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Discrepancy between Self-Reported and Actual Phonics Content Knowledge of Government Primary School Teachers in Pakistan

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Abstract

The discrepancy between teachers' self-reported and actual knowledge may be lethal for any educational process. In that case, they may not achieve the learning objectives by transferring the required knowledge and skills among the learners. The current research explored the gap between phonics-related self-reported and actual knowledge of Pakistani government primary school teachers to determine how far they are competent in phonics. This investigation further elucidated the quality of pre-and in-service teacher preparation programs to equip the primary grade instructors with the required skills. For this purpose, 230 government primary school teachers were asked to report their phonics knowledge through a Likert scale questionnaire. Additionally, a section of 10 MCQs was added to assess their actual knowledge related to different aspects of phonics, that is, the definition of phonics, number of sounds in the English language, identifying consonant and vowel digraphs, short and long vowel sounds, number of sounds, and syllable in a word and consonant blend. The findings showed severe discrepancy between the self-reported and actual knowledge, as only 28.3 % of teachers could score average or above-average marks, though the majority overrated their competence. Comparatively older, less qualified, and less trained teachers with non-MA English qualification were more prone to the tendency in order to overvalue their knowledge. This situation implies that specific phonics content-based training is not provided to the teachers during pre-and in-service teacher preparation programs. However, the phonology of English is taught to them to some extent; teacher knowledge needs assessment at any stage. These findings proposed content-based teacher training, teacher knowledge assessment, and the incorporation of technology to facilitate teachers.

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Keywords: actual knowledge, phonics content knowledge, Pakistani government school teachers, self-reported knowledge, teacher knowledge

Introduction

Guerriero (2014) identified teachers as 'learning specialists' whose knowledge not only helps to improve student learning outcomes (SLOs) (Hill et al., 2005; Baumert et al., 2010; Voss et al., 2011; Opper, 2019), however, also provides insights into teacher quality and teacher professionalism as a significant component, according to Blömeke and Delaney (2012). In this connection, two of the seven significant dimensions of knowledge possessed by teachers, as stated by Shulman (1987), are a) subject matter content knowledge and b) pedagogical content knowledge. Pedagogical content knowledge combines the content knowledge of a particular target area and the pedagogical knowledge in order to teach that particular aspect. Regarding the pronunciation and reading skills related to content knowledge at primary level, Carson and Bayetto (2018) stressed that teachers must have a strong command of phonics, phonological, and phonemic awareness, underpinning the early reading competence of learners.

Buckingham (2018) defined phonics as knowledge of how individual alphabets or groups of alphabets represent phonemes (speech sounds), whereas phonological and phonemic awareness are subsets of phonics knowledge. Neaum (2018) explained phonological awareness (PA) as a relationship between phonemes and graphemes of a language by helping learners break down the alphabetic code. It is interpreted as a cognizant capability to identify and employ the phonemic construction of words including individual phonemes (phoneme consciousness), onset-rimes (rime consciousness), and syllables (syllable consciousness). This proficiency among learners and reading success in early school is directly affected by the teacher's proficiency in phonics content and pedagogical knowledge through which they teach and assess learners' phonics knowledge (Schuele & Boudreau, 2008). In this regard, research shows a gap between self-reported phonics content knowledge and the actual knowledge of teachers (Louden et al., 2005; Fielding-Barnsley & Purdie, 2010; Fisher et al., 2007; Carson & Bayetto, 2018). Resultantly, poor readers may face difficulty in reading and breaking down the alphabetic code in their early school years, affecting their academic progress. Tormala and Petty (2007) defined perceived/self-reported knowledge as the amount

of factual information about a target issue one affirms to hold, whereas actual knowledge is a straight and definite understanding of facts and conditions. Dori and Avargil (2015) stated that perceived knowledge lies in the metacognitive domain, while actual knowledge is linked to the cognitive domain.

The discrepancy between self-reported and actual knowledge of phonics and phonological awareness might produce less-knowledgeable and less-informed teachers. They may assume their linguistic command to be perfect which needs no improvement, thus less likely to be involved in professional training prospects. This discrepancy may reflect different attitudes among teachers. Cunningham et al. (2009) recognized that instructors with better and more secured command of the language structures were humbler and more prudent in evaluating themselves. While, instructors with weak command of language structures were inclined to overvalue their actual knowledge. This phenomenon, usually mentioned as Dunning–the Kruger effect' (Kruger & Dunning, 1999), explains that persons with inferior capability in a specific knowledge area erroneously self-assessed their capacity as superior to it and those with better competence often underrated their genuine competence.

He and Lin (2018) stated that the teacher's knowledge must go beyond adding it to the teacher training process in order to effectively pass on the academic content to the learners. Instead, the incorporation of content must be based on a collective, potent, and communicative process, where the simultaneous development of instructors' and teacher educators' knowledge and proficiency in the target subject area is focused. Morton (2016, 2018) explained that non-native teachers teach their learners in English that is neither theirs nor their learners' L1; thus, developing, explaining, and assessing the competence of language instructors to execute teaching responsibilities efficiently is a dire need.

