goal-focused. Thus, self-efficacy aids instruction and learning in the scenario.

Yang (2020) examines teacher self-efficacy and professional development in the US. TALIS's goal is to provide full classroom conditions data from 34 partner countries. This quantitative international survey of middle school teachers and administrators (OECD, 2013) is extensive. This study found that professional development boosts teachers' self-efficacy. This approach relies on adult learning and social cognition. TALIS estimates classroom management, instruction, and student involvement using the TSES's 12 components. The teacher self-efficacy variable combines these three subdomain variables. Four four-point scale components make up the sub-construct. Data is analyzed using Bayesian Hierarchical Linear Modelling and a prior distribution from an international dataset. This study found that teacher self-efficacy rose with PD experience, even after controlling for major individual and school-level factors. Common PD forms including classes, workshops, seminars, and conferences do not fit these definitions. Teachers in small towns benefit more from professional development than those in large cities. This study may influence rural school policy to address issues. Quality professional development for educators may increase educational quality, teacher retention, and student outcomes in rural and remote schools. Well-designed programs may assist instructors improve their skills and help solve rural education problems through focused policy.

Emin Türkolu et al. (2017) investigated whether instructors' self-efficacy and job satisfaction were related. The poll comprised 489 elementary, middle, and high school teachers from Istanbul's Beyolu neighborhood. 39% and 61% were men, 194 and 295 women. The average participant age was 34. Their teaching experience ranged from 1 to 29. Balç created the Administrator's Job Satisfaction Scale to assess school administrators' job satisfaction. The 6-dimensional, 27-variable scale assesses instructor job satisfaction. A 5-point scale ranges from "(1) Strongly disagree" to "(5) Strongly agree". The measure considers employment quality, compensation, promotion chances, working conditions, interpersonal interactions, and organizational setting. They found that teacher self-efficacy predicted job satisfaction and the strong positive correlation between the two.

2.1 Competency

Teacher competency is an integrated combination of character traits, subject matter knowledge, abilities, and attitudes needed for effective performance in various educational settings. Few studies in Iranian EFL have examined the effects of instructors' capacity to create classroom practices and procedures. Sazideh et al. (2019) used Structural Equation Modelling (SEM) to model the motivational variables affecting Iranian EFL teachers' ability. The study aimed to understand if - the model of motivating variables of ELT instructors' ability fit indices meet expectations based on data from several Iranian EFL teachers; is motivation related to EFL teachers' ELT competence and the motivational factors that best predicts Iranian EFL teachers' ELT proficiency.

The study included 197 EFL teachers from Hormozgan province, Iran, who took a teacher competency test, a self-efficacy scale, and a classroom self-regulation questionnaire. The Pishghadam et al. (2011) teachers' competency test assessed EFL instructors' efficacy. The 61-item test covered skill instruction, evaluation and testing, classroom teacher behavior, and first- and second-language acquisition theories. The variables were well-correlated with teachers' skill, and the model fit well. The Tschannen-Moran et al. (1998) Teacher Self-Efficacy Scale (TSES), which has been shown to be reliable, was used to assess instructors' self-efficacy (Klassen et al., 2009). The study assessed teachers' self-regulation using CapaAydin et al. (2009)'s Teacher Self-Regulation Scale (TSRS). Self-regulation improved competency significantly, while self-efficacy improved it little. Instructor competence is best predicted by instructional approach (self-efficacy subscale) and intrinsic interest (self-regulation subcomponent).

De Juanas Oliva et al.'s (2009) study examines the competencies that a large sample of Spanish primary school teachers (ages 6–12) consider essential to their professional performance and use in their daily instruction, as well as how well their academic preparation prepared them for their professional development. The study's objectives are to identify and analyze the professional skills that seasoned and novice primary teachers consider essential for success. To compare new and experienced instructors' professional competence ratings. The study found that initial teacher education programs should emphasize time management, using new technologies in the primary classroom, involving parents, teaching values, and developing social and collaborative skills. Training should be focused on theory and practice to help build and apply professional skills and create close collaboration between teacher trainers and experienced teachers.

A school's and students' success depends on qualified teachers. Phin (2014) examines Cambodian educators' views on teacher competency and educational standards and teacher quality and professional development. When creating the survey's questions, teachers' professional knowledge, intense passion for teaching, working environments, professional skills, and use of a variety of student-centered teaching strategies were considered. The notification states that most higher-ranking officials have taught at any level. The results showed that respondents (a) understood and explicitly stated that competent teachers help student learning and promote education quality, and (b) understood the importance of in-service training for boosting teachers' career confidence and winning public respect and trust. This survey found Cambodian teachers value their work. They want to improve their abilities through ongoing training and education. Therefore, they need a meaningful and efficient in-service training paradigm.

