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TEACHING LICENSE IN PAKISTAN A WHITE PAPER 2022

Sajid Ali and Afaq Ahmed

TEACHING LICENSE IN PAKISTAN A WHITE PAPER

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1-5/B-VII, Federal B Area Karimabad Gulberg Town,
Karachi, Sindh 75950
Tel (021) 36347611
Email ied.raps@aku.edu
www.aku.edu/iedpk

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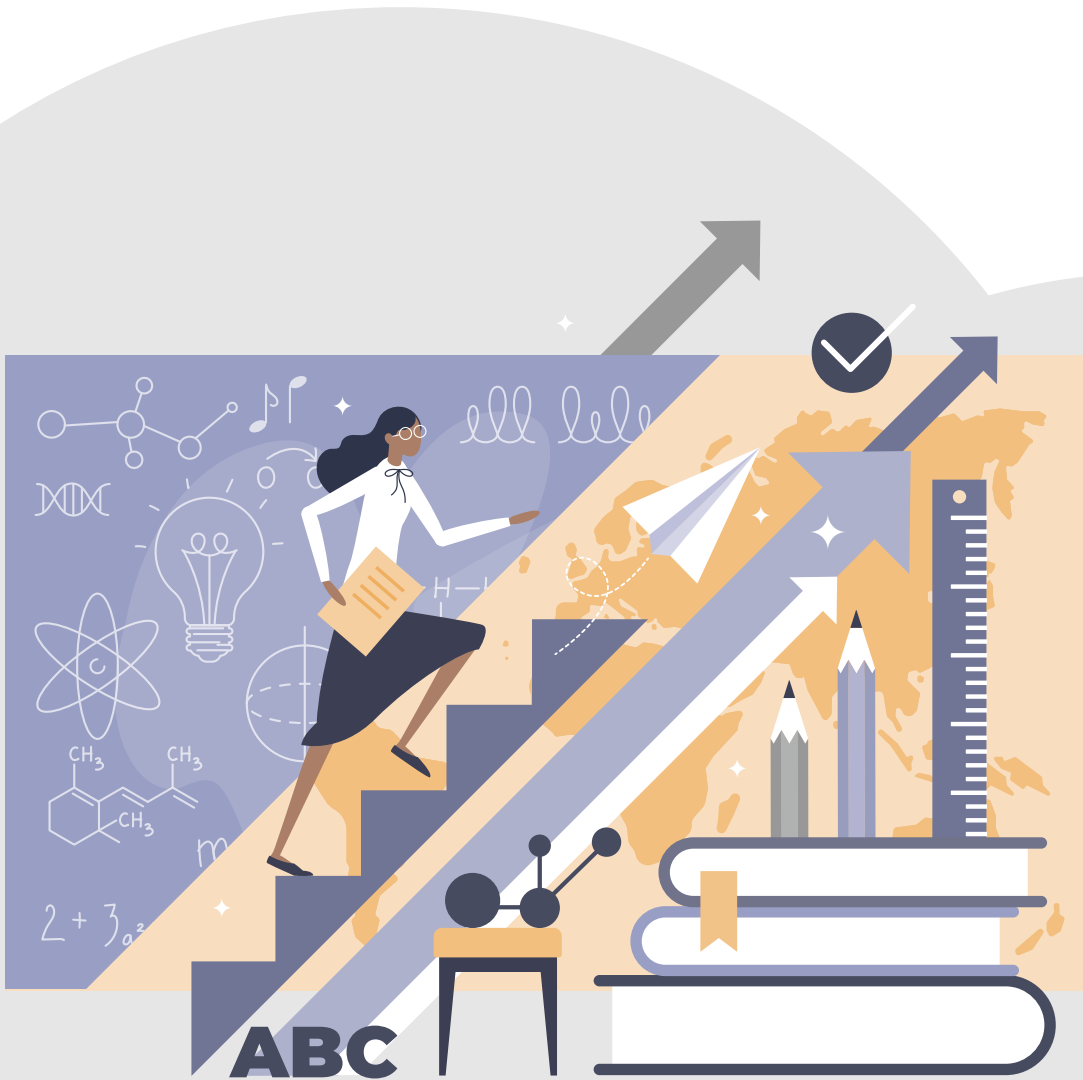
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EXECUTIVE SUMMARY

At the heart of the quality of a nation, one can propose, is the quality of its teachers. Effective teachers have a huge positive impact on student learning and their lifelong performance and through that on the social and economic health of a country. Though, having good teachers has remained a policy priority in Pakistan, getting any serious legislation to ensure that those who join the teaching profession have the potential to offer quality pedagogy has remained an elusive dream. The objectives of education policy reforms like the Single National Curriculum (2021) and the United Nations Sustainable Development Goals (UN, 2015) can only bring positive results if we take the quality of teachers with utmost seriousness. The performance of our students, as indicated by various national and international assessments like Annual Status of Education Report (ASER [2019; 2022]), Trends in International Mathematics and Science Study (TIMSS [2019]), is below average. No education system can improve students' learning without improving the quality of its teachers. The COVID-19 pandemic and school closures have also shown how central teachers are for any effort to continue meaningful education.



No education system can improve students' learning without improving the quality of its teachers.



The policy dialogues carried out for this white paper and international best practices unequivocally indicate that countries that perform well in league tables such as TIMSS have strong teacher management and licensure systems. A well-organised teacher management system has three main components: (a) preparation, (b) recruitment, and (c) retention (see pp. 6-7). All

these components are interconnected to ensure that good teaching takes place in every classroom. Good systems also require various conditions: in the form of certification or licensure that need to be acquired by teachers before joining the occupation. Licensure, therefore, can improve the quality of teaching, which can have positive effect on students learning. These licensure systems ensure that prospective teachers entering into the profession have met minimum requirements and are thus truly ready to enter the profession. Further, the continuation of licensure requires these teachers to go through continuous professional development. In this way, the public is also assured that their teachers have met the minimum requirement of the profession to safeguard against harm to their children. Such licensure systems do not exist in Pakistan at the moment but are certainly needed.

In order to explore the possibility of improving teaching quality through licensure in Pakistan, policy dialogues were carried out with international and national stakeholders. Three types of policy dialogues were conducted along with a survey on the views of stakeholders (n=982) about teaching license and teaching quality. First, seminar series were carried out with key international scholars. Second, one-to-one dialogues were conducted with the representatives of the licensure system in other disciplines (e.g., medicine). Third, a whole day grand policy dialogue event was organised with stakeholders for discussion on the Green Papers (see Appendix-4). As an outcome of these dialogues, the following aspects need to be addressed in the development of a teacher licensure scheme:

1. Jurisdictional struggle:

Every profession faces struggles to establish its jurisdiction and then defend it as an occupation. In Pakistan, teachers as an occupational group do not have a clear influence and authority over teaching; alternative pathways are open for anyone to join the teaching profession. Teaching

license should be introduced to regulate entry into the teaching profession. It is important to stress that initially, such regulations must take a gradual stance allowing alternates and gradually improving the system through continuous learning.

2. Availability of specialised and updated knowledge, and strengthening teacher preparation:

Every profession is built on a specialised knowledge base and so is the teaching profession – knowledge of learners, subject matter knowledge, and content pedagogy. A licensure system should keep teacher education in sync with teaching standards, and updated knowledge of content and pedagogy, through continuous professional education (CPEs).

3. Building a profession:

It has been acknowledged that there is a need in Pakistan to build teaching as a profession. Fundamental to a profession is accreditation within a recognised licensure system.

There is need to attract bright students towards teachers' education institutes, which can be helped significantly by improving teachers' status in society. Throughout their careers, teachers should be provided opportunities for continuous growth, which might include opportunities as they grow: to mentor, coach, design curriculum, engage in policy development, and engage in research and inquiry.

4. Economics of licensing:

A considerable proportion of schools in Pakistan belong to the low-fee private sector. The teachers in these schools will not be able to afford licensure fees, hence they need to be provided subsidies from public sector financing.

5. Politics of licensing:

In the public sector, a large body of teachers is highly unionised. It is important that teachers' unions should be engaged in a consultative process to launch any licensure system. The consultation should keep in view the interests of children and continuous growth of professionalism amongst teachers.

6. Portability of licensing:

Since the 18th constitutional amendment, the provinces are autonomous and have the legitimate authority to bring reforms in their respective education sectors. As such, policies and practices differ related to teacher management systems adopted across the provinces. There should be a strong coordination between provinces to make the credentials valuable and portable to other provinces through an equivalence mechanism.

7. Incentives for licensed teachers:

The demand and supply of teachers should be estimated and made publicly available. Hence, licensed teachers should be incentivised in terms of recruitment and salary structures, until such a time when all teachers become licensed.

8. Contractual teachers:

Contractual teachers are hired by provincial Governments with varying standards and processes of recruitment across the provinces. A clear policy of recruitment and regularisation should be enacted. The regularisation should be made conditional upon performance assessment and licensure requirements.

9. Process of licensure:

There is a continuous debate on the appropriate type of assessment for granting licensure. Performance assessment for the licensure should be introduced. This could also be connected to teacher education programs. A criterion-based assessment with some written

tests can be trialled as an initial system for granting a teaching license with requirements for renewal through continuous professional development. A strong data management system is required to create feedback loops for continuous improvement.

The dialogues suggested that the licensure system should be one of the key steps towards quality improvement. However, its success depends on the effectiveness of the system, components of licensure and demonstration of its strong correlation with student outcomes, which might be challenging. Therefore, it needs a gradual approach in a consultative fashion.

The responses from the survey show that removal of professional qualification requirements, low quality of professional development and mismatches between the supply and demand of teachers are the top three causes for low quality teaching in Pakistan. The majority of the stakeholders surveyed favor introducing the teaching license in public and private schools to improve the quality of teaching. They believe that the licensure system will help recruit quality teachers. However, the incentives need to be in accordance with the requirements.

In conclusion, it is important that our focus should remain on improving the 'quality of teachers' and not the introduction of licensure for its own sake. We should take a holistic view of any teacher management system and should not favour a piecemeal solution; reforms need to be introduced in all segments – preparation, recruitment and retention, contemporaneously. In this holistic view, the licensure system could work as a stimulus to connect the teacher management system's components. However, it needs to be recognised that introduction of licensure will not be a simple technical issue but also a political and economic one. The participants of the dialogues strongly

recommended that the governments (federal and provincial) in consultation with stakeholders introduce teaching license and use them as a means to achieve teaching quality and improve students' learning. The provinces will also need to work together for introducing and implementing the licensure through a gradual process (see the proposed licensure policy template in Appendix 1). The licensing bodies for licensure should be set up by the government but created as "autonomous provincial bodies" that have representation from various stakeholders to increase the legitimacy of licensing in both public and private sectors. Last but not least, the licensing system should not be used as a threat for the teachers but should be considered a professional requirement; accordingly it needs to be incentivised, and introduced in a consensual way.

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1. THE CHALLENGE BEFORE US

Research continues to show teaching quality as an important and powerful ingredient in solving the problems in students' learning outcomes. It has been argued that when a student excels at learning in school they tend to stay longer, become more skilled, and more effectively contribute to a country's work force (Hanushek et al., 2016). Many nations – Finland, Singapore, Canada, Australia, South Korea – have maintained a high quality education system, and as a result, the high performance of students.

The McKinsey Report (2007) strongly argued that these high-performing systems are distinguished because of the quality of the teachers they prepare, recruit and retain. Thus, the capacity of a system to have quality teachers can determine student learning outcomes and students' success in life. An inspiring and well-trained teacher can make a child successful and a bad teacher can impede his or her future. It is recognised that a good teacher is the single most important factor contributing to students learning (Hanushek, 2011; OECD, 2005).

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Unfortunately, we see dismal learning outcomes of Pakistani students as reflected through various assessments conducted by National Education Assessment System (NEAS), ASER or TIMSS that show very weak student learning standards in the country. ASER 2019 shows that 75% of children in Pakistan cannot read and understand a simple text by age ten. The TIMSS assessment of 2019 also showed that Pakistani children stood 63rd out of 64 countries in mathematics scores. A more recent nation-wide study shows 65% students in science and 80% in mathematics have weak understanding level in elementary grades (Bhutta & Rizvi, 2022).

A more recent nation-wide study shows 65% students in science and 80% in mathematics have weak understanding level in elementary grades (Bhutta & Rizvi, 2022).

To improve the existing condition, the Government of Pakistan is continuously bringing reforms that contributes to improved teaching and learning such as: curriculum improvements, examination reforms, teacher education, recruitment policies etc. These are commendable efforts and need to be continued with critical evaluation for their further improvement and sustainability. To make these efforts more successful at the implementation level, we need to increase the capacity of teachers so that they are able to teach effectively. Because it will be the teacher in a classroom who will be enacting the reforms and hence determining the future of a child. Our students deserve better teaching.

Good teaching comes from good professional education. 'Good' professional education should be credible, demonstrable and result oriented. Credible i.e. achieved through quality degree/post graduate or teaching certificates. Demonstrable i.e. displayed in classroom practices and professional conduct. Result oriented i.e. resulting in improved learning for students as evidenced through their scores, demeanor and character. The students learning scores, alongside various research and anecdotal encounters suggest that Pakistani teachers need to work a lot harder to be considered true professionals alongside doctors, nurses, engineers, or lawyers (Ali, 2018; Bhutta & Rizvi, 2022).

A good teacher is like a good doctor. A bad doctor despite having a good laboratory or medicines cannot, if they do not possess the skills, treat a patient adequately. Similarly, a bad teacher despite having good curriculum or examination system cannot make a student a successful learner. Importantly, a good teacher can not only make students learn better but also help in their future economic wellbeing. Hanushek (2011) calculated in the US context that a good teacher [but not a great teacher] can increase each student's lifetime earnings by \$10,600. A class of 20 students' aggregate earning will be raised to \$212,000 [great teacher will increase aggregate to \$400,000]. We can also think in terms of the negative effect of a low performing teacher on students' earning, which would be \$400,000 for the same 20 students mentioned earlier. Hanushek (2011) estimates that if 8-12% of low performing US teachers are replaced with average performing teachers, the US students can reach to the level of Finland. Quoting from Shuls (2018, p. 970):

Hanushek and Rivkin (2006) found the difference between an effective teacher and an ineffective teacher can be as much as a year's worth of learning. They note that students in the average teacher's classroom learn a year's [over the course of a school year] worth of material, while students in an ineffective teacher's classroom learn only half a year's worth of material and

students in a great teacher's classroom learn a year and a half worth of material. As a result, being in an ineffective teacher's classroom for 2 years could put a student a full year behind their average classmate and even further behind students who have had highly effective teachers.

The economic wellbeing of students also translates into economic wellbeing of the country. Hence, it is in the interest – both social and economic – of any country to ensure better teachers in all classrooms. Good teaching will also be able to retain students who may currently be pushed out of school because of bad schooling experience (Faran & Zaidi, 2021).

So the biggest challenge before us is to ensure availability of high quality teachers in Pakistan's classrooms.

More of the same or small changes are not going to work; it's very easy for people to say let's try little marginal changes and see what we get from that. That's not what you should be aiming; you should be doing the change that are necessary to lead your schools and economy forward.

Effective teachers will make you richer! (Prof. Eric A. Hanushek, Policy Dialogues, 8th Feb 2022)

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2.

THE TEACHER MANAGEMENT SYSTEM: A COMPREHENSIVE APPROACH TO IMPROVING QUALITY OF TEACHING

Our research revealed that high quality systems take a systemic view of teacher development and recruitment. Darling-Hammond (2017) argues that a well-organised teacher management system has at least three major components/sub-systems: i) Preparation; ii) Recruitment and iii) Retention and appropriate conditions to join teaching profession.

The preparation system ensures that good quality prospective candidates apply and are prepared through high quality teacher development programs (degrees or certification). The recruitment system ensures that high quality graduates from teacher development institutions are selected, inducted and deployed in schools where they are needed the most. The retention system ensures availability of attractive employment conditions and continuous professional development of teachers so that they remain satisfied and up to date in relation to contemporary pedagogy. All these three components work in-sync to ensure that good teaching takes place in classrooms.

An education system that manages to achieve high performance in all these three areas results in high quality teaching and subsequent higher quality student learning outcomes (e.g., see Programme for International Student Assessment [PISA], 2018 for China, Singapore, Finland, Canada, South Korea). Various countries around the world have tried to achieve right balance between these three components, the ones who have achieved this balance right are also ranked higher in most international benchmarking systems e.g. PISA, TIMSS, Progress in International Reading Literacy Study (PIRLS) etc.