In this respect, the integration of all the segmental and suprasegmental aspects of the English language, grapheme-phoneme correspondence, blending, segmenting, phoneme manipulation, and interrelation of these aspects with reading and oral skills in the teacher training curriculum at academic and professional degree, pre-and in-service teacher training must be evaluated to bring a positive change in the proficiency level of learners (Gersten et al, 2000; McCutchen et al., 2002; McCutchen et al., 2009; Piasta et al., 2009; Cohen et al., 2017). The assessment of teachers' current

knowledge before pre-and in-service teacher training can be beneficial in needs analysis and to determine the focus areas of teacher training.

From a Pakistani primary grade educational perspective, overall teacher knowledge and competence are not up to the national and international standards, as reported by Hunzai (2009), Dilshad (2010), Khan (2011), Gopang (2016), and Tahira et al., (2020). As the primary concern of this research was to probe into primary school teachers' competence in phonics, it was observed that government primary teachers still need more basic competency despite its inclusion in the government school curriculum from 2015-2016. When the government implemented Single National Curriculum (SNC) policy for Grades I-V in 2020, many new language skills and techniques were added to the curriculum for all government and private schools. Therefore, quality assurance requires teachers to be equipped with these skills, especially for the government, and less fee-charging private schools to bring effective change. Unfortunately, there is no content-based assessment to measure the teachers' knowledge of subskills before pre-or in-service teacher training programs in Pakistan, which results in the ineffectiveness of teacher training (Huma, 2013; Government of Pakistan [GOP], 2017; Malik, 2022). The official document of SNC. provides one-page recommendations related to teachers' training where most of the points use the verbs 'need to' and 'should'. It establishes that proper teacher training has yet to occur before implementing the new curriculum policy; the result could be teaching the teachers language skills and techniques in an old-fashioned way. The bulleted point 5 in Figure 1 below clearly states to provide synthetic phonics-based training to the teachers in order to improve the oral proficiency of learners admitting the low proficiency of teachers in oral skills. The bulleted point 7 recommends providing basic IT skills to the teachers in order to keep pace with the trends in teaching literacy skills.

Statement of the Problem

This backdrop emphasizes the significance to investigate the alignment between teachers' actual and self-reported knowledge in order to bring a meaningful transformation from the perspectives of policy and student learning outcomes (SLOs). To bring about this coherence, quality teachers' training programs and monitoring of its backwash effect are integral that may enhance the competence of teachers by increasing their knowledge of phonics. Therefore, this study explored and compared the primary grade teachers' self-reported and actual phonics knowledge from the district of

Multan and Punjab respectively. Moreover, it also unearthed different variables affecting teachers' self-reported and actual phonics knowledge alongside insights into existing teacher training programs.

Figure 1

Recommendations about Teacher Training in Single National Curriculum [SNC] (2020, p.90)

It is important that both pre-service and in-service teacher-training programs are designed in line with the philosophy and approach of the present curriculum to ensure its effective implementation. These should aim at familiarizing the teacher with the new curriculum and training them in varied teaching and learning contexts.

- The overall objective of teacher training programs should be to develop critically aware, self-directed, reflective and analytical teachers who are willing to adapt and supplement the existing material with their own teaching materials and classroom activities.
- Short in-service teacher training programs need to be conducted with the aim of enabling teachers to understand and teach the new curriculum using prescribed textbooks and handling supplementary materials.
- These teacher training programs also need to focus on enabling teachers to undertake skill-based teaching of English language.
- Teacher education programs at bachelor's level and diploma/certifications should focus on introducing the teachers to the new curriculum and its underlying philosophy, principles, related methodology/ instructional strategies and assessment procedures. Teachers, on their part should be willing to improve their pedagogical strategies.
- Majority of English language teachers in Pakistan have limited proficiency in English, particularly low proficiency in oral skills. It is a well-known fact that students learn from listening to the teacher and interacting with him/her both inside and outside the classroom. Hence, teacher training programs should include synthetic phonics training wherever possible to improve the English language proficiency of the teachers.
- Teachers need to know that errors are likely to occur in second language learning; they can use the trainings mentioned above to improve the general linguistic environment in their school and classrooms.
- Teachers should be given basic IT training to keep pace with the changing trends in language teaching.
- The teacher training programs should be needs-based and focused on the National Curriculum. The workshops/training material should be tailored to facilitate teachers to teach the textbooks keeping in view the strategies mentioned in the curriculum.
- Teachers should be given extensive orientation sessions related to text book so that they can effectively teach these in the classrooms.

Research Questions

The following research questions were formulated to explore the existing situation of teacher's phonics knowledge and how far they represent themselves to be knowledgeable in this respect:

1. How far is self-reported and actual phonics knowledge of primary-level government school teachers aligned?
2. How do different variables related to teachers affect the self-reported and actual knowledge in connection to phonics teaching at the primary level?
3. To what extent do primary school teacher training programs impart phonics content knowledge to teachers in Pakistan?

Literature Review

Many studies probed to investigate the relationship between self-reported and actual phonics knowledge or phonological awareness (PA) of early childhood and primary school teachers along with other specialists, such as speech pathologists, in the native contexts (Fisher et al., 2007; Cheesman et al., 2009; Alghazo & Al-Hilawani, 2010; Hammond, 2015; Chemonics International, 2020). Fisher et al. (2007) evaluated 140 Australian pre-service teachers' PA and phonics knowledge who reported a very high understanding of the phonological structure of language and its relation to print letters and their combinations. The research findings indicated that they overrated their knowledge and were unaware of what they knew and did not. The research conducted by Fielding-Barnsley and Purdie (2005) discovered that despite having a positive attitude towards PA and phonics-focused instruction, Australian pre-and in-service instructors, when tested, displayed inadequate knowledge in these essential areas. Hammond (2015) identified that early classroom teachers acknowledged the need to develop their literacy practices and teaching. However, mainly overrating their proficiency, they were satisfied and more confident about their pedagogic practice than they probably ought to be because they needed a basic understanding of PA.