Zhu et al. (2013) created and tested a tool to evaluate teachers' core competencies related to innovative teaching, examined the relationship between core competencies and innovative teaching performance, and examined the

relationship between school environment and innovative teaching performance. Four skills—learning competency, educational competency, social competency, and technical competency—are essential for innovative teaching, according to literature and previous studies. 200 teachers from six Beijing secondary schools participated in the study. The teachers taught arithmetic, linguistics, English, physics, chemistry, politics, geography, and biology. The study assessed instructors' core skills and innovative teaching efficacy. The items required Likert-scale responses from teachers. Correlation and regression study explored the relationship between creative teaching competencies, teacher background variables, school environment factors, and innovative teaching performance. The results show that instructors' educational, social, and technological competencies negatively affect their innovative teaching efficacy. The study shows that instructors need peer support to apply innovative teaching practices. The proven four-factor model of core competencies for innovative teaching can guide future study. This study also suggests that creativity may be taught. Creative teaching is essential to educational innovation. As this study suggests, encouraging the requisite competences can improve teacher education curricula.

Alkan and Erdem (2012) examined aspiring chemistry teachers' teacher self-efficacy and subject-matter competency. The research team includes 122 Hacettepe University Faculty of Education chemistry teacher candidates. The Gunes, Kayak, and Yamak (2011) Chemistry Special Field Competence Assessment tested chemistry teaching applicants' topic knowledge. The 119-item scale measures chemistry, information, and field knowledge. Tschannen-Moran and Hoy's "Teachers' Feeling of Efficacy Measure," translated into Turkish, was tested by Capa, Cakiroglu, and Sankaya (2005). Research shows that chemistry teacher candidates' self-confidence is positively correlated with their subject matter expertise.

Omar (2017) investigated how professional development activities affected English instructors' confidence. A survey study randomly handed 40 questionnaires to 40 secondary school teachers in Kuala Terengganu, Malaysia. The study was aimed to analyse the impact of professional development on in-service English teachers and if professional development programs improve English teachers' skills. SPSS was used to analyze questionnaire quantitative data. After professional development, "Study of English content" had the greatest impact on English teachers' teaching competency, while "Realism-Use of real objects" had the lowest mean and did not significantly affect teachers' competency. According to the study, teachers profit from professional development, learn new material, and exhibit creative language teaching approaches. They thought professional development improved their English teaching.

3.1 Development of Professionalism

The South African evaluation system, the Integrated Quality Management System (IQMS), affects teacher professional growth, according to Mahlaela (2012). In this qualitative case study, IQMS was examined in teacher professional development at three secondary schools in Limpopo's Capricorn District. To evaluate instructors thoroughly, the IQMS uses a standardized performance evaluation method including formative and summative tests. The tool allows instructors to self-evaluate and have them confirmed by a Developmental Support Group (DSG) of the department head and a peer (Republic of South Africa Department of Education, 2003). Teacher assets and development areas were also listed. Researchers used a case study method to learn about participants' IQMS and career advancement opinions. Male or female educators of any age, devoted or uncommitted, young or old in the teaching profession were eligible. In-depth interviews with four instructors from each school were the main data collection method. A predefined list of questions about the interviewee's evaluation and development experience guided the semi-structured interview. Inefficiency was found to be related to the school's culture, the program's development, and its impact on student accomplishment. If instructors could learn how to use IQMS, all areas would improve.

Gibbs & Coffey (2004) profile 22 universities from 8 nations for their research on university teacher training efficacy. A training group of teachers and their pupils was evaluated at the start and one year afterward. The same investigation was done on untrained new teachers in the control group. Three metrics show changes over time: students' assessments of their teachers are based on the Module Experience Questionnaire (MEQ) "Good

Teaching" scale and six measures from the Student Evaluation of Educational Quality questionnaire (SEEQ); teachers' self-described teacher- and student-focused teaching strategies are based on two ATI scales; The authors validated six SEEQ scales for UK use (Coffey and Gibbs, 2000). Skills scales include enthusiasm, organization, rapport, group interaction, breadth, and student learning. A common questionnaire question is used to illustrate each scale. The Module Experience Questionnaire (MEQ), based on Australia's widely utilized Course Experience Questionnaire (Ramsden, 1991), was the second questionnaire given to students. The MEQ's three scales with example items are: Excellent shallow, deep, and wide teaching methods. Student instructors were given the Approaches to Teaching Inventory (Trigwell). Gibbs and Coffey approved this survey for UK usage. The ATI measures teacher- and student-centered instruction frequency. Example: student and teacher attention. The untrained control group teachers demonstrate no change or negative changes, according to the article. The report shows many favorable changes in the training group's teachers and pupils.