We have tried to look at the comparative strengths of different teacher management systems across selected countries through an adapted rubric from Wang et al (2003) (see Appendix 3). Table 1 below shows that those systems which have stronger teacher management structures also perform better in student achievement. Note that Pakistan is ranked low and has a weak teacher management system.

Figure 1 The teacher management system

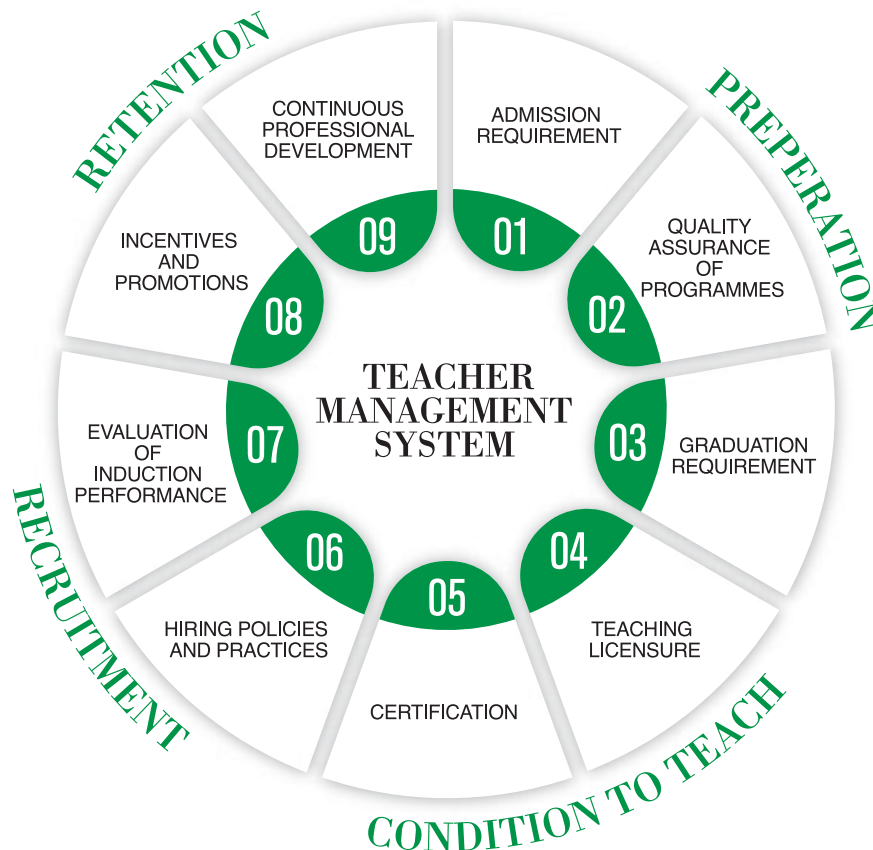


Table 1 Strength of teacher management systems across selected countries

	PISA 2018 Ranking	PREPERATION				CONDITION TO TEACH		RECRUITMENT		RETENTION
		Admission requirement	Quality assurance of programmes	Graduation requirements	Alternative routes possible	Certification	Teaching licensure	Hiring policies and practices	Evaluation of induction performance	CPD
China	1 st	⊗	●	○	Yes	Yes	Yes ¹	●	●	Yes
Singapore	2 nd	●	●	●	No	Yes	No	○	●	Yes
Finland	7 th	●	●	○	No	Yes	No	○	●	Yes
South Korea	9 th	●	●	⊗	No	Yes	No	●	●	Yes
USA	13 th	⊗	●	⊗	Yes	Yes	Yes	○	●	No
UK	14 th	⊗	●	⊗	No	Yes	Yes	○	●	No
UAE	46 th	⊗	○	○	Yes	No	Yes	○	⊗	Yes
Malaysia	55 th	●	⊗	○	No	Yes	Yes ²	○	●	Yes
Pakistan	63 rd ³	○	○	○	Yes	No	No	⊗	○	Yes
India	73 rd ⁴	○	○	○	No ⁵	No	No	⊗	○	No
Bangladesh	---	○	○	○	Yes	No	No	⊗	○	Yes

Key : ⁶ ● Strong ⊗ Medium ○ Weak

Source: Analysis carried out by the authors (see Appendix – 2 for detailed description of the teacher management system in selected comparative countries)



It took Finland about 30 years [of development from being] a poor country that did not have a strong education system to [possessing] one of the top education systems in the world. One of the key features that helped them was the collective decision that education was a really important investment that will also have economic outcomes. (Prof. Karen Hammerness, Policy Dialogues, 16 Mar, 2022).



1 In China, candidates with teaching qualification degrees are exempt from licensing exams. The PISA 2018 results for China are from four provinces – Beijing, Shanghai, Jiangsu and Zhejiang. The 10% most disadvantaged students in these provinces showed better reading skills than other average students of Organisation for Economic Co-operation and Development (OECD) countries and similar skills to most advantaged students.
 2 In Malaysia, tests are not taken but gaining a permit to teach is compulsory, especially for private school teachers.
 3 Pakistan's ranking is presented from TIMSS results 2019.
 4 India participated in the PISA test only in 2009.
 5 In India, a teaching qualification is mandatory along with academic qualifications.
 6 The key is adopted from Wang et al. (2003) using a rubric to rate the areas country-wise (See Appendix 3).

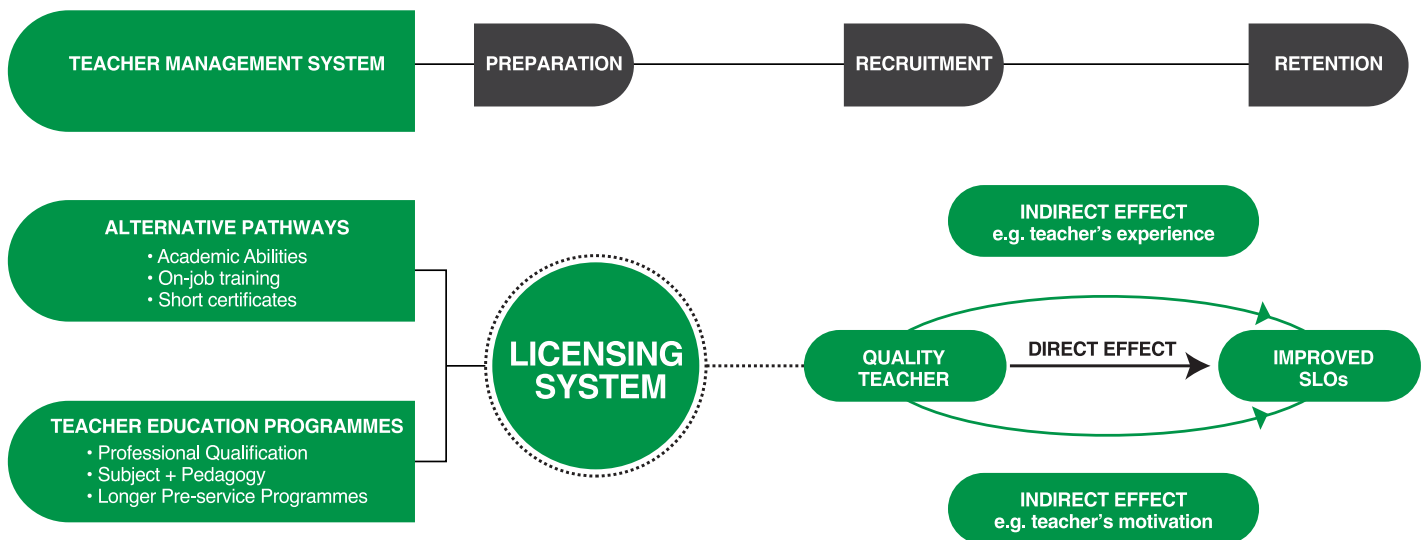


3. **TEACHING LICENSE: AN INTEGRAL PART OF THE TEACHER MANAGEMENT SYSTEM**

One way we can engender and enhance professionalism amongst teachers, so that better teaching learning takes place, is through introducing a teaching license. These license would ensure a systematic recognition of proper training, conduct and continuous professional development among teachers. The continuation of licensure could also provide on-going assessment of teacher effectiveness in the classrooms. Also, licensing will guide implementation of a transparent result-oriented accountability. Most developed countries (see Table 1) put in place strict conditions to teach in schools either in the form of license or certification. If we are to make any true headway in terms of improved teaching and learning we must ensure development, provision and sustenance of quality teachers in our classrooms. Teaching License could be a vehicle/stimulus and appropriate condition that can ensure availability of quality teachers for our students. Without quality teachers, the positive outcomes of any good curriculum will remain unrealised. Teacher quality is more significant than any curriculum or examination system. Figure 2 below shows how teaching license can affect the whole teacher management system, ultimately resulting in improved student learning outcomes.

Looking at Figure 2 above, one can see that ‘Improved Student Learning Outcomes’ (SLOs) depend on quality teachers. These teachers are in turn prepared through various teacher training programs. In the context of Pakistan these credentials are an ADE (Associate Degree in Education), a B.Ed Hons. (four-year Bachelors in Education), B.Ed (one and half/two years) and M.Ed (Master of Education). However, we know that in Pakistan anyone can become a teacher without these professional qualifications and only on the basis of their general bachelors or master’s qualifications; they can also gain training through alternative avenues. Irrespective of the entry pathways into teaching, all teachers must demonstrate teaching skills through lessons, portfolios etc. Within this context, we propose, based on strong literature support (Boyd et al, 2007; Bhutta & Rizvi, 2022; Darling-Hammond, 2017), that a teaching license can be a stimulus to maintain teaching standards. The licensing requirement could have a backwash effect to demand a better teacher preparation system, and a forward effect by recruiting good teachers and retaining them.

Figure 2 How teaching license can affect the teacher management system



CONCEPT OF TEACHING LICENSE

As observed above almost all high performing countries have put in place conditions for prospective teachers before they start teaching. These conditions can take various modalities, most prominent of them are – certification or licensure. The main purpose of creating such conditions is to uphold minimum standards and to avoid public harm. The literature points to a sharp distinction between certification and licensing which is sometimes neglected in practice. Shive (1988) distinguish between licensure and certification as follows:

Licensure is a legal process by which individual states set minimum standards for entry into a profession. These standards are designed to ensure that the individual is competent to practice, and, therefore, the standards protect the general public... Certification is a process which relies on high standards set by members of a profession through their own independent organizations for entry into the profession. Certification is a professional rather than a legal process, and it tends more toward knowledge-based assessments for professional entry... (P.2).

In our study of various systems across the globe, we find that generally, smaller systems tend to have certificate requirements, while larger systems have licensing requirements (see also Table 1). The countries like Finland and Singapore require mandatory certification from prospective teachers. The prospective teachers apply to government accredited institutes (e.g. National Institute of Education, Singapore) to become teacher and receive certification at graduation. In this way, system does not allow entry into teaching profession from any other route and the certificate act as condition without which one cannot teach in schools. The larger systems such as USA have multiple pathways to enter into teaching and hence, the licensure system is put in place to ensure that prospective teachers attain licensure, which assure that they demonstrate attainment of teaching standards and meet the conditions to enter into teaching profession. Given the huge number of teachers and the variety of pathways through which these teachers join teaching profession, licensing system seems more appropriate for Pakistani context.

Licensing offers the characteristics that would distinguish teaching from any other kinds of work and would ensure the teaching profession maintains high quality standards.

Because, similar to professions like medicine, law and engineering, teaching requires specialised knowledge, skills, status and competencies. Moreover, teaching, globally, is still in the process of gaining its full professional status (e.g., Ingersoll, 2017). The literature suggests that teaching license help teachers demonstrate teaching competence and gain professional status (Ingersoll, 2017; Murray, 2000; NCTAF, 1996). Licensure is also viewed as representing “socio-political events with heavy symbolic value, designed to suggest legitimacy, to reassure the public that the teacher is competent, properly trained, and thoroughly reliable” (Cronin, 1983, p. 172). It may be for this reason that licensure is a legal process for the state to control quality rather than focusing on institutional professional development.

The decisions regarding licensing are predominantly based on two ways: one is to take exams based on pedagogical and subject-content knowledge and, the second is performance-based assessment which involves prospective teachers teaching, demonstrations, and sharing their portfolios and evidence of teaching. While, the former is based on passing marks screening out the individuals with lower marks, the later strategy offers to examine prospective teachers’ teaching skills via demonstration of actions in classroom contexts (Santagata & Sandholtz, 2019).

It [teaching] can be powerful if we can create ways that teachers acquire the features—strong academic background, preparation prior to entry, certification in the field taught, experience, board certification/license—of training (Prof. Linda Darling-Hammond, 18 Nov, 2021)



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The aforementioned conceptual framework, global comparison and Pakistan’s situational analysis is the result of thorough literature review. Further details are attached in the appendices as below:

Appendix 1 is the template for the teaching license policy which incorporates the policy dialogues and recommendations.

Appendix 2 provides statistics and global practices used for development and recruitment of teachers. The Appendix also highlights the PISA results scores of the relevant countries.

Appendix 3 is the rubric used for the comparison of teacher management systems of the countries considered.



4. THE POLICY DIALOGUE – PROCESS

To find out whether a teaching license policy can improve education quality in Pakistan's schools and what the issues, debates and concerns related to the licensing policy could be, we followed a number of steps. In the first step, we carried out a situational analysis and literature review of both theoretical and empirical studies. The emerging issues were converted into about 12 green papers as a second step. These green papers included a brief discussion on the issues and key questions related to them (e.g., governance and accountability of teaching license; see Appendix 5). In our third step, we conducted policy dialogues with national and international key stakeholders, and a quantitative survey to get the views of stakeholders about licensing policy and teaching quality across the country. The dialogues were conducted in three forms: (a) Macro/grand policy dialogue (b) Micro policy dialogue in the form of seminars, and (c) one-to-one dialogues.

4.1. MACRO/GRAND POLICY DIALOGUE

A grand policy dialogue event for the whole day was arranged for the discussion on the green papers and issues that emerged from seminars. The grand dialogues included national and international participants. At the start of the event, a conceptual note was presented by Dr. Sajid Ali to the participants to enable understanding about licensing. Two keynote speakers, Dr. Linda Darling-Hammond and Dr. Irfan Muzaffar were invited to explore the possibilities of licensing in improving the quality of teachers with a structured and un-structured question session afterwards.

In the second half of the day, the participants were divided into six breakout rooms for discussion on the green papers issues. For in-depth discussion, a session lead was invited to lead the session keeping in view their expertise (for details see Appendix 6).

Along with session leads, faculty members, government official and at leadership level in private sector were invited as key participants. Both the key participants and session leaders were given the guidelines, conceptual notes and green paper issue prior to the policy dialogue event. All the participants who participated were given the choice to select one issue for discussion in the

breakout rooms. The participants were placed as per their selected issue for debates and discussion in the room. The total number of participants varied in the dialogues ranging from 76 to 116 key stakeholders.

4.2. SEMINAR SERIES AS PART OF THE DIALOGUE

In this globalised era, policies are often borrowed from other nations and contexts for developing countries, and implemented. In order to overcome the challenge of direct borrowing and to understand the conceptual underpinning and different models used in the high-performing systems, we invited key scholars for seminars of one hour 30 minutes whose work we had consulted during the initial phases. The guest speakers were asked to talk for 40 to 50 minutes. After the talk, participants were invited for questions/answers and discussions with the speaker for 40 to 45 minutes. Of the two seminars, the first guest speaker was Dr. Dan Goldhaber, Director of the Center for longitudinal data in education research at the University of Washington. Dr. Goldhaber deliberated on the topic of 'Improving teachers' quality through licensing'. The second guest speaker was Prof. Low Ee Ling, Dean of the National Institute of Education at Nanyang Technological University, Singapore. Prof. Low deliberated on the topic of 'How Singapore prepares, recruits and retains quality teachers: Lessons for Pakistan'. While, the third and fourth seminar were scheduled on 8th Feb and 16th March 2022 with the guest speakers Prof. Eric A. Hanushek from Stanford University and Prof. Karen Hammerness, senior educational research director at American Museum of Natural History (see Appendix 5).

“

We conducted policy dialogues with national and international key stakeholders, and a quantitative survey to get the views of stakeholders about licensing policy and teaching quality across the country.

”

4.3. ONE TO ONE DIALOGUES

To make the policy dialogues more robust, we carried out one to one dialogues with key representatives who were involved in the licensing agencies from other professions like medicine and engineering. Our purpose was to get a holistic view about licensing by involving the relevant key stakeholders. Moreover, one to one policy dialogues were also conducted to ensure the representativeness of all the key stakeholder groups if they had missed out on other policy dialogue events.