Blömeke (2016) assessed 171 teachers' content-specific and general teacher knowledge, finding a positive relationship between grades obtained and situation-specific skills. While evaluating the teacher training programs, National Council on teacher quality (2018) in USA published a report on the reading assessment for elementary and special education teachers. This report conveyed that only 37% of teacher training programs appear to be providing these methods. Therefore, they proposed a comprehensive assessment based on the science of reading. Moreover, Carson & Bayetto (2018) also compared actual and self-reported Australian

teachers' phonological awareness and related assessment practices. Although, teachers overrated their knowledge yet, they employed many assessment methods for their learners despite limited actual knowledge for instance, they implied the need for robust pre-and in-service teacher training. From the same perspective, Bills (2020) compared the knowledge, beliefs, and practices of 13 first-grade instructors who had received extensive professional training with those who had not (n=4), exhibiting significant differences in the knowledge and skills due to content-specific professional training. Apart from phonics knowledge, Schmid et al. (2021) dugged into pre-service teachers' technological pedagogical content knowledge (TPACK) while making lesson plans.

In Pakistani context, many studies focus on the pronunciation skills of teachers (Mahmood & Ghani, 2001; Warsi, 2004; Majoka et al., 2016), views of teachers about pronunciation and their practices, and the significance of phonics instruction at primary level (Ayub, 2017; Maqbool, 2020). In this perspective, few studies focus to dig out the actual phonics knowledge of primary grade teachers and the nature of teacher training in order to ensure teacher quality and preparedness as the primary missing link in implementing student learning outcomes. Instructors either need to be appropriately equipped through training, or their regular monitoring in terms of knowledge of language skills with the changing times is not done if provided some training (Malik, 2022). They are usually assessed based on their students' pass percentage in each class instead of their skills. There is a dire need to analyse teachers' current knowledge and skills according to the changing curriculum requirements and provide feedback on the teacher training developments for the policymakers, which is the primary intention behind this research.

Research Methodology

The current research is an exploratory study based on a quantitative approach. The primary data was collected from 230 primary-level male (n = 115) and female (n = 115) teachers of different government schools in Multan district, Pakistan. The tool used to collect the data regarding self-reported phonics knowledge was a Likert scale-based questionnaire survey in which they inquired about their phonics skills. This survey was divided into three major sections, that is, a) demographic information of teachers, b) 17 statements about their self-reported phonics knowledge, and c) 10 multiple-choice questions related to phonics concepts. Multiple-choice

questions of 10 marks were asked to triangulate whether the teachers' claims about their knowledge of phonics and pronunciation were correct in order to reflect their actual knowledge. This section was based on the basic knowledge of phonics, that is, the definition of phonics, the number of sounds in the English language, identifying consonant and vowel digraphs, short and long vowel sounds, the number of sounds and syllables in a word, and consonant blend. The statistical reliability of the section related to teachers' knowledge about phonics skills (items = 17) on SPSS was Cronbach's Alpha = .920, which realized an excellent internal consistency. The statistical analysis of the data was carried out through independent t-test and ANOVA. A discussion on teacher training programs was also given based on demographic information.

Demographic Information of the Participants

The demographic information of teachers displayed different variables, that is, gender, age, academic & professional qualification, teaching experience, employment status, pre-and in-service teacher training, and teacher allotting time to phonics teaching in class. All these variables in Table 1 below either shed light on different aspects of teachers' actual and self-reported knowledge or provide insight into teacher training.

Table 1

Demographic Variables of Government School Teachers

Demographic Variables	Group	Frequency	Percent	Cumulative Percent
Gender	Male	115	50.0	50.0
	Female	115	50.0	100.0
Age group	21-30 years	94	40.9	40.9
	31-40 years	59	25.7	66.5
	41-50 years	42	18.3	84.8
	51-60 years	35	15.2	100.0
Highest Educational level	Matric	25	10.9	10.9
	FA/F.Sc	24	10.4	21.3
	BA/B.Sc	41	17.8	39.1
	MA/M.Sc	138	60.0	99.1
	M.Phil	2	.9	100.0
Have you done MA English?	Yes	70	30.4	30.4
	No	160	69.6	100.0

Demographic Variables	Group	Frequency	Percent	Cumulative Percent
Professional qualification	CT/PTC	53	23.0	23.0
	B.Ed.	107	46.5	69.6
	M.Ed.	68	29.6	99.1
	No professional qualification	2	.9	100.0
Total teaching experience in years	1-10 years	129	56.1	56.1
	11-20 years	48	20.9	77.0
	21-30 years	53	23.0	100.0
Status of employment	Permanent	218	94.8	94.8
	Contract	12	5.2	100.0
Did you receive training related to phonics, specifically at the academic and professional levels?	Yes	00	0.00	0.00
	No	230	100.0	100.0
For how long, studied pronunciation during your academic career?	never taught	77	33.5	33.5
	less than a month	74	32.2	65.7
	1-3 months	53	23.0	88.7
	4- 6 months	12	5.2	93.9
	7-9 months	5	2.2	96.1
	9-12 months	9	3.9	100.0
Received pronunciation-related professional training?	Never received any training	65	28.3	28.3
	1-15 days of training	108	47.0	75.2
	1-month training	46	20.0	95.2
	more than a 1-month of training	11	4.8	100.0
Time allotted to phonics teaching each week	No time	35	15.2	15.2
	20 minutes	117	50.9	66.1
	40 minutes	67	29.1	95.2
	60 minutes	10	4.3	99.6
	more than 1 hour	1	.4	100.0