Standardized curriculum is often used in in-service teacher professional development (PDs). Teachers in different subjects use different teaching styles, therefore their demands and expectations may vary. Muslu et al.'s (2022) study creates a tool to assess in-service teachers' professional development expectations. An exhaustive literature review and the writers' on-the-ground observations formed themes concerning instructors' PD expectations. The final measuring tool was a 51-item, 5-point Likert scale with 1 = Strongly Disagree, 2 = Disagree, 3 = Undecided, and 5 = Strongly Agree. 322 Turkish instructors taught various courses online using the technology. To verify instrument construct validity, exploratory factor analysis was performed on the dataset. The investigations identified 49 aspects and 6 dimensions—support, practice, learning, student achievement, organization, and career. Individual items' Cronbach's alpha internal reliability coefficient is 0.94 in the final instrument. These findings demonstrate that the measure is trustworthy and valid for measuring instructors' theme-specific professional development expectations. This tool helps to determine how well current PDs meet instructors' standards and investigate their expectations for planning PDs.

Yoo (2016) examines how professional development affects teachers' efficacy and how they evaluate these changes. 148 teachers and school educators took an online professional development course. Tschannen-Moran and Woolfolk Hoy created the Teachers Feeling of Efficacy Scale (TSES) in 2001. It has three subscales: Instructional Techniques, Student Participation, and Classroom Management. The Likert scale grades 24 things from 1 to 9, with 1 meaning little and 9 meaning a lot. The Tschannen-Moran and Woolfolk Teachers Self-Efficacy Scale (TSES) (2001) was used to assess teacher effectiveness. The objective was to analyze the effect of online professional development on teachers' effectiveness.

The five-week online professional development program was divided into weekly courses to allow participants to obtain insightful feedback from their coaches. A paired T-test and one-way ANOVA were performed on three dimensions of teacher efficacy (instructional strategies, classroom management, and student engagement) along with years of professional experience, grade level, and sex. The constant comparison approach (Glaser & Strauss, 1967) was utilized to examine participants' efficacy change self-descriptions. The research shows that teachers' professional development improves their efficacy. The descriptive self-analyses of teacher efficacy in this study likewise showed a favorable relationship between new information and instructor efficacy.

Jakhaia's (2018) quasi-experimental explanatory sequential mixed-methods study examined Georgian ESL instructors' writing teaching perceptions after a 25-hour professional development program. It examined teachers' writing philosophies, instructional self-efficacy, and professional growth. Teachers who wanted professional development were selected from a convenience sample. Teacher efficacy was employed to collect quantitative data. Instructor assessments of program results were examined using semi-structured efficacy questions to supplement the data. Teachers' self-efficacy as instructors was assessed using the updated Teacher Efficacy Scale (TES) and in-depth interviews. This study found that teachers who participated in the 25-hour professional development course showed higher self-efficacy in addressing students' writing challenges, teaching writing skills, and assessing writing tasks.

Othman and Masum evaluated the professional development (PD) activities of Darussalam Modern Islamic

Boarding School (DMIBS) instructors in East Java, Indonesia, in 2017. Instructor satisfaction with PD programs determines their success. The study examined school teacher self-efficacy and professional development using a survey design of 124 teachers. The researcher rated teachers' confidence in their teaching abilities as low, moderate, or high. According to the poll, teachers liked PD activities for the course, material, instructor, and relevance to their jobs. The program also shows that PD providers like schools make participants feel comfortable, convenient, and like spending time with them. According to the survey, teachers are effective in student engagement, instructional tactics, and classroom management. No differences were found between teachers with different academic preparations or teaching experience.

P'Pool (2021) conducted study on the effects of excellent gifted education and talented student professional development training for pre-service and in-service teachers. This study also examines whether preservice and in-service teachers' knowledge and self-efficacy increased after the professional development course. All participants received a quantitative survey and training. The study comprised preservice teachers studying education at a southern Kentucky public institution and in-service teachers from 11 Kentucky and one Tennessee school districts. Before and after an online, self-paced professional development session on evidence-based gifted education practices, each participant completed a 43-item modified Survey of Practices (SOP) with Students of Varying Needs. The study found that the focused professional development plan benefited all educators. Preservice and in-service instructors gained understanding of gifted education and talented students and confidence in their ability to satisfy their needs in the classroom. According to the findings, all preservice and in-service teachers should get gifted education professional development to access materials and instruction methodologies. This study is limited by the COVID-19 pandemic, which required online professional development training throughout data collection.