All the recorded policy dialogues and keynote speeches can be viewed from the official website page of the Aga Khan University Institute for Educational Development <https://www.aku.edu/iedpk/research/Pages/policy-dialogues.aspx>

4.4. SURVEY

To enrich our understanding through wider participation of views we developed an online survey on issues related to licensing, that was completed by educational stakeholders in Pakistan (see Table 2). We were also interested to know the reasons participants gave for the low quality of teaching in the country. For this, we asked participants to rank the reasons from the most impactful to the least (see Appendix 7). The survey was developed based on the extensive literature review related to teacher licensing and was reviewed by experts in quantitative research and education policy. The data was collected through online means using SurveyMonkey. A total of 982 participants filled the questionnaire. Table 2 below displays the demographics of the participants.

Table 2 Demographics of the survey participants

Demographics	Group	N	%
Gender	Male	446	45
	Female	536	55
School Type	Public	308	31
	Private	570	58
	Others	104	11
Region	Punjab	196	20
	Sindh	486	49
	Khyber Pakhtunkhwa	131	13
	Balochistan	37	4
	Gilgit Baltistan	103	10
	Azad Kashmir	29	3
Role of Participant	Teacher	518	53
	Parent	26	3
	Academic/Researcher	140	14
	Principal/Head	160	16
	Prospective Teacher	19	2
	Others	119	12



5. OUTCOMES OF THE DIALOGUES AND SURVEY

The dialogues resulted in a number of outcomes which are presented as below:

1. Teaching license – advice from global thinkers
2. Concerns raised during dialogues and emerging recommendations
3. Survey outcomes about possibility of license and reason for low quality teaching

5.1. TEACHING LICENSE – ADVICE FROM GLOBAL THINKERS

5.1.1. UPHOLD STANDARDS TO IMPROVE TEACHING PROFESSION

In licensing, the fundamental element is the formulation of professional standards, which are created on the basis of research and authentic practices, emphasised Prof. Linda Darling-Hammond, during the policy dialogues. The professional standards provide ethical and technical guidance for preparation, licensure and accreditation to the teacher management system. The standards articulate what teachers should know and what skills they need to perform in the classroom. In addition, the standards also provide coherence, by providing a sense of shared conceptual understanding of what good teaching looks like at a variety of career stages, as well as shared language, to support that collective vision of good teaching.

She further suggested that we have to think of teaching as an expert profession, like medicine and law. However, it is important to consider that professions like medicine have a created a strong desire for individuals to enter due to the higher pay level as compared to teaching. But, it seems that all of these have common elements that make them expert professions. Firstly, the professions are committed to the welfare of the clients with whom they deal. In case of teaching, these clients are students. Secondly, the profession develops a body of knowledge that is transmitted and continuously expanded upon, to its members. By this we mean, it should not be an individualistic learning from one's own practice but what

an entire profession has learned and codified through research and its transmission. Thirdly, it has defined and enforced standards of practice that guides what should be happening “in the field”. Based on these aspects, in the teaching profession, we expect teachers to be effective in promoting learning and implementing a set of standardised professional practices. These practices cannot be learnt automatically but are rather developed with rigorous process, and acquiring the skills and knowledge needed through theory and practice, hence, making teaching a reputable and expert profession.

To improve professionalisation of teaching in Pakistan, Prof. Darling Hammond drew upon the analogy of the medical profession from the USA. She argued that the medical profession was in a similar condition a century ago, as the teaching profession in Pakistan is currently. The medical profession used to be an apprentice-based system with only a few weeks of course work undertaken. Now, the medical profession requires extensive study and practice. It requires performance-based licensure before graduates are allowed to professionally practice medicine. The licensing and accreditation systems continuously keep the preparatory programme in sync with requirements of practice.

5.1.2. ENSURE RIGOROUS RECRUITMENT AND DEVELOPMENT OF TEACHERS THROUGHOUT THEIR CAREER

Professors Darling-Hammond, Low Ee Ling and Hammerness emphasised that rigorous recruitment and selection policies mattered to support high quality teaching. In many countries, in the international study Professor Hammerness drew upon, the researchers observed a high bar for selection into teaching—but they did observe variation in the timing of selection- whether it was for selection into teaching or into teacher education. She pointed out that in a number of countries in her study, desirable teacher candidates were required to have

strong academic qualifications. However, selection was rarely solely based on academic strength. In many contexts, candidates also needed to demonstrate interest in and passion for working with children. In many of the countries studied, teacher education selection processes also included means of assessing dispositions, commitment to working with young children or adolescents, and other characteristics that might matter for good teachers.

Related to the key role of professional standards and preparation, Prof. Karen Hammerness, drawing on studies of high performing systems and jurisdictions from around the world, also emphasised the important role they played in promoting a coherent context for teacher learning and, in turn, to support quality teaching. She further noted that in these settings, teacher learning exists on a continuum – reflecting the notion that teachers develop over time from pre-service to veterans or masters; teachers have different needs and domains at different stages in their career. This promotes the idea that teaching is intellectual work and knowledge of the professional deepens and grows over time. It also allows for the targeted development of different kinds of learning experiences, for teachers at different points in their careers—starting with pre-service, to induction, to novice, to mid-career and to mastery.

5.1.3. INTRODUCE LICENSURE TO ENSURE ENTRY OF QUALITY TEACHERS AND LIMIT LOW PERFORMING TEACHERS

That licensure regimes ensure that high quality teachers enter into the profession was agreed upon by both Profs. Darling-Hammond and Low Ee Ling. Sharing examples from Singapore, Prof. Ling, explained that their recruitment and selection policies attract the brightest candidates to enter into the profession. These candidates are very well-prepared through good pre-service training programs. However, Singapore’s educational system is very small and can be better managed with fewer institutions. In the case of geographically large systems as found in the USA, India, China, Pakistan and Bangladesh, education systems need good gate-keeping, to allow only quality

teachers into the profession. The licensure system could thus be helpful for ensuring entry of good teachers within large jurisdictions, advised Prof. Ling.

Professor Hanushek further suggested that good teachers make the most significant contribution to the students’ learning, which in turn increases students’ ability to earn and eventually benefit the national economy. As he put it plainly, “the future of economic and social development of Pakistan depends on only one thing: that’s improving the [country’s] schools. The economic gains of better teachers are very large”. The cost of not having good teachers is equally bad and affects national growth negatively.

The future of economic and social development of Pakistan depends on only one thing: that’s improving the [country’s] schools. The economic gains of better teachers are very large.

It is desirable that we develop licensure in Pakistan in such a way that it ensures that good teachers join the system and developed over time. Additionally, and perhaps more importantly, the licensure system can allow us to limit the entry of undesirable teachers in the system, whose effect would be more negative as shown by Prof. Hanushek. which is more important given the kind of negative effects that an undesirable teacher can create. There will however, be contextual challenges that need to be understood, debated and resolved over time.

5.1.4. FOCUS ON LEARNING OF STUDENTS AND IMPLEMENTATION OF POLICY

All efforts towards licensing should focus on students' well-being and learning as their core. Prof. Goldhaber, pointed to the fact that the effectiveness of the licensing is dependent on the strong correlation between the components of the teaching license and student outcomes. In terms of licensure tests, studies suggest that licensure is more effective for higher-grade students and technical subjects like mathematics and science.

In the context of Pakistan, a teaching license is very desirable as there is a need for a gatekeeping mechanism that can help improve students learning, opined Dr. Irfan Muzaffar. He also emphasised that the implementation of the licensing policy requires concerted efforts. There is a need to understand the ways in which contextual factors work against the implementation of the policy in practice. We will need to bring all stakeholders on the same page to facilitate implementation of licensing policy. Importantly, the licensure can be more effective if it is made as a valuable credential from two perspectives: (a) policies across the provinces value it, and (b) the portability of licensing is possible.

Below we share the synthesis of various threads of discussions during the dialogues, which highlight the concerns shared by stakeholders and also recommend solutions. We hope that this can provide a useful way forward for policy makers, practitioners and academics.

5.2. CONCERNS EMERGING FROM THE DIALOGUES, AND RECOMMENDATIONS

The main dialogue gathered various educationists across Pakistan who were sub-divided into various groups for effective deliberations. These groups looked at various aspects of the teaching license and shared their views in the plenary sessions. In addition to these presentations, the participants of dialogues raised important issues throughout the seminar series and the individual dialogues. All these deliberations have been synthesised and presented under major themes below. Each theme presents a concern followed by recommendations to overcome that concern. All concerns and recommendations have emerged from consultation with stakeholders during various dialogues.



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5.2.1. JURISDICTIONAL STRUGGLE

Every profession faces struggles to establish its jurisdiction and then defend it as an occupation. Teaching as a profession is in a similar struggle and is yet to settle its jurisdictional boundaries in the context of Pakistan. The teaching profession needs to establish an exclusive right to teaching and push out all alternatives, if they are posing a threat to teaching quality. Jurisdiction is secured when occupational groups have an exclusive ritual of initiation i.e., initial teacher education and a system of discourse and practices to govern the members in the profession. In Pakistan, the occupational group of teachers do not have a clear influence and authority over teaching; alternative pathways are open for anyone to join teaching profession. So, how can we create the jurisdictional exclusivity for the education profession just as it exists in other professions? Or should we even attempt to claim jurisdictional exclusivity, given the fact that we already have alternative pathways to teaching?

5.2.1.1. RECOMMENDATIONS

1. Strong regulations to be introduced, like those in the Pakistan Engineering Council (PEC)/Pakistan Medical Council (PMC) by the licensing authority. However, looking at the current situation we have to have a gradual approach with some time-limited actions. license in teaching may not carry similar incentives as it carries for medical and engineering graduates. We need to be mindful of this reality and adopt a gradual approach while increasing incentives for having teaching license.
2. The occupational groups such as teacher education and schools can come together to create and sustain the profession in terms of quality to combat the critique of preparatory programmes.
3. Existing teachers, through traditional or alternative pathways, can get a license after meeting licensing requirements. The license can be categorised into: beginning, mid-level and expert teacher depending on their competency level. Each level could accrue certain incentives. (see also 5.2.6 for portability of license)

5.2.2. AVAILABILITY OF SPECIALISED AND UPDATED KNOWLEDGE, AND STRENGTHENING TEACHER PREPARATION

Every profession is built on a specialised knowledge-base and the teaching profession is no different. A knowledge base for teaching is created on at least three domains, highlighted Prof. Darling-Hammond. First, is knowing about learners and how they develop. Second, is the subject-matter knowledge. Third, is content pedagogy. The blend of these domains ensure strong and comprehensive preparation and leads to teacher retention in the profession.

In Pakistan, the specialised research-base knowledge exists with low intensity due to which the profession is critiqued for its low quality. As a result, current policies allow almost anyone to become a teacher. The problems with teacher education programs are: (a) faculties are ill-prepared to teach to prospective students, (b) no links between teacher education departments and other departments of universities (e.g., Mathematics) exist, (c) research is not used to improve practice and policy. So, to create a specialised knowledge-base, teacher education institutes and schools will need to work together to create the discourse as well as practice of professionalisation, for example as found in Shulman's idea of Pedagogical Content Knowledge. This initiation ritual will help us to conceptualise the repertoire and practice of professionalisation within teaching.

5.2.2.1. RECOMMENDATIONS

1. Teacher education institutes should be connected with other departments for content enhancement of students and faculties should have mastery of the pedagogical content knowledge.

2. Practicum in its traditional form (e.g., teaching without mentor support, a lack of learning teaching with guidance, modeling feedback, opportunities to see good teaching modeled by experienced teachers, rehearsing and testing practices with guidance) might lead to wrong or invalid assertions about teaching practices. It should not be left to trial and error, but based upon explicit modelling of practices under expert supervision so that the learners scaffold these models.
3. The longer B.Ed Hons courses should be given priority in employment in order to make it valuable compare to alternative pathways and short courses. However, the quality of longer teacher education programs also needs to be improved. Short-term CPEs should be initiated for continuous update of knowledge and skills.
4. Licensure and accreditation should keep the country's teacher education programs in sync with each other and with the knowledge base facilitated by the professional standard
5. To look around and consider the resources already available (e.g., quality curriculum, standards, and school sites to support teacher learning)
6. Connecting veteran teachers, out-of-school educators and university faculties in communities of practice. Picking good schools as teacher training schools for teachers' professional learning.

5.2.3. BUILDING A PROFESSION

It has been acknowledged that there is need in Pakistan to build teaching as a profession. The bureaucratic approach which is used to manage the profession in many societies. The approach is problematic however, because it restricts teachers' use innovative practices. For instance, teachers may be required to follow what is written in textbooks rather than what works in their specific context. Therefore, decisions in this approach comes from a hierarchy making practices standardised at the school level, giving the notion that teachers may

not require a lot of skills. It emphasises on 'doing the things right' rather than 'doing the right things'. In reality though, pedagogical practices cannot be standardised if they are going to be effective, because children are not standardised, and they do not learn at the same pace and in the same manner. Children have different needs and experiences and that is why we need to develop a profession that enables collegial activity-based practices.

"If you want teachers to stay in profession; you really need them to come up with [a] high sense of wanting to become teachers and/or being proud to become teachers. Then the rest is just drills to help them stay [in the profession]" (Prof. Low Ee Ling, Policy Dialogues, 25 Nov, 2021)

5.2.3.1. RECOMMENDATIONS

1. The preparation-based knowledge for teacher development should be continuously updated based on research and professional knowledge. There is a need to make schools hubs of professional learning where training faculties, expert mentors and teachers work together.



If you want teachers to stay in profession; you really need them to come up with [a] high sense of wanting to become teachers and/or being proud to become teachers.

Then the rest is just drills to help them stay [in the profession]"
(Prof. Low Ee Ling,
Policy Dialogues, 25 Nov, 2021)



2. There should be a strong accreditation and performance based licensure system to control the quality of teaching.
3. There is a need to attract the brightest students to training institutes, hire the top cohort of students, and retain those teachers. The profession should be demanding the best and most able of Pakistani society. Therefore, it requires investment to provide incentives, compensation, and good salaries at all levels, for teachers making the profession to compete in the labor market.
4. Give teachers multiple pathways for their career-long growth and development from beginning to professional teacher levels, which might include opportunities as they grow, to mentor, coach, design curriculum, engage in policy development, and engage in research and inquiry.
5. A bureaucratic approach to the profession will control practices and it will not be effective for teachers. Therefore, decisions should be made, by teachers and for teachers, on standards of the practice, based on views of professionals and pedagogical research.

5.2.4. ECONOMICS OF LICENSING

In Pakistan, a huge proportion of schools are low-fee schools within the private sector. The number of private institutions in Pakistan are reported to be 116,015 (Pakistan Education Statistics, 2021). The hiring practices of the teachers in these schools rely on attracting teachers with lower qualifications who can be hired on low salaries too. So for these schools, there would be additional costs associated with licensing and it will be difficult for either the teachers or the administrators of low-fee schools to bear that cost. Such schools might shift the licensing costs to parents who would resist, which will work against licensing. Therefore, it needs to be determined as to who will bear the cost of licensing.

The costs associated with licensing might make the profession expensive, which would add difficulty for some hoping to become teachers, and this might reduce the supply of teachers. So it's important to consider the contexts of teacher recruitment policy, the teacher labour market, and overall political economy as compared to other professions. The government should realise that good quality teachers add to GDP (Hanushek, 2011) and if the government bears the cost of licensing it will be repaid in a longer term.

5.2.4.1. RECOMMENDATIONS

1. A licensing authority can be setup with a high degree of autonomy through public sector funds. It is important that such an authority remain independent from various influences. It should have representation from various stakeholders. Government should introduce licensing in all types of schools.
2. For some schools (e.g. low-fee schools, NGO schools, trust schools, Public Private Partnership [PPP] schools etc.) the cost of the licensing should be borne by government, donor agencies, partners etc. The independent authority should also have a subsidy scheme for prospective teachers in need of financial support.

5.2.5. POLITICS OF LICENSING

Currently in Pakistan there is no system that can effectively differentiate between good and bad teachers. Generally, teachers do not like to be evaluated. In the public sector, a large body of teachers is highly unionised, and they will not like licensing to be imposed on them. If the unions are not convinced, then the system will work against the idea of licensing. If licensing work against the unions, it becomes challenging for the politicians to pass and enact legislature. So there are questions which arise: who will be licensed? How? And how do we bring unions to be in favour of licensing?