Demographic Variables	Group	Frequency	Percent	Cumulative Percent
Get help from any phonics/ pronunciation software/ website.	Yes	84	36.5	36.5
	No	146	63.5	100.0

The investigation into gender variables may shed light on whether the participants from both genders possessed similar levels of knowledge. M.A. English qualified teachers must have some background knowledge of phonetics and phonology, resulting in a positive impact on their knowledge of phonics. Permanent or contract employment status determines whether job security affects their knowledge or not. Based on this variable, a sense of accountability in the case of contract service creates the pressure to perform better as compared to the secure job holders who go through a long process of accountability based on their low performance.

The respondents were asked about their age based on the classification into four groups, that is, 21-30 years, 31-40 years, 41-50 years, and 51-60 years. These age groups correspond to the young, middle, and old teachers who also represent different periods of experience. The respondents were then asked about their highest/terminal educational qualification and divided into five groups from Matric to M.Phil. The variable of educational qualification was investigated to observe the induction policy of the government and how far teachers of different qualifications are competent for teaching the latest contents provided in textbooks. Their professional qualification is divided into four categories, from having no professional qualification to the highest level of M.Ed. The variable of professional qualification was probed from the perspective of teachers' skills and classroom management in handling the recently added contents in textbooks. It needs to be investigated whether the teachers of government schools are benefitting or using this professional knowledge for the teaching of phonics skills or not and what is the difference between teachers who have and do not have any professional qualifications. The participants were asked about their total teaching experience divided into three categories, that is, 1-10 years, 11-20 years, and 21-30 years. This variable determines whether the teachers having different terms of experience differ in their knowledge. Based on this analysis, it can be inferred whether the experience of older teachers or the energy of young teachers is more beneficial at primary level.

Data Analysis

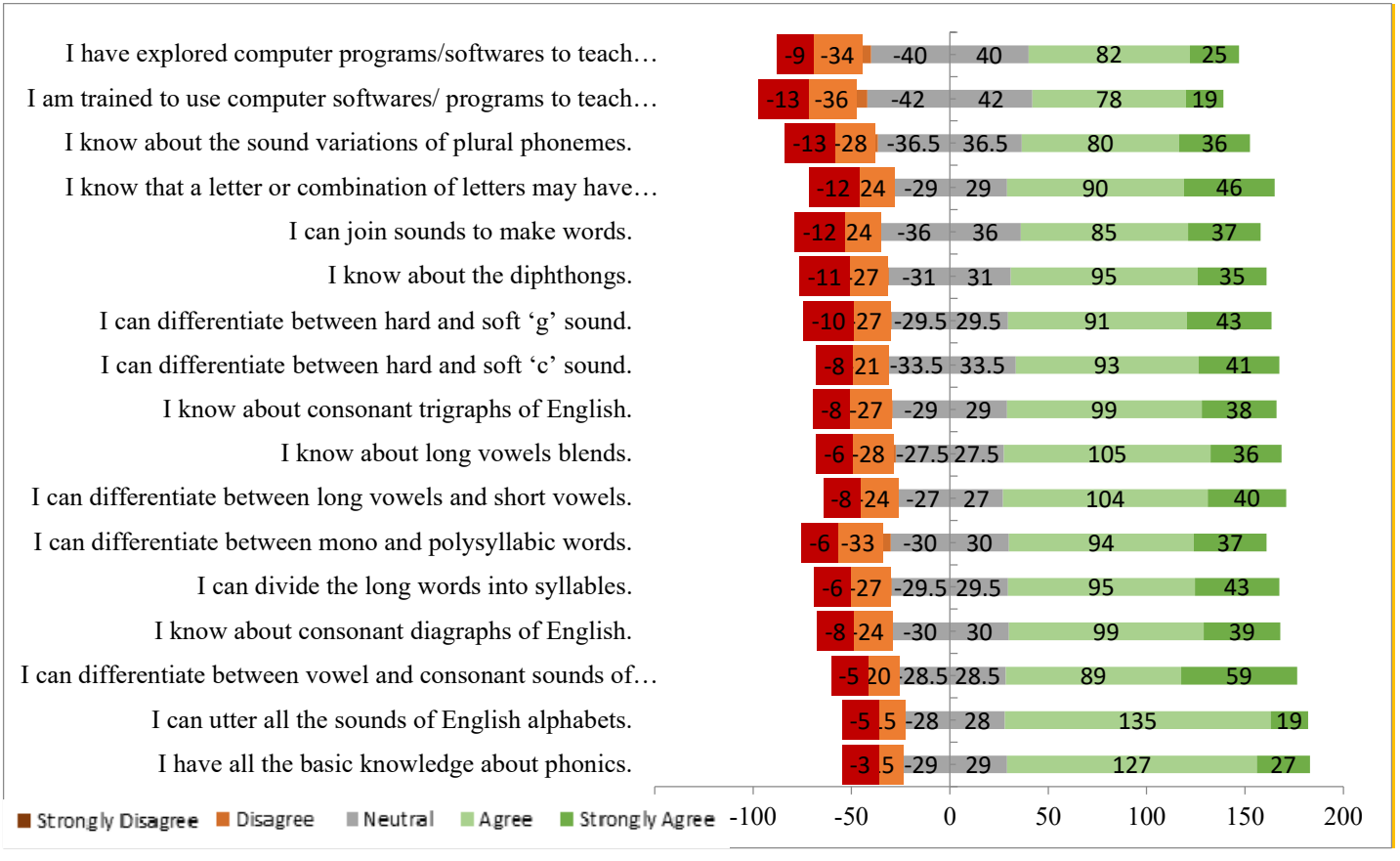
The findings of the self-reported knowledge of teachers through the questionnaire and MCQs highlight the misalignment between actual and self-reported phonics knowledge of teachers. Most teachers either overrated their knowledge or tried to be neutral; analysis of demographics indicates what different variables impact the actual and self-reported knowledge of teachers.