Many research have examined the relationship between teaching profession, self-efficacy beliefs, and teacher competency, each with a different explanation. Yeşilyurt (2014) examined the relationships between instructors' competency, self-efficacy, and attitudes about teaching. The study included 417 first- and second-grade teacher candidates from a private institution in Anatolia, Turkey. The relational survey model was employed in this investigation. The data was collected using the Scale of Teachers' Competence Beliefs, Self-Efficacy Scale, and Teaching Profession Attitude Scale. Acikgoz and Zengin's 2003 Scale of Teachers' Competence Beliefs was modified by Gundem (2009). This study used Gundem's Scale of Teachers' Competence Beliefs. The scale has 20 components and four factors—Idealist, Wise, Tired, and Innovative. A scale by Dellinger et al. (2008) measured instructors' self-efficacy. The scale has 29 components and five criteria: planning and developing learning, providing a positive classroom atmosphere, managing student differences, and academic achievement. Ustuner's (2006) Attitude Scale of Teaching Profession has 34 items and one attitude-related factor. Data was analyzed with AMOS 17.0 and SPSS 16. This study found that teacher competency and self-efficacy beliefs positively affect teaching profession attitude. This study also found that teacher self-efficacy and competency views strongly predict teaching attitudes.

The aforementioned investigations have shown that all the variables in the framework are interconnected. As each variable's commitment depends on the other, none of them can be considered an independent variable. The three factors—Teachers' Professional Growth, Self-Efficacy, and Teaching Competency—all have a direct impact on Teachers' Job Satisfaction. Hence, research into the relationships and cycles of the teacher-related factors is essential to the development of teachers.

4.1 DISCUSSION:

The methodological review has presented the relationship among variables Teachers' Professional Development, Self-Efficacy, and Teaching Competency and their direct impact on Teachers' Job Satisfaction. Teachers' professional development positively and significantly affect and explain teachers' self-efficacy. The effectiveness of a group and a teacher can both benefit from professional development in mathematics, according to a 2008 study by Zambo & Zambo. The results of the Karimi (Allvar), (2011) study also showed that Professional Development (PD) initiatives significantly increased EFL teachers' perceptions of their effectiveness in the classroom. It has been demonstrated that PD can give teachers some self-assurance in their skills and is persuasive

enough to fundamentally alter accepted beliefs. It is significant to highlight that the effects of PD on self-efficacy beliefs typically last over time in light of the findings of the delayed post-test. Moreover, Yang's (2020) research has found a stronger link between a teacher's level of professional growth and their sense of self-efficacy.

Second, Teachers' professional development positively and significantly affect and explain teachers' competency. Apriliyanti (2020) advocates that professional development course is shown to be successful in terms of boosting teachers' competencies. The Academic Stream's substantial educational basis, according to Singh & Rao (2020), can be linked to Teaching Competency. This suggests that the course content and the scientific exploration methodologies used to instil a thorough comprehension of the curriculum in each student determine their teaching competency. Also, Omar (2017) examined how professional development affects teachers' English teaching competency. They stated that engaging in professional development programmes had increased their skill in English teaching.

And lastly, Teachers' competency and self-efficacy collectively affects teachers' Job Satisfaction positively and significantly. Yeşilyurt (2014) found that teacher candidates' perspectives on the advancement of the teaching profession were significantly and favourably influenced by instructors' perceptions of their own competence and self-efficacy. The findings of other investigations in the literature are in agreement with this conclusion. The realisation of competency belief as a link between the comprehension of teacher preparation and the actualization of effective teaching was made. Yeşilyurt (2014) came to the conclusion that their collective views on teacher competency and teacher self-efficacy were significantly responsible for explaining the job satisfaction and attitudes of teacher applicants. Teacher self-efficacy has been demonstrated to improve motivation and positively effect teaching behaviour (Ashton, 1984), to predict students' academic progress (Jinks & Lorschbach, 2003), to be linked to the management element of class management (Gencer & Cakiroglu, 2007), and to lead to greater job satisfaction (Woolfolk & Hoy, 1990).

5.1 CONCLUSION

The methodological review has shown that all of the factors are connected to one another and to the job satisfaction of teachers. There exists a pattern of connections between all the variables. However, propositions must be empirically tested under various circumstances in order to study generalizability. Teaching-learning skills of teachers has shown to have significantly been affected by the professional development as is clear from the above studies. To strengthen the relationships between the variables, appropriate fieldwork and case studies are needed. Moreover, there is need to conduct further research using different nomenclatures to discuss the same variables.

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