5.2.5.1. RECOMMENDATIONS

1. Licensure is not a technical problem but a political, contested and contextual issue. Therefore, teacher education and teaching license should create the political space for the policy and reach a negotiated settlement with politicians and unions.
2. It will be more feasible to introduce licensure for new teachers only, in the first stage. Currently in-service teachers and/or senior teachers should be engaged in professional development courses. They may therefore be incentivised without threatening their jobs.
3. Unions can be useful for identifying expert mentors for newly hired teachers or for offering professional development courses.

5.2.6. PORTABILITY OF LICENSURE

Since the 18th constitutional amendment, the provinces are autonomous and have the legitimate authority to bring reforms in their respective education sectors. Thus, educational policies and practices differ related to teacher management systems across the provinces. Each province has their own set of requirements for the preparation, recruitment and retention of teachers. If the requirements of the licensure are different in different provinces, it needs to be ensured that candidates with a license in one province are eligible to move the license into another province. Evidently, it will be greatly restrictive for teachers to meet different licensure requirements again and again when moving from one province to another.

5.2.6.1. RECOMMENDATIONS

1. The provincial licensing authorities should work together to make the licensure valuable so that successful candidates can move it around the country. This can also serve as an incentive for the licensing. Besides, portability of license will be important for labour mobility at the macro scale, and thus for an effective distribution of labour resources.
2. To incentivise, the licensure can be connected to teachers' career-track promotions. This should be

from senior to master teachers, including leadership roles. The experience of Singapore is worthy here.

5.2.7. INCENTIVES FOR LICENSED TEACHERS

The robustness of the labour market is fundamental for thinking about the supply and demand of the teachers in the licensure system. Because, imposing licensure will be another requirement to be met by the teachers, their pay and compensation should also be competitive with other professions. There is a general perception in Pakistan that teachers' salaries are not attractive, and that teaching does not offer good professional progression. The license can improve the professional standing of teachers, streamline their career progression and help improve the teacher incentive package. Crucially, the changes can attract quality candidates to join the teaching profession.

5.2.7.1. RECOMMENDATIONS

1. Demand and supply of teachers need to be estimated through professional statistical measures, which should be made available openly; availability of such data may attract new recruits for the profession.
2. Competitive salaries on par with the other professions and improved working conditions should be ensure for teachers, which will also improve the status of teachers.

5.2.8. CONTRACTUAL TEACHERS

Contractual teachers are hired with varying standards and processes of recruitment across the provinces. The regularisation and retention policies of these teachers are also inconsistent. The regularisation of these teachers is achieved through political agitation by the unions or through court interventions. In the absence of any standardised policy and process by the government, the unions' protests pressurise the government to regularise without any standardised policy. So, what can be done for contractual teachers to license them and to ensure their professional standards?

5.2.8.1. RECOMMENDATIONS

1. There should be a clear policy for the recruitment and regularisation of contractual teachers. However, there is a need for concerted efforts by the stakeholders, on the requisite quality in contractual hiring and regularisation.
2. Regularisation can be made conditional on performance assessment, including meeting the licensing requirements. This could be supplemented with professional development during the contract period.
3. The license should be time-bound and should require renewal for continuity of service. However, the renewal criteria should be rigorous and aim to meet higher standards.

5.2.9. PROCESS OF LICENSURE

There is a continuous debate on the appropriate type of assessment for granting licensure. While, a paper-pencil test format cannot capture the complexity of teaching practices and performance of the candidates, it may still be useful to gauge their pedagogical concepts and subject mastery. The test format is also easier to conduct and manage. However, there will be a greater need to ensure the validity and reliability of the test and its alignment with professional standards. A more comprehensive assessment can be done through assessing teachers' performance portfolios, and observations. However, such a process will require efforts to ensure transparency, and availability of experts who are professionally well-trained to carry out this assessment in a timely manner.

5.2.9.1. RECOMMENDATIONS

1. Performance assessment for licensure should be introduced as it provides evidence about teachers' performance. The performance assessment should have a developmental focus by identifying professional development needs of teachers. This will make the licensing less threatening, aligned with professional development and helpful for teachers by giving them feedback to improve.

2. The performance-based assessment should also be connected to teacher education programs to help prepare the prospective teachers towards end goals.
3. Absolute and criterion-based assessment can be used to give license. The criteria should be based on national professional standards for teachers.
4. Initially, assessment can be in the form of a written test administered by an approved examination body to grant general licensing for teachers. Later, other levels of licensing can be introduced along with provision of associate training required for a particular level.
5. There should be a quality assurance mechanism to look at the process of teacher licensing. The quality assurance mechanism should be designed in collaboration with training institutes and accrediting organisations (NACTE).
6. We should create a data management system that also has feedback loops. It will help us to know about the value of particular aspects of the licensure system (e.g., pre-service experiences, induction experiences and ongoing classroom performance).
7. The database of licensed teachers should be available with relevant government bodies like National Accreditation Council for Teacher Education (NACTE), Sindh Teacher Education Development Authority (STEDA), Quaid-e-Azam Academy for Educational Development (QAED) etc. The schools should also be given access to the teachers database to verify teachers' licensing status.

5.3. SURVEY RESULTS

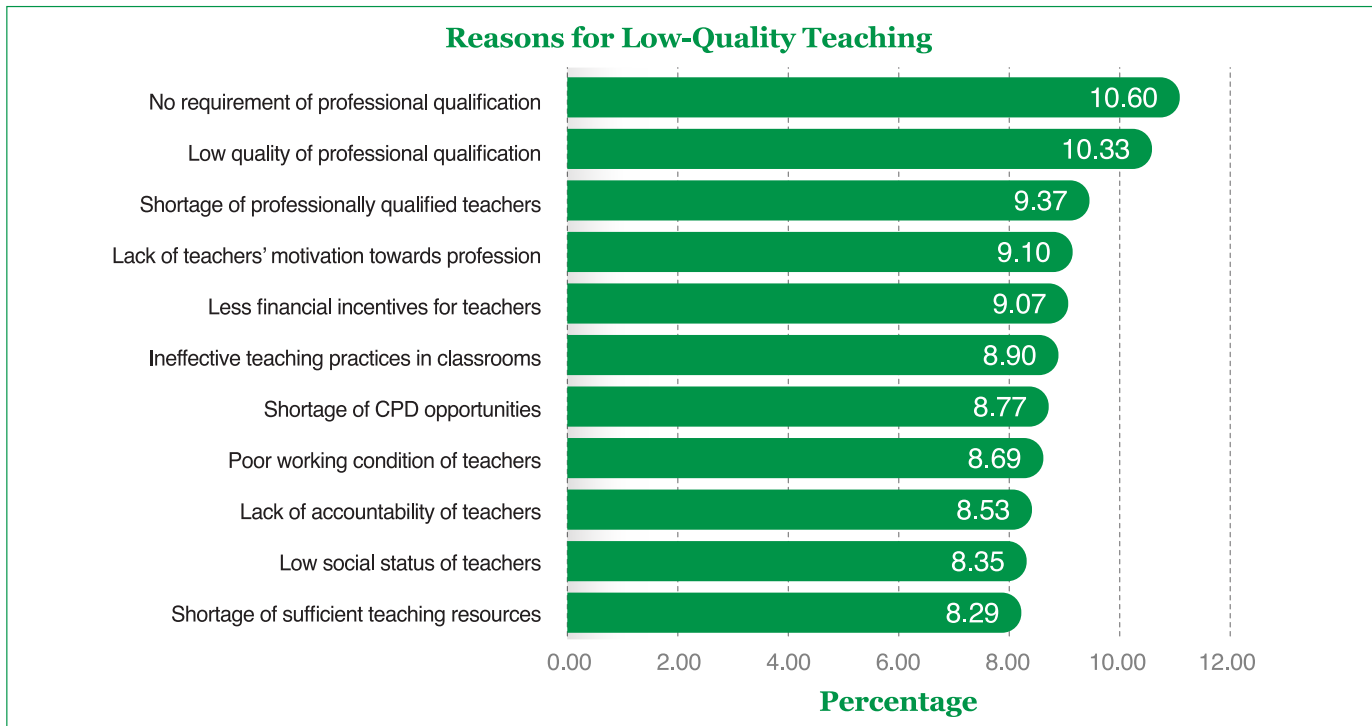
Below we share the key outcomes of the survey in Table 2 and Figure 2. The table shows the views of the participants about teaching license in Pakistan. Figure 2 shows the participants' ranking of the reasons for low-quality teaching. In addition to the deliberations of the key participants in the dialogues, the survey provides a larger understanding about stakeholders' views towards teaching license and quality of teaching.

Table 3 Stakeholders' views about teaching license

Views about Teaching License	SDA	DA	UD	A	SA
Teachers needs to be properly trained before teaching	2.44% (24)	1.63% (16)	1.22% (12)	16.40% (161)	78.31% (769)
A person should have knowledge of teaching before being recruited as a teacher	2.24% (22)	2.34% (23)	2.44% (24)	28.82% (283)	64.15% (630)
Teachers should also have a license for teaching like the medical profession	2.65% (26)	5.40% (53)	5.50% (54)	34.32% (337)	52.14% (512)
Teachers should teach in both public and private schools	4.58% (45)	9.57% (94)	8.55% (84)	33.50% (329)	43.79% (430)
There should be transparent mechanisms for awarding a license to a teacher	2.65% (26)	2.14% (21)	4.89% (48)	31.26% (307)	59.06% (580)
A due financial incentive should be given to a licensed teacher	2.04% (20)	3.16% (31)	6.21% (61)	33.10% (325)	55.50% (545)
License renewal should be conditional to teachers' performance	3.05% (30)	7.74% (76)	8.04% (79)	40.84% (401)	40.33% (396)
Teacher licensing improves the social status of teachers	2.14% (21)	3.16% (31)	9.16% (90)	39.71% (390)	45.82% (450)
Teacher licensing improves the financial status of teachers	3.16% (31)	6.42% (63)	14.36% (141)	40.22% (395)	35.85% (352)
Teacher licensing increase teachers' motivation towards the profession	1.83% (18)	4.28% (42)	7.23% (71)	40.84% (401)	45.82% (450)
The quality of teaching improves by recruiting licensed teachers	2.24% (22)	3.67% (36)	6.92% (68)	42.67% (419)	44.50% (437)
Students get access to quality teachers when they are recruited through licensing	2.85% (28)	4.79% (47)	8.25% (81)	45.62% (448)	38.49% (378)
SDA= Strongly Disagree; DA= Disagree; UD= Undecided; A= Agree; SA= Strongly Agree					

Table 3 above, shows a clear indication that stakeholders are in favor of a teaching license in both the public and private sector. In the stakeholders' view, such licensing can facilitate in recruiting quality teachers and increases teachers' motivation towards the profession. Besides, there is need to properly train teachers and recruit teachers who have adequate knowledge and skills. Furthermore, the licensing can be beneficial to improve the social and financial status of teachers if it is mandated and incentivised.

Figure 3 Reasons for low-quality teaching



Looking at the ranking for respondents' views of the drivers of low-quality pedagogy, it is interesting to note that the abolishment of professional qualifications is considered as the highest ranked reason for low quality. However, low quality of professional qualifications is also among the top listed reasons for low quality of teaching. The findings also suggest that the current system is not able to produce enough professionally qualified teachers to meet the demand of the market. Apart from the need to have professional teachers, teachers are seen to lack motivation towards the profession, have less financial incentives, pursue ineffective teaching practices, have less CPD opportunities, and endure poor working conditions, all of which are negatively contributing to the teaching profession. Other factors ranked at the lower end are lack of accountability of teachers, low social status and shortage of sufficient resources.

To establish teaching as a profession, we will need a specialised knowledge base, we will also need a web of power. It will need to be created as it does not appear from nowhere. The schools of education and schools [will need to] work together to create a discourse, as well as practice, of professionalisation (Dr Irfan Muzaffar, 18 Nov, 2021).



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6. CONCLUSION AND WAY FORWARD

We started these dialogues in an exploratory way i.e. we avoided taking a definitive stance towards having or not having teaching license. Our primary concern has remained focused on 'quality of teachers' and resultant learning outcomes of children. In our journey we very quickly realised, having reviewed the literature, that various aspects of the teaching system cannot be treated in a piecemeal fashion – a wholistic approach is necessary. Hence, we developed our overall conceptual map of the teacher management system (see Figs. 1 & 2). The conceptual framework helped us see at least two things very clearly. First, that teaching license can work as a stimulus and contribute towards uplifting the standards of teaching. Second, the global study and assessment of various teacher management systems showed that those countries which have stronger teacher management systems also perform higher on student learning outcomes (see table 1).

The policy dialogues have made it clear that introducing licensure is not simply a technical matter, it is embedded in a thick social, political and economic context. Stakeholders raised their concerns but also suggested viable ways through these issues. However, one lesson was very clear: we have to proceed in a gradual way, improving our practices at every juncture by involving all stakeholders. Only then we can reap the benefits of licensure towards having good teaching and learning outcomes.

We cannot deny that there may be some brilliant teachers, who may not have a license or who would not see any benefit in having license. However, license function to ensure that all teachers meet minimum standards (e.g. National Professional Standards for Teachers in Pakistan). And while an exceptional teacher would find it an annoyance, the system of licensing will safeguard against having bad teachers in the profession, which is more dangerous from a policy perspective.

We recommend that Pakistan's educational policy makers make effort to strengthen the whole teacher management system, which would ensure that:

- Pre-service teacher education attains high value through the NACTE accreditation process.
- Licensing bodies at provincial levels (having

coordinating functions like IBCC) introduce license in a gradual fashion by involving all stakeholders.

- Recruitment whether in the public or private sector should value the professional qualifications and licensure for future teachers and create incentives for current teachers to attain both credentials and licensure.
- Schools and school management authorities must create a conducive work environment for their teachers to develop themselves continuously, and consequently benefit students learning outcomes

Last but not the least, the whole system should create checks and balances to ensure accountabilities and; ICT should be utilised to remove any bureaucratic hurdles and introduce transparency and efficiency. In the appendices we have included a template that various provinces can consider as an initial draft of policy, which can be debated, discussed and improved with the help of stakeholders.

In the past the teaching licensing policy efforts were generally resisted for: i) it being pushed by donors; ii) non-consensual approach and iii) not allowing enough time for settlements. We have tried that this university-led effort is not a donor driven project; build consensus among stakeholders; and rolled out in a gradual long term perspective. The context of devolution also allows us to introduce teaching license at a smaller provincial scale rather than national scale, so that the change process remains more manageable.

Following this White Paper we will be holding various consultative meetings with policy makers, academics, teachers' unions, school owners and other stakeholders to gather support for licensing as a way for improving teaching in Pakistani classrooms. We have set a good precedent of inviting global scholars on the subject to contribute their expert views, and we will continue this effort as much as possible in the future to keep the momentum going regarding licensure. The deliberations are kept at a dedicated webpage which will be updated at regular intervals and can be viewed in the following link:

<https://www.aku.edu/iedpk/research/Pages/policy-dialogues.aspx>

APPENDICES

APPENDIX 1: LICENSING POLICY TEMPLATE

Process of Policy Development

This licensing template is a result of various consultations with stakeholders. The process included a review of previous efforts, drafting of an initial draft with stakeholders, discussions and debates on various forums, policy dialogues and eventual agreement. The White Paper issued, emerged from a laborious four-stage process. The first stage was situational analysis in which a thorough national and international literature review was conducted. The second stage resulted in green papers/draft policy. The third stage involved key stakeholders in policy dialogues. As a result, concerns and recommendations emerged that were incorporated in the policy.

Components of the Policy

1. Categories of the Teaching License
2. Criteria for the Teaching License
3. Process for the Teaching License and the Role of Universities and Teacher Education Institutes
4. Governance of the Process for the Teaching License
5. Data Management regarding the Teaching License

1. Categories of the Teaching License

1.1. Provisional License

A provisional license should be granted when the candidate meets the requirement of the licensure. This license should be valid to the probationary period or induction period (three years). In this period, the teacher's performance must be recorded and used for renewal of the licensure. The performance can be in the form of observations, portfolio, lesson plans and so forth. In the probation period, teachers should be supported with quality continuous professional development, and mentors for their development irrespective of their qualification. The government can also keep record of the required number of days/courses attended as requirement for the renewal of the license.

Three years will be granted to all currently serving teachers. Within those three years they will be expected to undertake upgrading of their qualifications such that they demonstrate acquisition of Level 2 of the National Professional Standards for Teachers in Pakistan (NPSTP). They will be given opportunities to do this and will be supported through professional development to enable them to strengthen their practice in order to attain the standards.