Self-Reported Knowledge of Teachers

This section comprised 17 questions that elicited teachers to report their knowledge of phonics from all the essential perspectives. For instance, uttering all the sounds of the English language, difference between consonants and vowels, short and long vowels, diphthongs, consonant clusters, consonant digraphs and trigraphs, syllables, segmenting and blending sounds, variations of letter combination exhibiting a sound, variation of plural phoneme, hard and soft sounds of letters and their basic knowledge, and training about computer-assisted pronunciation/phonics teaching. The participants' responses were represented through the diverging stacked bar in Figure 2. The results showed that most respondents reported being knowledgeable in each aspect by opting more for agree and strongly agree options as compared to a smaller frequency of disagree and strongly disagree answers. Even the neutral answers were more frequent than disagreeing options. For instance, by opting for neutral answers, the respondents might not want to show their lack of knowledge, keeping themselves on the safer side. More teachers claimed to have all the essential knowledge required for phonics teaching at the primary level from KG-5. They also reported being trained to use and explore digital resources for phonics teaching.

Figure 2

A Graphical Representation of Self-Reported Knowledge of Teachers



Actual Knowledge of Teachers Assessed through MCQs

The teachers' self-reported knowledge was assessed through 10 items of MCQ section to triangulate their claims about their knowledge of phonics/pronunciation skills. They were asked about the definition of phonics, the total number of sounds in the English language, consonant and vowel digraphs, short and long vowels, syllables, consonant blends, and identifying the number of sounds in a word. The obtained scores were graded into three categories, that is, 0-4 marks for below average/poor score, 5-7 for the average score, and 8-10 for above average/good score. Table 2 gives a summary of the teachers' obtained marks.

Table 2

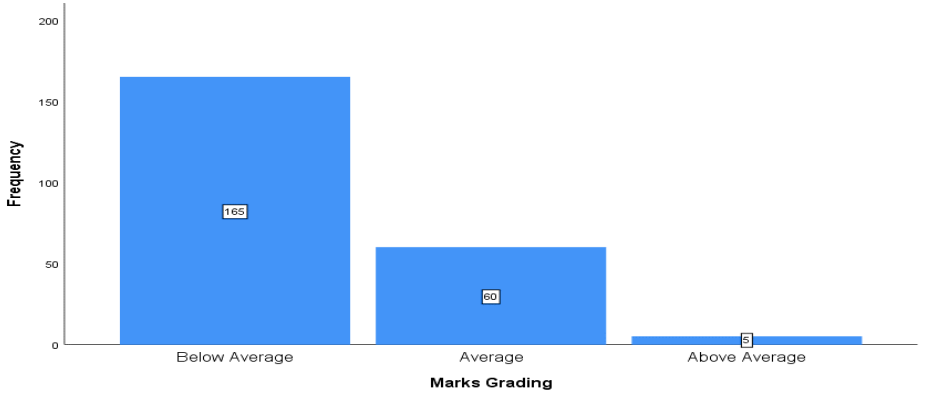
Marks Grading of MCQs

Marks Grading	Frequency	Percent	Cumulative Percent
Below Average	165	71.7	71.7
Average	60	26.1	97.8
Above Average	5	2.2	100.0
Total	230	100.0	

The results of MCQs indicated that 165 teachers (71.7%) scored below average/poor marks, 60 teachers (26.1%) scored average marks, and only five teachers (2.2%) got above average/good scores. Hence, their self-reported knowledge did not match their actual knowledge proving their claims false about their competence in the phonics/pronunciation skill; Figure 3 illustrates the situation more comprehensively.