1.2. Professional License

The professional license should be provided to teachers who successfully meet the requirements in the induction period. However, those teachers who have unsatisfactory performance should be given more time to improve with the right professional support. The professional license should be valid for three years before converting into extended professional license. The extended professional license means that the teacher is now experienced. Those teachers who have licenses and outstanding performance can be later on used for mentoring of other teachers who are pursuing the license. CPD should be continued as a professional support for teachers.

This will be issued for five years. This will be granted to those who have successfully demonstrated acquisition of NPSTP through one of the routes to teaching. It may be renewed according to criteria devised and published by approved authority.

2. Criteria for the Teaching License

2.1. Qualification Criteria for Licensing

- 2.1.1. Graduates from the Associate Degree in Education [ADE] will undertake a probationary/internship placement for one academic year at a recognised school (Public or Private) during which final assessment will be carried out by an approved authority to grant a provisional license. This will carry a stipend. OR Candidates with ADE must complete the remaining 2-years and go through licensure exams.
- 2.1.2. Graduates with 4-year B.Ed (Hons.) programme (Elementary and Secondary) qualifications from an accredited university (must be selected universities/institutes by approved authority based on quality) will be granted a license at the end of the successful completion of the program. The practicum in the program must show evidence for teaching practices which can be evaluated to grant license. OR The candidates with 4-year B.Ed and ADE can go through an exit examination at the end of their pre-service program based on pedagogies and subject knowledge. This examination can be in the form of evaluating their practicum or taking an exam.
- 2.1.3. All in-service teachers irrespective of their qualifications must go through a specially designed CPD course. This training must also be supported through experienced mentors in schools to facilitate teachers in their learning.
- 2.1.4. The training for in-service teachers should carry a stipend or be linked with performance indicators to upgrade their scale/promotion.
- 2.1.5. Candidates without teaching qualifications must undertake the assessment to obtain a license to teach. The assessment could be either in the form of exams or evidence of teaching like portfolios, observations, anecdotes and lesson plans.
- 2.1.6. A bridging course should be introduced for teachers without teaching qualifications. This bridging will be connected to the induction/probationary period. These bridging courses can be specially designed and delivered through training institutes and education departments in universities.

2.2. Criteria for Level-wise Licensing

- 2.2.1. Licenses to teach will be issued using the cadres of teachers mentioned in the recruitment policy i.e. ECT (Early Childhood Teachers), JEST (Junior Elementary School Teachers), EST (Elementary School Teacher), SST (Secondary School Teachers), SSST (Senior Secondary School Teacher), SS (Subject Specialist) and SSS (Senior Subject Specialist).
- 2.2.2. License requirements/exams may vary as per the level of schools. For example, at the primary level the focus is more on pedagogies. At the elementary level, there should be a balance between content and pedagogy. At the secondary level, more focus on content knowledge.
- 2.2.3. The nature of module of the training must be different for different specialisations. For example, ECE training must be different from special education.
- 2.2.4. Level-wise training should be designed to prepare teachers. For example, individuals have to complete level 1 training before they can do level 2.

2.3. Assessment against National Professional Standards for Teachers in Pakistan

- 2.3.1. The approved authority will use the National Professional Standards for Teachers in Pakistan for final assessment for the licensing.
- 2.3.2. NACTE could play the role of evaluator and monitor as well as implementer in the licensing policy.
- 2.3.3. Portfolios based on the academic plan will be developed. The portfolio will be assessed by the mentor/guide teacher and the faculty of Teacher Education Institutes (TEIs) based on NPST rubrics. The results will be submitted to the approved authority.

2.4. Monitoring Procedure

- 2.4.1. The approved authority will monitor and accredit the institutions offering Continuous Professional Development programs (CPDs) and the bridging programs.
- 2.4.2. The approved authority will ensure the quality of the recognised schools on a regular basis, where the internship/bridging/CPD programs will be offered.
- 2.4.3. Schools/ schooling systems (public and private) will be responsible to ensure that they will only employ teachers with licenses or the ones willing to gain licenses in the first year of their employment.
- 2.4.4. There should be clear roles of HEC, NACTE and provincial agencies like STEDA

2.5. Duration of License

2.5.1. Provisional License:

- 2.5.1.1. This will be for three years and will be granted to all currently serving teachers upon application. Within those three years they will be expected to undergo bridging courses and upgrade their qualifications such that they demonstrate acquisition of Level 2 of the NPSTP.
- 2.5.1.2. Pre-service teachers will get their provisional license at the completion of ADE and B.Ed (Hons.).

2.5.2. Professional License:

- 2.5.2.1. This will be issued for five years. This will be granted to those who have successfully demonstrated acquisition of NPSTP through above-mentioned procedures. It may be renewed according to criteria devised and published by the approved authority.

3. Process for the Teaching License and the Role of Universities and Teacher Education Institutes

3.1. Role of Universities and Teacher Education Institutes

- 3.1.1. Specialisation in certain subjects like drawing, home economics, liberal arts, physical training instruction, and Quran be incorporated in B.Ed. (Hons.) courses.
- 3.1.2. The in-service teachers who do not possess required qualification will go through bridging courses offered at training institutes. The approved authority will define the roadmap for bridging courses to meet teachers' needs.
- 3.1.3. Teacher Education institutions should get their CPDs recognised by an approved authority.
- 3.1.4. Teacher education institutes should be connected with other departments for content enhancement of students and faculties should have mastery of relevant pedagogical content knowledge.
- 3.1.5. The preparation-based knowledge for teacher development should be continuously updated based on research and professional knowledge. The education institutes must be encouraged to work closely with schools to make them a hub of professional learning where training faculties, expert mentors and teachers work together.

3.2. Portability of Licensing and Incentives

- 3.2.1. The provincial licensing authorities should work together to make the licensure valuable so that the successful candidates can move them around the country.
- 3.2.2. To incentivise, the licensure can be connected to teachers' career track promotions. This should extend from senior to master teachers, including leadership roles.
- 3.2.3. For some schools (e.g. low-fee schools, NGO schools, trust schools, PPP schools etc.) the cost of licensing should be borne by government, donor agencies, partners etc. The independent authority should also have a scholarship scheme for teachers in need of financial support.

3.3. Contractual Teachers in Licensing

- 3.3.1. There should be a clear policy for the recruitment and regularisation of contractual teachers. However, there is a need for the concerted efforts by the stakeholders on the requisite quality in contractual hiring and regularisation.
- 3.3.2. Regularisation can be made conditional on performance assessment, including meeting the licensing requirements. This could be supplemented with professional development during the contract period.

4. Governance of the Process for the Teaching License

4.1. Coordination among Provinces

- 4.1.1. The independent committee will be established to ensure coordination and communication between the provinces. Such a committee will be established under the auspices of IPEMC (Inter Provincial Education Ministers Conference).
- 4.1.2. The committee will establish the criteria for inter provincial mobility of licensed teachers.
- 4.1.3. The committee will meet every quarter and deal with the issues of inter provincial matters of teacher licensing

4.2. Implementation in Public Schools

- 4.2.1. Initially, provisional licenses shall be provided to in-service, public school teachers for three years.
- 4.2.2. During the period of three years, teachers will have the opportunity to prepare themselves to meet the required standards in order to acquire a professional license as mentioned above.
- 4.2.3. Teachers failing to acquire the professional license within the three years can apply for a one-year extension of the provisional license.
- 4.2.4. Promotion and incentives for teachers shall be allied with obtaining teacher licenses.

4.3. Involvement of Private Sector

- 4.3.1. The participation of private school associations will be ensured in every important meeting and conference.
- 4.3.2. Every year, the approved authority will release the names of those private schools which will apply the licensing policy in their schools.
- 4.3.3. There shall be a committee of people from the private sector, working conjointly with STEDA to implement the policy into private schools.

4.4. Interdepartmental Coordination

- 4.4.1. The governing body shall collect data of teachers from the entire province, which will be helpful to delegate tasks to other departments and implement the policy in a systematic way.
- 4.4.2. The data of public and private teachers will be available on STEDA's website as everyone can see his/her license status.
- 4.4.3. District Education Officers (DEOs) will be responsible for licensing teachers within his/her district.

4.5. Advocacy of the Policy

- 4.5.1. There shall be a coherent, phased advocacy campaign to promote awareness, understanding of and commitment to the Policy. This will be managed, monitored and evaluated by the approved authority. It will engage all stakeholder groups and will use the fullest possible range of strategies and media.
- 4.5.2. SMS and mobile phone services will be used to promote the need of licensing for teachers.

5. Data Management regarding the Teacher Licensing

5.1. Data Management and its Confidentiality

Efficient efforts are needed to manage the teacher licensing data. This data could also be used for research purposes to track the progress and effectiveness of licensed teachers. Some recommendations were made in the policy dialogues for data management as follows:

- 5.1.1. Primarily, the data management of teacher licensing will be dealt with by the approved authority. Yet, some parts of the data management might be outsourced as and when required.
- 5.1.2. There will be provision of a customer service center for facilitation and handling of queries related to licensing.
- 5.1.3. Existing and new private schools must be registered with the licensing body. The licensing body must keep the record of licensed and non-licensed teachers.
- 5.1.4. Existing and new government schools must be registered with the licensing body. The licensing body must keep records of teachers both licensed and non-licensed. These records will also help us to know the supply and demand for the teachers.
- 5.1.5. Teachers' registration information should contain demographics details like experience, qualification, gender, transfer places, candidate institutes from which they qualified, subject specialisations and so forth. The registration of teachers can highlight the place where there is a shortage of teachers and the existing pool of teachers provincially/nationally.
- 5.1.6. There should be a registration process of all the teachers from public and private schools to disclose knowledge about qualified teachers, the teachers pool and the requirement for teaching posts.
- 5.1.7. A verified credentialing system should also be introduced in the licensing system. This should review the authenticity of qualifications, certifications, experience and training. Credentialing can also include the process of additional qualifications if required for license.
- 5.1.8. Foreign graduates who wish to join the teaching profession with equivalency certificates should undergo the same process as others, or must have a foreign license.

5.2. Online Application for Teacher Licensing

To facilitate the process of teacher licensing there will be two modes of the application for the facilitation of candidates. First, a candidate may apply online. Second, an applicant may also apply through a manual process.

5.2.1. Online process for Teacher Licensing

- 5.2.1.1. Candidates will apply and submit online applications for getting a teacher license.
- 5.2.1.2. There will be a provision of uploading all the relevant documents.
- 5.2.1.3. The provision of renewal of teacher license policy will also be available.
- 5.2.1.4. Options for the online fee payment / e-payment for the application of license will be displayed on the website.

5.2.2. Manual process for Teacher License

- 5.2.2.1. Those candidates who may not be able to apply online may submit their applications through a manual process at DEOs offices.
- 5.2.2.2. The data management rights will be given to the approved authority representatives at district offices to transcribe and input data online from the respective offices.

5.3 Data Synchronisation

- 5.3.1. The data will be synchronised with other databases like the Sindh Education Management Information System (SEMIS), Biometric data for Teachers attendance, Human Resource Management Information System (HRMIS) and National Database and Registration Authority (NADRA).
- 5.3.2. If in future, a private school census is conducted, it may also be synchronised with the teacher licensing data.

5.4 Segregation of Data

- 5.4.1. The data of all licensed teachers will be segregated into various levels like preprimary, primary and secondary.
- 5.4.2. The data may also be segregated into public and private sector licensed teachers.

APPENDIX 2: EDUCATION STATISTICS, TEACHER RECRUITMENT PRACTICES AND STUDENT OUTCOMES OF SELECTED COUNTRIES

Education statistics of the selected countries

	Population (in thousands)	Enrollment in Pre-Primary	Enrollment in Primary	Enrollment in Secondary	GDP (Year)	Pupil-Teacher ratio at Primary (Year)	Pupil-Teacher ratio at Secondary (Year)	Literacy Rate age 15+ (Year) ⁷
UAE	9771	207,918	496,261	558,365	3.1% (2017)	18.6 (2019)	10.5 (2019)	93 (2015)
Finland	5532	236,837	373,124	356,316	6.38% (2017)	16.4	13.3	
Singapore	5,804	112,587	232,943	157,504	2.8 (2013)	13.6	13.8	
China	1,433,784	52,098,459	102,981,926	99,104,513	4% (2012)	16.4 (2019)	13.3 (2019)	97 (2018)
USA	329,065	12,015,598	24,648,236	25,052,845	4.96 (2014)	14.2	14.6	
UK	67,530	1,632,570	4,920,594	5,248,938	5.44% (2017)	17.5 (2018)	16.7 (2018)	
South Korea	51,225	1,315,540	2,728,683	2,843,964	4.56% (2017)	16.4	12.6	100 (2008)
India	1,336,418	69,409,922	121,821,478	177,585,036	3.84% (2013)	27.7	21.5	74 (2018)
Pakistan	216,565	10,723,208	25,106,458	31,988,369	2.9% (2017)	45 (2019)	20.4 (2018)	59 (2017)
Malaysia	31,950	1,031,544	2,965,705	3,048,230	4.16 (2019)	11.7 (2017)	11.4 (2019)	
Bangladesh	163,046	8,657,769	14,724,290	21,456,207	1.33% (2019)		30.1	

1. United Arab Emirates – statistics

In 2019, the United Arab Emirates⁸ was recorded with a total population (in thousands) of 9771. Among which, 1438 of the population is age 14 years or below and 1149 of the population is between 15-24 years of age. The education system of the country is categorised into four levels: (a) pre-primary (4-5 age group) catering 207,918 of the country's population, (b) primary (6-10 age group) 496,261 enrollment, (c) secondary (11-17 age group) 558,365 enrollment and (d) tertiary (18-22 age group) with 561,952 enrollment. In UAE, the compulsory education lasts up to 12 years from age six to age 18.

At the pre-primary level, the UAE has a net enrollment rate of 69.6% (female 68.3% & male 71%). Whereas, 1054 children and 279 adolescents are out of school at the pre-primary level. At the primary and secondary level, the total net enrollment rate stands at 96.7% in 2019. As per 2019 data, the ratio of repeaters is 0.2% at the primary level. While, the transition rate from primary to lower secondary was documented as 99.9% in 2013. According to Statistics Center (2017)⁹ report, the student-teacher ratio in government schools is 11.6 as compared to 15.6 in private schools.

7. Sources: World Bank: <https://data.worldbank.org/indicator/SE.ADT.LITR.ZS> & UNICEF: <https://data.unicef.org/resources/dataset/education-literacy-data/>

8. The statistics of majority of the countries are retrieved from the official website of UNESCO <http://uis.unesco.org>

9. Retrieved from <https://www.scad.gov.ae/Release%20Documents/Education%20Statistics%202016-17%20-%20EN.pdf>

The country spends about its 3.1% of the GDP on education and 10.2% of the total government expenditure on education. As per 2015, in UAE, 93.5% of population (95.1 female & 92.6% male) aged 15 years and above are literate. While, 99.4% of the population (99.1% female and 99.6% male) age between 15 and 24 years are literate.

Teacher recruitment and selection process

The educational professional license is a mandatory requirement and permit issued by ministry of education after meeting specific requirements which enable the holders to practice his/her job in education field. The license is a requirement for education professionals in UAE. It is obtained by passing two tests: one in the pedagogy and the other in the subject-matter specialisation test. In case candidates fails the examination then the system offers training courses to achieve the required outcomes in the retaking tests.

Purpose: to develop a knowledge economy and ensure delivery of quality education align with standards of education. One way to do so is to license the teachers according to high standards of pedagogy and subject matter specialization.

Performance in PISA results

According to PISA 2018 results, the UAE performance was statistically significantly below the OECD average in reading, Mathematics and Science. In other words, the UAE performance in students achievement tests was below average. The country student's performance was noted as: 432 mean score in reading, 435 mean score in mathematics and 434 mean score in science. It might be for this reason that UAE is trying to introduce the licensing policy to improve the quality of teaching which will ultimately improve the learning outcomes of students.

2. China - statistics

China¹⁰ is a country with population (in thousands) of 1,433,784 having its 171,398 population between the age of 15-24 years and 255,278 of population aged 14 or below. The country has the largest state-run education system in the world categorised into four levels similar to UAE. The first level is the pre-primary (age group 3-5) with 52,098,459 enrollment, the second is primary level (age group 6-11) with 102,981,926, the third is secondary level (age group 12-17) with 99,104,513 enrollment and the fourth is tertiary level (18-22) with 87,405,727 enrollment. In China, the education from age 6 to age 14 is compulsory. As per 2018, the China literacy rate stands at 96.8% for the population (95.2% female and 98.5 male) aged 15 years and older. While, 99.8% (99.8% for both male and female) of literacy rate among the population aged 15-24 years. The student-teacher ratio is 16.7 at the pre-primary level, 16.4 at the primary level and 13.3 at the secondary level (UNESCO, 2019).

10. The statistics reported for the China is retrieved from UNESCO official website: <http://uis.unesco.org/en/country/cn>

In China, the Ministry of Education oversees the education system and carry out the policies and regulations in the country. At the provincial level, education department take charge of the education system. Whereas, at county level bureaus of education are also responsible. The policies designed by Ministry of education is implemented by the local department. According to OECD (2016) report on education in China, the country investment on education reached over 4% of GDP in 2012. Apart from government funds, efforts are made to raise funds through donations, taxes, private school founders.

Teaching is considered as highly respectable profession in China. There are about 15 million full-time teachers in China, of which 5.6 million primary and 3.5 million junior secondary teachers making it about 60% of the total teaching force (OECD, 2016).

Teacher selection and recruitment in China

The qualification required for teaching in China depends on the type and rank of the teachers. Candidates are required to possess moral character certificates, clear interviews and clear a teacher qualification examination in pedagogy, education knowledge and subject-mastery (in other countries such tests are referred to as licensing exams). In some cases, graduate from teacher education institutes are allowed to skip exams (See OECD, 2016). After the candidates are recruited, the Chinese government kept it mandatory to take at least 120 hours of training before beginning.

PISA results - China

China (Beijing, Shanghai, Jiangsu and Zhejiang) was the top performing country in PISA 2018 results in Mathematics, Reading and Science. China achieved the highest mean score 555 in reading, 591 in Mathematics and 590 in science.

3. Finland – statistics

Finland¹¹ is a country with total population (in thousands) of 5532 among which 616 of the population (in thousands) are between the age of 15 to 24 years and 836 of the population (in thousands) aged 14 years and younger. Finland education system is one of the finest in the world that operates at national level. Finland allocated 6.38% of its GDP for education and 11.9% of the total government expenditure on education in 2017. The compulsory education in the country lasts for 10 years from age 6 to 15. The country pre-primary level (age group 3-6 years) has enrollment of about 236,837 with a net enrollment ratio of 85.1% (84.9% female and 85.2 male%). At the primary level (age group 7-12), the education system caters the need of 373,124 with a net enrollment ratio of 98.5% (98.7% female and 98.3% male). While, at the secondary level (age group 13-18 years), 356,316 students are enrolled in schools with a net enrollment ratio of 96.7% (96.7% female and 96.8% male). At the tertiary level (age group 19-23), the enrollment stands at 326,291 with a net enrollment ratio of 90.3% (98.1% female and 82.8% male). The country has a 99.64 survival ratio of students to the last grade of primary thus making 0.3% of repeaters at the primary level. While, the transition rate from primary to lower secondary is 99.9%. In order to cater the needs of these

11. The statistics presented are taken from official website of UNESCO for the year 2018. Retrieved from <http://uis.unesco.org/country/FI>

students, the student-teachers ratio on head count basis is 10.8 at pre-primary level, 13.6 at primary level and 13.8 at secondary level.

Teacher recruitment and selection in Finland

Preparing and recruiting good teacher remained one of the top priority of education systems around the globe. Finland is consistently performing at the top in PISA results since 2000. One of the reason is its high quality teaching. Finland follows a rigorous process from candidates entering into teacher education programmes to recruitment and continuous professional development through-out their career. Out of 10 applicants, one gets selected to enroll into teacher education programmes. The candidates are needed to earn high scores in previous exams, posses interest in extra-curricular activities, pass entrance exams and then interviewed. A four-year undergraduate and two-year graduate programmes are offered in the teacher education institutes/universities in Finland. This initial preparation is fully funded by the government and a stipend or salaries are paid to the prospective teachers. After the completion of programmes, the prospective teachers are ready to begin teaching in schools. However, induction training is provided at the beginning and continuous professional support in their career.

Performance in PISA result 2018

Finland performance in PISA results are impressive and consistent to be among top performing countries. In 2018 results of PISA, the country was ranked at 7th with mean score of 520 in reading, 507 in mathematics and 522 in science. The current ranking shows a decline as compared to previous PISA results e.g., in 2015.

4. Singapore – statistics

Singapore is a country with total population (in thousands) of 5,804 among which 692 of the population is 15-25 years and 715 of the population is 14 or below years. The education system of the country is controlled at the national level by the ministry of education. The compulsory education start from pre-primary stage (age group 3-5 years) and last at the primary stage (age group 6-11 years). As per UNESCO 2019 statistics, the education system is catering the needs of about 112,587 children at pre-primary level, 232,943 at primary level, 157,504 at secondary level and 222,809 at the tertiary level. Given these statistics, in 2018, 99.5% (99.5% male and female) of net enrolment at the primary level, 99.3% (99.1% female and 99.4% male) at the secondary level and 88.9% (95.4% female and 82.9 male) at the tertiary level was documented for the 2018 year. While, the percentage of the repeaters at the primary is at 0.2%. making survival to the last grade of primary at 99.39%¹². The transition rate from primary to secondary also is at high of 99.8%. According to Singapore Ministry of Education Statistics (2020)¹³, the teaching staff (Pupil-teacher ratio) is 14.8 students at the primary level and 11.7 at the secondary level per teacher in a total of 342 schools.

Teacher recruitment and selection in Singapore

The process of selecting teachers is highly rigorous in Singapore. The process of teachers selection is managed by Ministry of Education and National Institute of Education. The country has a four-step process of entrance into the National Institute of Education. Those who enter into the training institute are successfully complete the programmes requirement join schools for teaching.

12. For the Year 2017 (UNESCO).

13. Ministry of Education. (2020). Education statistics digest 2020. Ministry of Education, Singapore.

<https://www.moe.gov.sg/-/media/files/about-us/education-statistics-digest-2020.pdf?la=en&hash=C5E45EEA6E424D9749F617A4D88A171F6E20AB9A>

Performance in PISA results

Singapore is among few countries performing continuously at the top in PISA result in all three subjects. In 2018 results, Singapore ranked second with mean score of 549 in reading, 569 in mathematics and 551 in science.

5. United States of America (USA) - Statistics

USA is a country with total population (in thousand) of 329,065 among which 43,687 of population is between 15 to 24 years and 61,039 of population is aged 14 or younger. The country caters the need of 12,015,598 enrolled children at pre-primary level (age group of 3-5 years), 24,648,236 at primary level (age group of 6-11 years), 25,052,845 at secondary level (age group of 12-17 years) and 21,452,031 at the tertiary level (age group of 18-22 years). The net enrollment rate at the pre-primary level is 64.5% (65.4% female and 63.6% male), at the primary level is 94.5% (94.9% female and 94.1% male) and at the secondary level is 92.2% (92.8% female and 91.6% male). Moreover, 1.6% of the students at primary are repeaters. However, the effective transition rate from primary to secondary level is 99.5%. While, the pupil-teachers ratio¹⁴ on headcount basis is 14.4. at the pre-primary level, 14.2 at primary level and 14.6 at the secondary level.

In USA, the compulsory education lasts 12 years starting from age 6 and ending on age 17 (primary and secondary education). Out of school children noted for the year 2018 were 141,533 (76,669 female and 64,864 male) and 38,664 adolescent. The country allocated its 4.96 of the GDP for education in 2014.

Teacher selection and recruitment in USA

Teacher's selection and recruitment process is complex and differs depending on the state-wise requirements. In general, candidates whether with professional qualification or without professional qualification both can apply for teaching posts and become a teacher. Some states also take examinations test and offer teacher licenses. One of the key component is candidates demonstrates strong subject-mastery.

Performance in PISA results

USA is ranked at the 13th in PISA results of 2018. The country mean score was 505 in reading, 478 in mathematics and 502 in science. Although, these results indicates good performance of students. However, ranked lower than countries like Finland, Singapore, Sweden, China which focused on rigorous preparation of the teachers.

6. United Kingdom (UK) – Statistics

United Kingdom has a total population (in thousands) of 67,530 among which 7,805 of the population is between 15 to 25 age group and 11,950 of the population aged 14 or below. The country education system starts from pre-primary level (age group 3-4 years) with current enrollment of 1,632,570 children. The second stage is primary level (age group 5-10 years) with 4,920,594 enrolled students. Whereas, 5,248,938 children at the secondary level (age group 11-17 years) and 4,019,176 children are enrolled at tertiary level. The net enrollment that of 2015 at pre-primary level was 96.6% (94.6% female and 98.6% male), at the primary level was 99.3% (99.2% female and 99.5% male) in 2018 and at the secondary level was 96.2% (96.3% female and 96.1% male). While, effective transition rate from primary to lower secondary is 99.6%. The country total expenditure on education was 13.8% and 5.44% of the GDP allocated for education in 2017. Pupil-teacher ratio (headcount basis) at the pre-primary level was 63.4, at the primary level 17.5 and at the secondary level 16.7 in 2018.

14. Pupil-teacher ratio is given for the Year 2017.

Teacher recruitment and selection process

To teach in UK, the candidates had to gain the Qualified Teacher Status (QTS) also termed as teacher license. The candidates are required to a university or school based initial/pre-service training programme. The entry and exit to these teacher education programmes might requires entrance and exit examinations. However, England conduct a separate licensure exams for prospective teachers. The candidates who successfully clear the examinations are awarded with Qualified Teaching Status (QTS). While, the induction program is not monitored but organised by individual schools.

Performance in PISA results 2018

England performance in PISA throughout remain at the top performing countries. In recent 2018 PISA results, UK was ranked at 14 position. The country performance in the reading was mean score 504, in mathematics subject was 502 and in the science subject was 505.

7. South Korea - statistics

Republic of Korea's¹⁵ total population (in thousands) is 51,225, of which 5,924 of the population is between the age of 15 to 24 and 6,530 aged 14 years or younger. As per 2019 UNESCO statistics, Korea is catering the needs of 1,315,540 children at pre-primary level (age group 3-5), 2,728,683 children at primary level (age group of 6-11 years), 2,843,964 at secondary level (age group of 12-17) and 3,216,844 at tertiary level (age group of 18-22). The compulsory education start from age 6 and end at the age 14 making it a total of 9 compulsory years. The net enrollment ratio in 2018 for school level; 93.5% (93.7 female and 93.3 male) at pre-primary level, 98.8% (98.8 female and 98.9 male), 95.8% (95.6 female and 96 male) at the secondary level and 95.9% (84.9 female and 105.8 male) at the tertiary level. While, a total of 25,225 children and 38,303 adolescents are out of school. The schools repeaters percentage at the primary level is zero and 99.5% effective transition rate from primary to lower secondary schools.

The government allocated its 4.56% of GDP for education from the total budget. The pupil-teacher ratio (headcount basis) that of 2018 at the pre-primary level was 12.7, at the primary level was 16.4, at the secondary level was 12.6 and at the tertiary level was 48.5.

15. The data for Republic of Korea was retrieved from the official website of UNESCO: <http://uis.unesco.org/en/country/kr>

Teacher selection and recruitment process

Among all countries mentioned, Korea follows a high-stake rigorous process from teacher development, recruitment to probationary evaluation. The country education system is managed by the Ministry of Education. A strong pool of applicants (top 10% of secondary school cohort) are admitted in teacher education programmes. After completion of teacher education programmes, all candidates are required to pass the national employment examination to work in the public schools as a teachers. Teachers are fully certified and maximum of them hold at least a bachelor's degree. Once the candidates are selected, they go through three stages of induction training: (1) pre-employment which deals with the pedagogies, (2) on-job post-employment training which includes teachers and principals mentoring, evaluation, supervision and student guidance and (3) follow-up training which demonstrates the learning. Teachers are evaluated every year based on a set of national guidelines which is used for decisions like promotion, awards etc. While, the feedback from principals, teachers, parents is used for professional learning.

Performance of South Korea in PISA results

Republic of South Korea is also among top performing countries in the PISA results. Even the country performed better from USA, UK and Australia. In PISA 2018 results, Korea was ranked at 9th position. The performance of students was mean score of 514 in reading, 516 in mathematics and 511 in science subject.

8. India – statistics

India's¹⁶ total population (in thousands) is 1,366,418 among which 247,486 of the population aged between 15-25 years and 363,717 of the population aged 14 years or below. The education starts from pre-primary level (age group of 3-5 years) with 69,409,922 enrolled children as per 2019. While, the system caters 121,821,478 enrolled children at the primary level (age group of 6-10). The country total enrollment at the secondary level (age group of 11-17 years) is 177,585,036 and 123,012,080 enrollment at the tertiary level (age group 18-22). The compulsory education proceed from age 6 to age 13 making it a total of 8 years. However, 2,887,748 of the children and 11,218,994 adolescents were out of school in 2013. In 2019, the gross enrollment at the primary level was 62.8 (64.3 female and 61.5 male), at the primary level 96.83 (97.81 female and 95.94 male), at the secondary level 73.79 (74.5 female and 73.1 male) and at the tertiary level 26.6 (30.2 female and 27.1 male). In 2018, the survival rate of student at the last grade of primary level was 86.51 and effective transition from primary to lower secondary was 90.9. The government 3.84 of the GDP for education and a total of 14.1% of government expenditure on education in 2013. On the headcount basis, the pupil-teacher ratio at the pre-primary level was 31, at the primary level 27.7 and at the secondary level 21.5.

Teacher recruitment and selection process

India recruitment process of teachers is straight forward. It requires the candidates with minimum of graduation and teaching qualification/certificates which is mandatory at all level. At the primary level, qualification in education field is required. The candidates then appear in center teacher eligibility test which is used for the appointment of teachers.

16. The Statistics for India is taken from the official website of UNESCO: <http://uis.unesco.org/en/country/in>

Performance In PISA results 2009

India did not participate in the international students' performance tests. The last time India appeared into the PISA results was in 2009¹⁷. The country was ranked at the 73 out of 74 countries. The performance was at the lowest with mean score in reading was 337 for Tamil Nadu and 317 for Himachal Pradesh, mean score in mathematics was 351 for Tamil Nadu and 338 for Himachal-Pradesh and mean score in science was 348 for Tamil Nadu and 325 for Himachal-Pradesh.

9. Pakistan - Statistics

Pakistan's total population (in thousand) is 216,565 among which 42,338 aged 15-24 years and 75,915 of the population age 14 years and below. Among overall population, the education system caters 10,723,208 children at the pre-primary level (age group of 3-4 years), 25,106,458 at the primary level (age group of 5-9 years), 31,988,369 at the secondary level (age group of 10-16 years) and 20,964,647 at the tertiary level (age group of 17-21 years). In 2019, the net enrollment at the pre-primary level is 64.6 (59.7 female and 69.2 male). While, the gross enrollment at the primary level was 95.3 (87.9 female and 102.3 male), and at the secondary 86.6. The percentage of the repeaters at the primary level is 1.8 and the survival rate to the last grade of primary level is 65.67. whereas, effective transition rate from primary to lower secondary is 85.3. On the headcount basis, the pupil-teacher ratio at the primary level is 45.8 (in 2019) and at the secondary level is 20.4 (in 2018). The latest education budget 2021-22 by federal government allocated Rs 140 billion which is 19% increase of the previous budget.

Teacher recruitment and selection process

In Pakistan, after the 18th amendment, the educational jurisdictions shifted from federal to provincial matters. Since then, the policies of recruiting teachers changed and depends on provinces. However, recently, except Balochistan, the rest of three provinces (Punjab, Sindh and Khyber Pakhtunkhwa) abolished the requirement of teaching qualification from teaching posts at the primary and secondary level. A minimum of 14 or 16 years – differs in provinces – of education in any field can apply for teaching posts. Generally, tests are conducted and those with high scores along with scores in previous credentials are selected for teaching posts. The selected candidates are then provided induction training.

Performance in TIMSS results 2019

For the first time, Pakistan participated in international assessment of students. The TIMSS 2019 results ranked Pakistan at 63rd out of 64 countries. The mean score of fourth grader in mathematics was 328 and 290 in science subject.

10. Malaysia - statistics

The total population of Malaysia is 31,950 (in thousands). Among which 5,588 of the population is between 15-24 years while 7,570 of the population is 14 years or below. Of the total population, 1,031,544 children are enrolled at the pre-primary level (4-5 years age), 2,965,705 students at the primary level (6-11 age group), 3,048,230 students at the secondary level (12-17) and 2,829,077 of the students at the tertiary level (18-22).