Figure 3

A Graphical Representation of Marks' Grading in MCQs

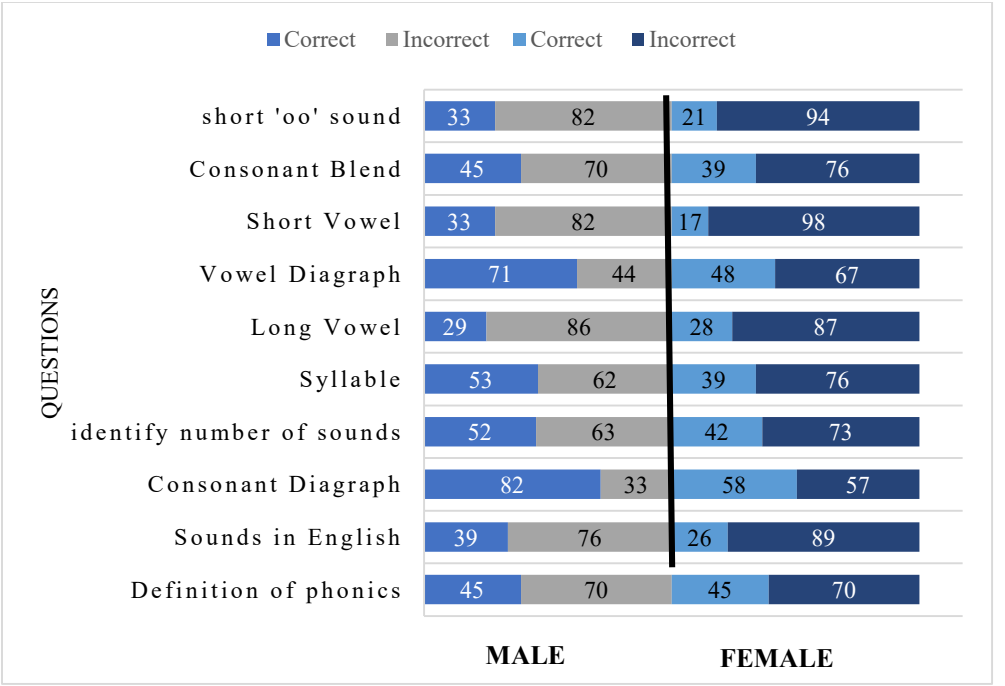


Findings and Discussion

To triangulate teachers' claims about their phonics knowledge, they were assessed through 10 MCQs related to basic phonics knowledge. Of 230 teachers, 165 teachers scored below average, 60 teachers scored average, and only five teachers showed better command of phonics. Apart from all these marks, when these obtained marks were analyzed from the perspectives of male and female teachers and how they responded to each question, it was evident that male teachers scored comparatively better than female teachers. In 8 out of 10 questions, that is, the total number of sounds in the English language, consonant and vowel digraphs, short vowels, syllables, consonant blend, and identifying the number of sounds in a word, male participants exhibited better knowledge by scoring significantly more marks. In contrast, in 2 questions, that is, the definition of phonics and long vowels, they scored almost equal marks. Figure 4 below presents the analysis from this comparative perspective:

Figure 4

A Comparative Analysis of Male and Female Teachers' Actual Knowledge of Phonics



Out of 1150 answers of each gender, the female teachers' score was 363 (31.57%) and the male teachers' score was 482 (41.9%). Their collective score was 845 out of 2300 (36.7%). The respondents of both genders represented comparatively better knowledge of consonant and vowel digraphs, that is, their incorrect responses outnumbered the correct ones for the rest of the questions. It may be inferred that teachers made false claims about their knowledge, as represented by Kruger & Dunning (1999) and Cunningham et al. (2009). These findings also aligned with Fielding-Barnsley and Purdie (2005), Fisher et al. (2007), Hammond (2015), Yagiz (2018), and Bai and Yuan (2019), who probed into phonics and pronunciation knowledge of teachers in different contexts and reported it to be unsatisfactory. This perspective depicts a wide gap between primary grade teachers' actual phonics competence and their claims. This situation has a backwash effect on the performance of government schools' learners if they are also found to lack phonics competence.

Impact of Different Variables on Primary School Instructors' Self-Reported and Actual Knowledge

M.A. English qualification, gender, and employment status were found to be significant variables through independent sample *t*-test that impact the self-reported and actual phonics knowledge of the teachers. The *p*-value and Mean Average (MA) were reported for comparison as tabulated in Table 3 below.

Table 3

Analysis of MA English Qualification, Gender, and Status of Employment through Independent Sample t-Test

Variable			*N*	*M*	*SD*	*df*	*t*	*p*
MA English	Obtained Marks in MCQs	Yes	70	4.04	1.546	228	2.204	0.014
		No	160	3.49	1.843			
	Self-reported knowledge	Yes	70	38.200	12.374	228	-2.59	0.005
		No	160	43.094	13.517			
Gender	Obtained Marks in MCQs	Male	115	4.14	1.696	228	4.281	0.000
		Female	115	3.17	1.723			
	Self-reported knowledge	Male	115	40.678	12.563	228	1.053	0.147
		Female	115	42.530	14.077			

Variable			*N*	*M*	*SD*	*df*	*t*	*p*
Status of Employment	Obtained Marks in MCQs	Permanent	218	3.66	1.738	228	0.020	0.492
		Contract	12	3.67	2.425			
	Self-reported knowledge	Permanent	218	44.812	13.318	228	1.006	0.158
		Contract	12	37.833	13.848			

The respondents who were M.A. English (p = 0.014, MA= 4.04) qualified realized a different level of 'actual knowledge of phonics' than those who were not (p =0.005, MA=3.49). However, the respondents who did not hold M.A. in English showed higher self-reported knowledge of phonics (MA = 43.09) than those who had an M.A. in English (MA= 38.20). These findings exhibited a similar perspective stated by Kruger and Dunning (1999) and Cunningham et al. (2009), who claimed that teachers with lower competence overstate their actual knowledge. In contrast, more competent teachers are humbler and more prudent in self-appraisal. These respondents may have made false claims about their knowledge as they scored fewer marks in MCQs.