17. Walker, M. (2011). 'PISA 2009 Plus Results: Performance of 15-year-olds in reading, mathematics and science for 10 additional participants'. Melbourne: ACER Press

In 2019, the total net enrolment at the pre-primary level was 84%, at the primary level was 99.6% for the year 2017, at the secondary level was 75.2% and 43.1% at the tertiary level for the year 2019. As per 2016, the survival rate to the last grade of primary level stands at 96.38%. whereas, the effective transition rate from primary to lower secondary is 91%.

The pupil-teacher ratio per head count basis at the pre-primary level is 16.2 in 2019, at the primary level was 11.7 in 2017, and at the secondary level was 11.4 in 2019. The Malaysian government has spent its 4.16 of the GDP on education and 17.4 of the total expenditure in the year 2019.

Teacher preparation and recruitment process

The recruitment and preparation policies in Malaysia are centralised under the Ministry of Education. The candidates are prepared in an initial training programme. After successfully completing the programme, the candidates received certification and permit (license) from the government to teach in the schools.

PISA results 2018

Malaysia was ranked at 56th place in PISA results. The country secured mean score of 415 in reading, 440 in mathematics and 438 in science subject.

11. Bangladesh – statistics

Bangladesh total population is 163,046 (in thousands) among which 30,834 is between 15 and 24 years and 44,372 of the population is 14 years of below. The enrollment at the pre-primary level is 8,657,769 (3-5 age group), 14,724,290 at the primary level (6-10), 21,456,207 at the secondary level (11-17 age group), 15,385,979 at the tertiary level (18-22 age group). The enrollment rate in 2019 was 67.6 (73 female & 62 male) at the secondary level. Whereas, the percentage of repeaters at the primary level was 4.1 in 2018. The country allocated 1.33 GDP for education and 9.3% of the total expenditure on education in 2019. The pupil-teacher ratio on per head count basis at the primary level is 30.1.

Teacher recruitment and preparation process

In Bangladesh, at the lower level or junior teacher requires matriculation or intermediate with short term training. While, for senior teachers bachelor's degree with B. Ed. is required. The teachers are provided with an in-service training but tenuous attention is paid on pre-service training programmes.

APPENDIX 3: RUBRIC FOR STRENGTH OF THE TEACHER MANAGEMENT SYSTEM

	Strong	Medium	Weak
Admission requirement	Must exceed threshold levels on subject area examinations, advanced level national examinations or university entrance examinations. Selection of top candidates from cohort who show interest, and participate in co-curricular activities. (Graduate programmes): must hold a bachelor's degree in subject area.	Must meet threshold levels on secondary school exit examinations or national examinations. (Graduate programmes): must hold a bachelor's degree in relevant field.	Must pass a basic skills test. (Graduate programs): must hold a bachelor's degree or its equivalent in some field.
Quality assurance of programmes	Formal monitoring and enforcement, with successful performance required for graduation. Courses and programmes are planned/evaluated/ accredited by responsible agency/ministry.	Formal monitoring. The courses maybe evaluated by agencies with medium level enforcement.	May be required but, generally, no monitoring or enforcement. Degree requirements, and no others, other than perhaps a basic skills test.
Graduation requirements	System wide exit examinations in subject areas and on other topics (e.g., pedagogy).	Institutional examinations in subject area and on other topics (e.g., pedagogy).	Up to individual school. No standardised practices to evaluate candidates' entry into teaching.
Hiring policies and practices	National examination with high cut-score required; additional tests required locally. Other practices are observed such as teaching interest, interviews, observations.	Decision is made by state authorities or national ministry (thus, is standardised) with set thresholds for passage required on multiple criteria.	Programmes are typically required or provided but are not monitored. Teacher can lose job only through furloughs or improper personal conduct.
Evaluation of induction performance	Programmes are systematically monitored and satisfaction with candidate performance must exceed a certain threshold level. In some cases, one- to two-year waiting period before tenure is considered.	Programmes are formally monitored by state authorities or national ministry. New teachers obtain contract with no tenure.	

Source: Adapted from Wong et al (2003)

APPENDIX 4: GREEN PAPERS DEVELOPED FOR POLICY DIALOGUES

ISSUE 1: GOVERNANCE AND ACCOUNTABILITY IN TEACHING LICENSE

This licensing template is a result of various consultations with stakeholders. The process included a review of previous efforts, drafting of an initial draft with stakeholders, discussions and debates on various forums, policy dialogues and eventual agreement. The White Paper issued, emerged from a laborious four-stage process. The first stage was situational analysis in which a thorough national and international literature review was conducted. The second stage resulted in green papers/draft policy. The third stage involved key stakeholders in policy dialogues. As a result, concerns and recommendations emerged that were incorporated in the policy.

Quality of education has remained a serious subject in Pakistan since the inception. Government of Pakistan has always been tinkering with the vulnerable situation of education, which is quite evident from the fact that state has borrowed various policies which are considered global best practices for example decentralisation, standardisation and privatisation. Initially educational reforms and execution was the responsibility of federal government. However, after 18th constitutional amendment, education is a provincial subject. The provincial governments have initiated various reform programs and policies to improve dismal condition of education. For example, in Sindh, the conception of STEDA revised recruitment policies in Punjab and Khyber Pakhtunkhwa etc. Despite these changes, the students learning outcomes show a substandard performance.

The teacher licensing/certification is a need-based evolving idea for improving and ensuring quality of teachers through establishing standards that teachers need to attain prior to teaching in schools. There are various aspects related to governance and accountability of licensing in the context of Pakistan that arise if we are to introduce mandatory licensing. For example who will govern teacher licensing/certification at provincial/national level and how? Will licensing open another door to corruption? Will license make teachers accountable towards their profession? etc.

Apart from this as institutional reforms are going on in various provinces, it is important to build greater institutional capacity of the emerging authorities (e.g., STEDA, NACTE, PITE, RITE) to ensure professionalism and accountability that would be required for licensing. The roles and responsibilities of different line-departments within education need to be streamlined to designate proper responsibilities and accountabilities vis-à-vis licensing. Finally, resource evaluation is also centrally important in good governance, thus it is presumed that the government will develop realistic and contextual programs to avoid disruption during policy implementation.

Discussion Questions

1. What would be the mechanism of framing and implementing teacher licensing policy?
2. What are possible predictable challenges for implementation of licensing policy?
3. What capacities (professional, structural and institutional) are required for governance of teacher licensing?
4. How to involve different stakeholders (public, private, unions) into the process of teacher licensing?
5. What will be the interdepartmental and intradepartmental communication channels?
6. How to deal with the financial, political and social cost of teacher licensing policy?
7. What should be the framework for accountability and transparency for teaching license?

ISSUE 2: ROLE OF UNIVERSITIES AND TRAINING INSTITUTES IN TEACHER LICENSING

The universities in some countries prepare teachers by offering approved courses by the Ministry of Education. This could be used for professional development as well as to evidence the learning.

In Pakistan, both public and private sector universities and teacher education institutes are providing teacher education (Pre-Service and In-service). Some offer Bachelor in Education (B.Ed Honors), Masters in Education (M.Ed.) or Doctorate in Philosophy (PhD.) and others offer continuous professional development courses (CPD) for teachers. No doubt, quality of these teacher education programs varies across private and public sector. But there is no authority like Pakistan Engineering Council (PEC) that accredits engineers, Pakistan Medical Council (PMC) accredits the doctors, in education sector. NACTE accredits programmes but does not register/accredits teachers. In this regard, the criteria and process need to be specified. Globally, some countries require teachers to possess basic requirements like Bachelor degree, teacher certification course and must pass licensing test in order to get teaching license and teach in schools. Whereas, in other countries, teacher education from accredited universities is the basic requirement to become a teacher.

Since many of the existing teachers in the public sector generally (except the recently hired teachers) and the private sector particularly have no pre-service teaching qualification like B.Ed.; it is to be decided, as to how would such teachers get license for teaching? If certain “bridging courses” are designed for these teachers, the problem of who would design and implement such courses needs to be addressed. Furthermore, the issue of conditions for renewal of teachers’ license also needs consideration. If “credit hours” or test is defined as pre-requisite for teachers’ license renewal, the private and public teacher training institutes need to develop/modify their CPD programs accordingly.

Discussion Questions

- 1 How would the accreditation authority ensure transparency in accreditation (if opted for) and issuance of license?
- 2 Should teacher education be the responsibility of public, private or both teacher education institutes?
- 3 What role would teacher training institutes play in enhancing the level of teacher license /renewal of licensure?
- 4 Who will assess the teachers for teacher licensing processes?
- 5 How can licensing policy ensure good teaching irrespective of teaching qualification?
- 6 What will be the effect of licensing policy on teacher education institutes?
- 7 How licensing policy can be used to uplift the status of teachers?

ISSUE 3: ROLE OF HEC/NACTE IN TEACHING LICENSE

The Higher Education Commission (HEC) is a statutory body formed by the government of Pakistan to accredit higher education institutes. National Accreditation Council for Teacher Education (NACTE) is the council established by HEC to regulate and ensure standards in teachers education institutions. NACTE has a set of National Accreditation Standards to ensure quality of teacher education programmes. The purpose of both the council is to ensure that competent graduates are prepared through quality programmes. It also helped establish a teacher education roadmap which places certain conditions for teacher education qualifications. NACTE's agenda is ultimately ensure the quality in the schooling system.

While, NACTE places conditions on the teacher education qualifications, it could not ensure that employers (government education departments and private schools) prefer teachers with proper qualification credentials. The recruitment policies differ in provinces and do not consider teaching qualification as mandatory. In this chaotic situation, it needs to be identified that how both the NACTE credentialing instruments and HEC teacher education programmes framework can be further linked to teacher licensing. The NACTE along with HEC can play an influential role in establishing teaching license to ensure that standards are established and adhered to. We have seen influential role played by Medical and Engineering councils and similar role can be played by NACTE. For that to happen, NACTE needs to be strengthened, empowered and make decisions that keep in consideration the ground realities.

Discussion Questions

1. How can NACTE and HEC play their role in teacher licensing policy?
2. How can we link NACTE and HEC standards with the licensing policy to ensure teachers meet the minimum professional standards?
3. How can the quality assurance mechanism of NACTE and HEC inform us about teacher licensing policy?
4. How can we engage NACTE as an evaluator in the teacher licensing policy?
5. Can NACTE play similar role played by councils of engineering and medicine?

ISSUE 4: CONTRACTUAL TEACHERS AND TEACHING LICENSE

There are growing trends of hiring contractual teachers to deal with the shortage of teachers due to financial constraints. A variety of teachers can come under the contract teachers such as community teachers, volunteers and para-teachers. These trends are also followed in Pakistan in both public and private sectors. Literature suggests that contractual teachers due to restricted privileges are insecure and unstable and feel inferior to the regularised counterparts. As a result, it might have negative consequences on the quality of education. Nevertheless, these teachers are used to serve in remote and underserved areas, increasing access to education. But literature also suggests that contractual teachers perform better than permanent teachers, especially in public sector education in Pakistan.

In Pakistan particularly in Sindh, we see the government hires contractual teachers for last decade. With no regularisation process in place, these teachers either form pressure groups or seek help from the Unions to get regularised. The contractual teachers are often seen doing strike in front of the provincial assemblies whereby increasing the chances to negotiate with the education ministries. If the negotiations are successful, the contractual teachers are regularised after a lot of hassle. Therefore, there should be a proper process to regularise the contractual teachers for quality teaching and learning.

For this to happen, there is a greater need to ensure that these teachers meet quality standards for teachers. For example, whether the contractual teachers are meeting the professional standards, possess relevant qualifications etc. Licensing could be one way to deal with the challenges of the contractual teachers for regularisation. For example, contract teachers may be asked to prepare themselves for licensure exams to demonstrate their quality. Under this theme, we can discuss in detail how licensing can effectively deal with the issue of regularising contractual teachers by ensure standards.

Discussion Questions

1. Whose agenda is the contractual recruitment? How is it perceived locally and globally?
2. How can licensing policy be used for the regularisation process of contractual teachers by the governments?
3. How can teaching license ensure the quality of contractual teachers? or On what basis contractual teachers can be given teaching license?
4. What should be the requirement for getting a teaching license for contractual teachers? If given the license, what privileges will the contractual teachers hold?
5. What and how licensing policy can provide the professional support to contractual teachers to ensure quality of teachers?
6. How can licensing policy be beneficial for contractual teachers particularly to increase the status of teachers? Any pros and cons?

ISSUE 5: ROLE OF TEACHER UNIONS IN TEACHING LICENSE

Teacher unions are integral part of the licensing process as they can either be a hindrance or contribute to the success of the licensing policy. This is because teachers Unions themselves are political actors and can influence the government decisions. Like other areas, these Unions can also contest, approve and negotiate for the licensing policy. The discourse on teachers Union also suggests that policy reforms need willingness and agreement of Unions. In Pakistan, teachers Unions have an active role in education reforms. There are possibilities that Union and government have different professional and personal agendas. For example, temporary license or permanent license to in-service teachers or perhaps licensing might be seen as an accountability system for teachers. It becomes crucial to understand the role of Union and how they perceive the teacher licensing. Our purpose is to explore how Unions perceive teaching license and to seek their involvement for licensing policy to be more inclusive

Discussion Questions

1. What unions think, how teaching quality should be ensured?
2. How to ensure that every child gets a quality or certified teacher to teach?
3. What could be the quality marker for a certified teacher?
4. Is it licensing or certification or academic degree?
5. What role unions can play in developing and implementing such accountable mechanism for recruiting, developing and retaining quality teachers?
6. How licensing is perceived by the Unions?
7. How can teacher Unions help us improve the teachers quality through licensing?
8. In what ways teacher Unions can be beneficial for teacher licensing policy?
9. How can teachers licensing solve the issues between government and teachers Unions?

ISSUE 6: LICENSING CRITERIA

Research studies show that improving initial teachers training, modifying teachers' recruitment criteria and teachers' in-service education has a significant impact on teachers' behaviors, and teaching skill. Worldwide there are different policies for pre-service and in-service teacher education and recruitment. For example, in United Kingdom, USA and in many other countries there are mechanisms for teacher licensing with specific criteria, standards, and requirement and registration procedures. However, in Pakistan the recruitment policies allow everyone to become a teacher. As a result learning outcomes of students are extremely unsatisfactory. Therefore, introducing the teacher certification/licensing seems to be a possible way to ensure quality professional teachers. The licensing can ensure that teachers entering into the profession meet the minimum professional standards. In doing so, there is a need of transparent criteria for licensing in terms of academic qualification requirement, procedure for registration and in-service teachers' promotion mechanism.

There are certain issues which need to be overcome properly in this regard. Firstly, there must be a mechanism to check the quality of initial teachers training before issuing license. If a license to teach specific class or specific age level is issued to the teachers then there is a need to modify the curriculum or explore some alternative pathways. There should be standards setting for each stage of education. Secondly, the criteria for registration of in-service teachers and pre-service teachers also need to be addressed properly. If the in-service teachers do not meet the criteria there must be a procedure to make them able for registration e.g., bridging course with upgraded curriculum and assessment. Thirdly and most importantly there must be a linkage between teachers licensing and teachers' promotion rather than promotion based on seniority. Fourthly, there must be a specific duration for the validity of the license as well. Lastly, all teachers whether they teach in public or private school need to be issued license, so that teachers' quality and competency can be enhanced in both the public and private school.

Discussion Questions

- 1 What would be the criteria for those competent human resources who want to make teaching as a profession but not having initial teachers training like B.Ed, & MEd?
- 2 How can we link teachers' promotion with licensing?
- 3 What will be the bridging curriculum for in-service teachers and how will it be assessed?
- 4 How will the teacher-licensing agency assess teachers' professional skill of specific grade and subject?
- 5 How to include the private sector teachers and regulate them?
- 6 What should be the process to monitor and correct noncompliance?

ISSUE 7: TEST FORMAT FOR LICENSING

In Pakistan, some private or government agencies prepare a paper-pencil test for all the candidates usually based on Language, general knowledge and education field. The candidates qualifying test are then selected for teaching posts.

Two approaches are used for licensing and to gauge teachers' quality on set standards across the world. The first is paper-pencil examinations to determine objectively if the candidates have adequate knowledge and skills for teaching. Researches revealed that paper-pencil exams are not a good measure for teacher quality. It cannot show the knowledge application, the reasoning process and needs to be credible. On the other hand, performance assessment is increasingly utilised by the countries/states to examine teacher's quality subjectively. It can be on-job performance evaluation before granting a temporary or permanent license. The teachers can present evidence like portfolios, classroom observation, lesson plans, sample of students work etc. Evidence suggests performance assessment as effective, however it needs to be assessed by experts, needs to be valid, require time and is costly. Yet, the approach can be beneficial for both the readiness and preparation of the teachers. It can also inform us about the teacher learning and what further is needed to support and strengthen teachers practices.