For the gender variable, results indicated that the male and female participants had different levels of 'obtained marks in MCQs. The results were statistically significant (p = 000); the male teachers performed significantly better than female teachers as male teachers' mean of 4.14 was higher than female teachers' mean of 3.17, exhibiting their better knowledge. While, for 'self-reported knowledge', the p-value was statistically non-significant (p = 0.147), implying that female teachers overstated their phonics knowledge. In terms of the status of employment, the results for 'actual and self-reported knowledge' were statistically non-significant (p = 0.492 and p = 0.158, respectively).

Table 4

Analysis of Age, Academic & Professional Qualification, and Teaching Experience through ANOVA

Variable		SOV	*SS*	*df*	*MS*	*F*	*p*
Age	Obtained Marks in MCQs	Between Groups	26.402	3	8.801	2.868	0.037
		Within Groups	693.463	226	3.068		
		Total	719.865	229			

Variable		SOV	*SS*	*df*	*MS*	*F*	*p*
	Self-reported knowledge	Between Groups	1133.832	3	377.944	2.154	0.094
		Within Groups	39647.164	226	175.430		
		Total	40780.996	229			
Academic Qualification	Obtained Marks in MCQs	Between Groups	82.875	4	20.719	7.318	.000
		Within Groups	636.991	225	2.831		
		Total	719.865	229			
	Self-reported knowledge	Between Groups	4359.542	4	1089.885	6.733	.000
		Within Groups	36421.454	225	161.873		
		Total	40780.996	229			
Professional Qualification	Obtained Marks in MCQs	Between Groups	40.446	3	13.482	4.485	0.004
		Within Groups	679.419	226	3.006		
		Total	719.865	229			
	Self-reported knowledge	Between Groups	612.318	3	204.106	1.148	0.330
		Within Groups	40168.678	226	177.738		
		Total	40780.996	229			
Teaching Experience	Obtained Marks in MCQs	Between Groups	38.659	2	19.329	6.441	0.002
		Within Groups	681.206	227	3.001		
		Total	719.865	229			
	Self-reported knowledge	Between Groups	365.933	2	182.966	1.028	0.359
		Within Groups	40415.063	227	178.040		
		Total	40780.996	229			

The variables of age, academic, and professional qualification with teaching experience were analyzed through ANOVA. Table 4 below indicates the *p*-value and mean Average (MA) to compare different groups. Significant differences in average mean were found in the analysis of the age variable from the perspective of actual and self-reported knowledge of teachers. The interesting phenomenon was that the age groups of 41-50 years and 51-60 years self-reported knowledge with a higher mean average,

that is, MA= 45.31 and MA= 42.29, respectively, as compared to the 21-30 years and 31-40 years age groups' lower mean average, that is, MA= 41.6 and MA= 38.58 respectively. In contrast, the mean of actual knowledge realized the reverse situation where teachers below 40 exhibited better performance as compared to older teachers between 41-60 years.

For the academic qualification, results indicated that participants showed a different and statistically significant level of 'actual and self-reported knowledge'. The interesting phenomenon was that Matriculate, FA/F.Sc., and BA/B.Sc. showed higher mean averages for self-reported knowledge, that is, MA= 41.24, MA= 46.33, and MA=49.39 respectively, as compared to MA/M.Sc. and M.Phil. degree holders' lower mean average, that is, MA= 38.65 and MA= 33.5. In contrast, the mean of actual knowledge exhibited a reverse situation where teachers with MA/M.Sc. and M.Phil. qualifications showed better performance through higher mean than lesser qualified teachers.

For the professional qualification, results represented that participants had a different level of 'actual knowledge', as the results were statistically significant, while 'self-reported knowledge' was statistically non-significant. Teachers holding B.Ed. and M.Ed. professional qualifications had a higher mean average for actual knowledge, that is, MA= 4 and MA= 4, respectively, as compared to teachers with no professional qualification and CT/PTC with a lower mean average, that is, MA= 3, for both the groups. It can be inferred that teachers with low professional qualifications either exaggerated or made false claims about their knowledge. Kruger and Dunning (1999) also explained this phenomenon on behalf of teachers to hide their incompetence.

Regarding teaching experience as a variable, results showed that participants had a different level of 'actual knowledge', as the results were statistically significant, while for ‘self-reported knowledge’, statistically non-significant. It could be inferred that younger teachers with less than ten years of teaching experience exhibited a better mean (MA=4) in actual knowledge than the lower mean average of middle-aged or older teachers, that is, MA= 3. These findings corroborate the findings of Algozzine et al who also demonstrated that young teachers exhibit better knowledge than older teachers. Moreover, this overall result also highlights the Pakistani government school teachers as non-native instructors who realize their weak actual knowledge (Morton 2016, 2018). These findings strengthen the

notions of Sagliano et al. (1998) and Cammarata and Ó Ceallaigh (2018), who stated that the lack of training in content-based instruction is the primary reason for the problem in the educational system. Therefore, Freeman et al. (2015) demanded to rethink about the teacher proficiency in the ELT classroom and incorporate a similar construct in teacher training. Based on these findings, teacher training programs in Pakistan are also to be evaluated, which is discussed in the following sections.

Insights into Primary School Teacher Training in Pakistan

This discrepancy was unearthed due to a comparison between self-reported and actual phonics content knowledge of primary school teachers. It not only directly reflects the quality of pre-service and in-service teacher training and teachers' knowledge assessments, however, it also realizes a vast disconnection with the official curriculum that attempts to inculcate new content knowledge among the learners. Teachers being ill-quipped with the new content and pedagogical knowledge usually revert to how they were taught (Akyeampong et al., 2011; MacKenzie et al., 2011; United States Agency for International Development [USAID], 2014; USAID, 2017). Resultantly, many teachers become professional instructors without the command of the content knowledge and need to learn how to teach. Malik (2022) evaluated the contents of primary grade pre-service and in-service teacher training programs, reporting no phonics-related content in Pakistani context. However, general English phonological concepts were taught. Alongside teachers' knowledge, the assessment of teacher knowledge needs to be focused on in teachers' training programs in order to highlight the critical areas. National Council on teacher quality (2018) in USA proposed an assessment to assess teacher knowledge during pre-service training in which general pedagogic knowledge and specific subject-related content are to be incorporated, reporting a distinct sub-score for the science of reading precisely. In this way, if a teacher scores less on a reading test, this low score cannot be disguised by a higher score in some other subject area, resulting in overall passing marks gained in the test. It quotes Heather Peske, Massachusetts Senior Associate Commissioner (National Council on Teacher Quality, 2018), that before demanding the learners to exhibit their content knowledge, teachers' command of content knowledge to teach must be ensured.” In Pakistani teacher training programs, no significant sub-skills assessment of teachers' knowledge was incorporated (Malik, 2022).

According to the demographics extracted from the teachers in this research, it was inferred that no teacher received specific phonics-related training at any stage, that is, academic and professional levels. A few teachers exhibited pronunciation skills to teach at primary level. In their academic qualification and in-service period, 77 (33.5%) and 65 (28.3%) instructors never had any exposure to the pronunciation/phonics content, that is, 74 (32.2%) and 108 (47%) teachers had less than a month of exposure to sounds of the English language. This time period is not adequate to get a command of the phonics knowledge. During the academic and in-service periods, 26 (11.3%) and 57 (24.8%) instructors studied pronunciation extensively. Moreover, irrespective of the fact that for how long teachers received training, it was related to phonology. They were taught about the sounds of the English language, not how they related to or were represented through different spelling combinations. Moreover, the majority of teachers, 146 (63.5%), reported making no personal efforts to improve their phonics competence by consulting any digital resource. Consequently, due to this lack of knowledge, 152 (80%) teachers either allotted no time or just devoted 20 minutes/week to phonics instruction. Only 78 (33.8 %) teachers reported to learn phonics for more than 40-60 minutes/week. That too, is not a sufficient time for phonics instruction at primary level as learning to spell (Zipke, 2021: Westwood, 2022), morphological development (Rastle, 2022), identification of reading difficulties (Nation, 2022), and helping to read (Hempenstall, 2022) are linked to the development of phonics knowledge among the primary grade learners. Hence, Slattery (2017) proposed a balanced instructional framework consisting of print, phonemic awareness, phonics, fluency, vocabulary, comprehension, and writing. For this purpose, Siegel (2022) emphasized the teachers' training to develop phonological awareness and phonics skill among the students.

Conclusion and Recommendations

Teachers are the mediators between the learner and the curriculum/syllabus in the pedagogic process (Blömeke & Delaney, 2012). They are responsible for delivering the content and developing the skills related to learning outcomes, the investigations into their knowledge, and command of these skills and contents become extremely relevant (Sagliano et al., 1998; Cammarata & Ó Ceallaigh, 2018). Regarding their self-reported phonics knowledge, the majority either made high claims about their command of

the pronunciation skill or remained neutral while reporting their knowledge. When this self-reported knowledge was compared with their actual knowledge through MCQs, the results were alarming, as most of them could not identify the basic phonics concepts related to vowels, consonants, digraphs, trigraphs, clusters, and syllables. The older, less qualified, and less professionally trained teachers and mostly female instructors were found to be more overrating their phonics knowledge than younger, more academically and professionally qualified teachers, especially with M.A. English qualifications. Apart from individual traits of teachers, this lack of phonics knowledge among the majority of primary school teachers is rooted in teacher training programs that provide no content-based training and do not assess the teacher knowledge before induction and during service (Akyeampong et al., 2012; He & Lin., 2018). The following recommendations are made to improve this situation: (a) the focus of induction and in-service teacher training schemes need to be more content-oriented, (b) phonics must be included in academic degree programs as a relevant concept of English phonology and reading skills for young learners, (c) teacher's actual knowledge of phonics skill must be assessed before induction and during service regularly through oral assessments, (d) in the primary sections of schools, young teachers having M.A. English need to be placed on priority basis and non-M.A. English teachers must be provided proper content-based training, and (e) older and less qualified teachers need to be motivated and supported in order to learn the phonics concepts by integrating technology into their routine teaching, that is, by using simple phonics apps not only for themselves, however, also for teaching and assessing the learners.

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