Discussion Questions

1. How can we ensure transparency in assessment of teachers for licensing?
2. What type of assessment (test or performance) will be more suitable in the context of Pakistan for licensing teachers?
3. How assessment for licensing can inform the effectiveness of teachers?
4. How can licensing policy ensure equal distribution of teachers especially female teachers?
5. How on-job professional training can be linked to licensing (catering in-service teachers)?
6. Who will assess what for licensing teachers?
7. How to deal with the various recruitment policies in the country by various agencies in public and private sectors (with or without professional degree requirement)?

ISSUE 8: SEMINARS RELATED TO POLICY DIALOGUE

It has been well established that good teachers are single most important factor in contributing the students development. In order to impart quality education it is necessary to develop professional teachers who meet the ten National Professional Standards for teachers in Pakistan related to subject matter knowledge to classroom pedagogies as well as assessment. However, to ensure that the teacher is familiarised with all the standards and is capable to teach is what quality assurance is all about.

Globally, there are two major practices that prevail; either there are licensing policies which varies from giving universities an allowance to run accredited program for teacher training which would make the graduate legible for the license such as in Canada, South Africa, Singapore, Australia etc. Whereas, in other places, there are licensing bodies that conduct test and then grant license to the teachers. These countries includes United States of America, UAE, China, Nepal etc. Also, there are countries which do not offer license yet have a set criteria for people who want to take teaching as a professional career. These include Finland, Singapore etc. Finally, there are countries, such as Germany, which have the criteria as well as the test for the certification process. These practices also ensure that good teachers are prepared, recruited and retain in the teaching profession.

In the context of Pakistan, we do not have any licensing procedures but we do have set criteria for people who want to take up teaching in the public sector (government schools) which includes Associate Degree of Education, B.Ed elementary of 2 years and M.Ed. Also, recently they have even an introduction of the requirement of NTS test clearance for applying for the teaching position. However, the recruitment policies of teachers do not consider these professional qualifications as mandatory and allows everyone to enter into the teaching profession. On the other hand there are no set criteria in the private sector for hiring of the teachers at all levels.

Discussion Questions

1. Can licensing be a step to bring equity in the field of education? If yes how? And if not, why not?
2. Why existing hiring process is not delivering quality education?
3. Would licensing the teachers improve the quality of education being delivered in Sindh? When some countries improved without having a licensing policy.
4. If province is to have a licensing policy why do we need it and what should it encompass?
5. Does qualification matters? If yes which qualification and why?
6. How can licensing policy impact the recruitment of teachers with both subject-mastery and professional qualification?

ISSUE 9: PROCESS OF TEACHER LICENSING

The process of teacher licensing aims to meet the National Professional Standards for Teachers in Pakistan. This process should also cater the needs of provinces, if introduced at the national level considering the constitutional limitations. Teacher Licensing is the process by which prospective teachers get licensed to teach within a given area after completing required coursework, degrees, test or go through any other related process.

There may be various expected problems or hindrances that will occur in this journey (licensing) but “process of teacher’s licensing” can be one of them. Globally, teacher licensing process varies from country to country and state to state. For instance, in England an under graduate degree and successful completion of teacher training program is compulsory for qualified teacher status (QTS) recommendation. QTS is required as a teacher of children in state schools under local authority control, and in special education schools. After having been awarded QTS it is still important for teachers to pass an induction period (previously called ‘probation’) normally their first year of teaching. Newly Qualified Teacher who fails the induction still retain their QTS but cannot teach in state run schools. The induction period normally lasts a year. During this period, a trained tutor is assigned who observe his teaching and overall performance. Similarly, other countries have their own system for licensing.

As the education system in Pakistan is divided into five tiers: primary, elementary, high, higher secondary and tertiary (university level). Therefore, the current licensing policy will define separate criteria of licensing for each grade level (primary, middle etc.). Level-wise licensing will bound teachers to teach at the certified level and, if he/she wish to switch from one level to the another then he/he will again appear in the licensing process. Secondly, to ensure quality, fair and transparency the licensing agency will encourage framing a technical team public-private partnership. The team may comprise of subject specialists who will design and conduct the test under the supervision of the provincial/national agency for prospective teacher (public & private). This will be made mandatory for every teacher and prospective teachers to appear so that unfair means or malpractices will be discouraged. Competent, dedicated and committed teachers will be filtered who will ensure quality education in public/private schools. Once teacher qualified the initial test then he/she will be provided provisional certificate/license that will be for a particular time. After completion of this time period, teacher will again apply for the final or renewal license and this license may be renewed after every five years through the agency/authority.

Discussion Questions

1. How to ensure all ten National Standards of Teaching in conducting the test?
2. What could be the expected challenges from teachers and how those challenges will be addressed?
3. Should provisional license and final license be separated, or only final license will be enough?
4. What should be the time limit to renew the license?
5. Should there be level-wise license or one license for all grades? Why? Their pros and cons.

ISSUE 10: SHORTAGE OF TEACHERS

Shortage of teachers in Pakistan especially female teachers in underserved areas remained an issue and evident in almost every education policy. The education policies in Pakistan tried to solve the shortage of teachers mainly through lowering the qualification bar in the requirement of teaching jobs. Researches around the globe indicates many other reasons for teachers attrition. Previous researches indicated teacher retirement and increase in the students enrollment causes shortages of teachers. More recent research revealed poor working conditions, dissatisfaction from job, demotivation, lack of incentives and inadequate support/professional development also contribute to teacher leaving the profession. In the context of Pakistan, teachers who join the profession as a 'chance' without proper teaching qualification leave the job as soon as another opportunity is offered. Moreover, it is also possible that the teaching vacancies are not regularly filled as a result schools have shortage of teachers, and the government is unable to meet a bulk of teachers at a time.

Licensing could be a way to ensure candidates long intention to serve the schools by 'choice' may it be teachers with professional qualifications or without professional qualifications. The chances of teachers with license to stay in the teaching profession will increase. Firstly, the process of licensing can gauge candidates motivation and interest towards teaching. Secondly, it can be useful for teachers to serve for a long time. However, it may also reduce the applicants pool in applying for the teaching posts or candidates failing to meet the requirements to get the license.

Discussion Questions

1. What type of licensing will be more suitable in Pakistan?
2. How much time will it take for teachers to get permanent license?
3. How licensing can be useful for under-resourced schools?
4. How will the government ensure the supply and demand of teachers?
5. How can the licensing policy increase the pool of applicants for teaching posts?
6. To what extent licensing policy will be helpful in retention of the teachers?

ISSUE 11: DATA MANAGEMENT

Licensing of professionals is not a new concept in Pakistan and has been used in fields like medicine and engineering. However, implementation of licensing methodology in the field of education is being contemplated by stakeholders and authorities. Teacher licensing is based on the premise that it will not only enhance the quality of teachers available in the country but will also work as a barometer to standardise the quality education and teachers throughout the country. This mechanism will work by issuing professional license to those teachers who meets certain qualification benchmark or achieving / passing certain objectives or examinations. The purpose of data management is availability, access and organisation of the data. Considering the vast number of teachers to be registered nation-wide, to manage their data and keep the database abreast of latest technological trends; data management of professionally licensed teachers is one of the most important areas which requires significant planning and attention of the authorities for the sustainability of the licensing structure. In this modern era, data / information is one of the most critical resource for any organisation and significant resources are diverted towards its management and safekeeping which also needs consideration. A recent trend in the domain of information management is outsourcing of data / database management of large volume of data to specialised service provider having expertise and resources to handle such size of data. In order to maintain the database of licensed teacher this will be handled in decentralised manner at provincial level.

Discussion Questions

1. The data management part of teacher licensing will be outsourced, or it should remain with the principal licensing authority?
2. If database is not outsourced, will there be relevant and sufficient technological and human resources are available to develop, test, implement, maintain and upgrade the database?
3. If the data management is outsourced; how the security, integrity and confidentiality of the data will be ensured by the licensing authority?
4. Will the licensing applications be directly allowed to interested teachers via online website, or the paper based mechanism will be used for applications and a dedicated data transcribing department will be available to input all the data in system? Adopting which approach will be beneficial and cost-effective?
5. If online applications are allowed, what will be the mechanics for the same? Should there be any verification of the information and documents based on which the license has been applied?
6. How the updates relating to particulars of already licensed teachers will be catered? Will it be made available online or through manual application for update of particulars? (Particulars like address, contact number, academic qualifications etc.)
7. Will the database be segregated into various levels of licensing? Like license for primary teachers, secondary teachers and higher secondary teachers.
8. Should the database be available online to external stakeholder? Or it should be accessible only by the licensing authority and others may get the required data through an application in prescribed manner. Discuss the advantages and disadvantages of both the conditions.
9. If database is not made available externally then whether there will be a need to establish a helpline / hotline / customer services center for handling queries relating to licensing, for example, verification of licenses on the request of academic institutions and status inquiry relating to application for licensing.

ISSUE 12: FINANCING TEACHER LICENSING/CERTIFICATION

Quality education is a fundamental right of every child. Learning is associated with quality teaching and professional teachers. Pakistan has been facing shortage of qualified professional teachers. The gap is not filled for last 75 years. Teacher certification/licensing seems a possible solution towards filling the gap. It is a way to improve quality of teaching and learning at classroom. Many developed and developing countries have been implementing teacher licensing / certification through autonomous bodies/authorities. There is a need of such authority in Pakistan either at national level or provincial level to regulate teacher licensing. In this regard, the challenge is who will finance the authority and how the authority will manage funds in issuing the license.

Discussion Questions

1. What is the mechanism of financing the licensing in PEC or medical?
2. How are the funds managed for licensing?
3. What components of the licensing mechanism needs fundings?
4. How can the authorities generate funds for licensing?

APPENDIX 5: SEMINARS RELATED TO POLICY DIALOGUES

Speaker	Affiliation	Topic	Date/Duration	Dialogue Type
Prof. Dan Goldhaber	Director, Center for Education and Research, University of Washington	Improving teachers quality through licensing?	21 Oct 2021/1 hour 30 minutes	Micro Dialogue
Dr Linda Darling-Hammond	CEO Learning Policy Institute	Teacher education for an expert profession: Role of licensing	18 Nov 2021/40 minutes	Macro/Key note speaker
Dr Irfan Muzaffar	Technical Director Khyber Pakhtunkhwa Education	Teacher license: A possible way to improve teachers quality in Pakistan	18 Nov 2021/40 minutes	Macro/Key note speaker
Prof. Low Ee Ling	Dean, Professor of Education, National Institute of Education, Singapore	How Singapore prepares, retains and recruits quality teachers: Lessons for Pakistan	25 Nov 2021/1 hour 30 minutes	Micro Dialogue
Prof. Eric Hanushek	Paul and Jean Hanna Senior Fellow at Hoover Institution Stanford University	The economic value of good and bad teachers: Lessons for Pakistan	8th Feb 2022/1 hour 30 minutes	Micro Dialogue
Prof. Karen Hammerness	Senior Director of Educational Research and Evaluation at the American Museum of Natural History	Role of teacher education institutes in licensing	16 Mar 2022/ 1 hour 20 minutes	Micro Dialogue

APPENDIX 6: PROGRAMME OF MACRO DIALOGUE AND INFORMATION ABOUT SESSION LEADS

Time	Activity	Guest/Speaker	Chair
10:30– 10:35am	Settling & Tilawat	M/C Syed Gohar Shah	M/C Syed Gohar Shah
10:35 – 10:40am	Welcome	Dr Farid Panjwani	
10:40– 10:50am	Inauguration	TBD	
10:50 – 11:20am	Concept note	Dr Sajid Ali, Afaq & Ali Gohar	
11:20– 12:00pm	Keynote Address	Dr Linda Darling-Hammond (Rec Speech)	
12:00 – 12:40pm	Keynote Address	Dr Irfan Muzaffar	V. Provost Dr Anjum Halai
12:40 – 12:50pm	Q/A	Dr Irfan Muzaffar	Afaq Ahmed
12:50 – 01:00pm		Breakout Rooms Technical Details	
Break 1:00 p.m. – 2:00 p.m.			
2:00 – 3:30p.m.	Discussion based on Green Papers		Session Lead
3:30–4:30 p.m.	Presentation, Recommendations & Q/A		Session Lead
4:30 – 4:45 p.m.	Concluding Remarks & way forward	Dr Sajid Ali	

Green Paper Issue	Session Lead	Assistant
Governance & Accountability in Teaching License	Dr Irfan Ahmed Rind Associate Professor, HoD, Education Department, IBA Sukkur University	Rahim Ibrahim
Role of Universities and Training Institutes in licensing	Dr Meher Rizvi Associate Professor, Aga Khan University	Syed Hassan
Role of HEC/NACTE in teacher license	Dr Tasneem Anwar Assistant Professor, Aga Khan University	Sohail Ahmad
Contractual teachers and teaching license	Mr Syed Asim Iftikhar Head of Human Resource & Operations, Aga Khan Education Services, Pakistan	Ghazanfar Iqbal
Role of teachers Unions in teaching license	Ali Gohar Chang Principal IBA-Sukkur School; PhD Scholar AKU-IED	Sarwat Noureen
Licensing Criteria and Test for teacher licensing	Dr Shehzad Jeeva Director, Aga Khan University Examination Board	Samida Sikander

APPENDIX 7: QUESTIONNAIRE FOR STAKEHOLDERS' VIEWS ABOUT TEACHING LICENSES AND TEACHING QUALITY

Dear Participant,

We would request you to share views about teaching licensing and quality of teaching in Pakistan. The purpose of this survey is to investigate stakeholders' opinion about teaching licensing policy and teaching quality in Pakistan. Your information will be confidential and use for research purpose only. Please understand your participation is voluntary.

Consent. I have read the above information and would like to fill the form.

Yes

No

Demographics

Gender: Male Female

Age group: Below 25 26-35 36-45
46-55 Above 55

School Type (with direct experience): Public Private
Others: _____

Region: Punjab Sindh Khyber Pakhtunkhwa
Balochistan Gilgit Baltistan Azad Kashmir

Location: Rural Urban

Your Role: Teacher Parents Academic/ Researcher
Principal/Head Prospective Teacher
Other _____

Qualification: Matriculation Intermediate Bachelor
Master PhD Other (Specify) _____

Indicate the extent of your agreement or disagreement with the following statements by choosing the response using this scale: Strongly Disagree = SDA; Disagree = DA; Undecided = UD; Agree = A; Strongly Agree = SA

	SDA	DA	UD	A	SA
I believe that... Teachers needs to be properly trained before teaching					
A person should have knowledge of teaching before recruiting as a teacher					
Teachers should also have license for teaching like medical profession,					
Only licensed teachers should teach in both public and private schools					
There should transparent mechanisms for awarding license to a teacher					
A due financial incentive should be given to licensed teacher					
License renewal should be conditional to teachers' performance					
Teacher licensing improves the social status of teachers					
Teacher licensing improves the financial status of teachers					
Teacher licensing increase teachers' motivation towards profession					
The quality of teaching improves by recruiting licensed teachers					
Students get access to quality teachers when they are recruited through licensing					
Teacher licensing promotes performance-based accountability of teachers.					
Teacher licensing increases professional development opportunities for teachers					

Which reason you think is most responsible for low quality of teaching? Please rank them in order of preference (1 most to 11 least).
Note: The rank selected cannot be repeated.

Reasons for low quality of teaching											
Statement	1	2	3	4	5	6	7	8	9	10	11
Low social status of teachers											
Less financial incentives for teachers											
Shortage of sufficient teaching resources for teachers											
Shortage of professionally qualified teachers											
Ineffective teaching practices in classrooms											
Lack of accountability of teachers											
Shortage of continuous professional development opportunities for teachers											
Poor working condition of teachers											
Lack of teachers' motivation towards teaching profession											
Low quality of professional qualification of teachers											
No requirement of professional qualification of teachers											

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آغا خان یونیورسٹی

THE AGA KHAN UNIVERSITY

Institute for Educational Development

Aga Khan University Institute for Educational Development
1-5/B-VII, Federal B Area Karimabad Gulberg Town,
Karachi, Sindh 75950
Tel: (021) 36347611 | D. +92 21 3486 2712

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