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## Are our teachers ready for Education 4.0? Exploring teacher quality in Philippine basic education



<https://www.quora.com/What-is-Education-4-0>

**This policy brief outlines the current state of teacher quality in Philippine basic education and its implications to Education 4.0. A review of the extant literature on teacher quality in the Philippines suggests that Filipino teachers are not yet equipped with content and pedagogical knowledge to fully engage with Education 4.0. In response, professional development for teachers has been instituted and teacher quality has also been standardized by integrating the roles and functions of a K-12 teacher with the domains of the Philippine Professional Standards for Teachers.**

The global era of the fourth industrial revolution (4IR), an era characterized by the universal access to facts and declarative knowledge via the Internet, has changed and continue to change the landscape of education across the world; giving birth to 'Education 4.0.' As a result, schools and universities transitioned from purely classroom-based lectures to hybrid classrooms and online platforms. This ubiquitous nature of technology, however, has recently been challenging educators and educational institutions alike as the freedom to access information anytime and almost anywhere in the world has opened doors to fake news and distorted information (e.g. historical revision, fake science) resulting to misconceptions (Espinosa, 2019). Unfortunately, while the 4IR paved the way to a well-informed society, it has also engendered a threat to knowledge and education. Occurring simultaneously with the 4IR is the global era of 'post-truth,' an era characterized by the spread of fake news and distorted information through the Internet (Verkade et al, 2017). With the challenges brought by this era, the relevance of learning theories and instructional designs developed prior to the 4IR are hereby put into question. Present-day educational institutions call for a paradigm shift in both curriculum and instruction: from putting heavy emphasis on the acquisition of declarative knowledge to developing and promoting critical thinking skills



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among students. Critical thinking skills are essential for students to discern a potential fake news or distorted information; thereby blocking misconceptions that get in the way (Espinosa, 2019).

### *The K-12 curriculum*

With the implementation of the K-12 curriculum in the Philippines, learner-centered and inquiry-based pedagogies have been instituted (Laureano et al, 2015; Montebon, 2014) to develop the four 21<sup>st</sup> century core skills (information, media and technology skills, learning and innovation skills, communication skills, and life and career skills) among basic education students (DepEd, 2019). These 21<sup>st</sup> century core skills promote critical thinking and ensure that activities inside the classroom will lead to long-term learning. The predicament, however, is the readiness of teachers to develop these skills among our students: are they equipped with content and pedagogical knowledge to effectively implement the K-12 curriculum? Findings from the study of Espinosa et al (2013) show that simply implementing an inquiry-based performance task did not result to higher critical thinking ability among students. These findings suggest that while good teaching strategies are important, the quality of teacher training is equally important to effectively execute a teaching strategy.

### *Teacher quality in Philippine basic education*

The Philippine Public Education Expenditure and Quantitative Service Delivery Study (PETS-QSDS) pointed out that the “knowledge of subject matter among elementary and high school teachers is low in most subjects” (The World Bank, 2016, p. 3) and they also lack the “higher order problem-solving skills necessary to teach the curriculum effectively” (The World Bank, 2016, p. 4). These teachers, however, are not aware of this as they even rated their knowledge of the subject matter very highly in the same survey (The World Bank, 2016). The same findings were reported by Espinosa, Elipane, and Atweh (2015): knowledge of the subject matter is an impediment in implementing lesson study in the Philippines. They also reported that the theoretical knowledge and language of teachers are problematic as they were unable to distinguish the ‘principle’ behind their teaching from their ‘strategies’ in teaching (Espinosa, Elipane, & Atweh, 2015). In the case of science teachers, Orbe, Espinosa, and Datukan (2016) reported that their content and pedagogical knowledge are problematic because of the mismatch in teacher preparation. Present high school science teachers’ pre-service preparation is to teach a specific science discipline. In the K-12 curriculum, however, they are required to teach all the disciplines in a spiral progression approach (Orbe, Espinosa, & Datukan, 2016). These findings indicate an alarming narrative of [in]competence and unfortunately contradicts one of the facets of 21<sup>st</sup> century learning: the acquisition of high-level conceptual knowledge. With this knowledge on hand, the PETS-QSDS further emphasize “the need for significant improvements in teachers’ skills and subject knowledge if they are to have a full command of the curriculum and to provide effective instruction in the classroom” (The World Bank, p. 3).

### *Would professional development for teachers mitigate this pressing problem?*

Studies show that professional development for teachers improve both their content and pedagogical knowledge (e.g. Samaniego & Espinosa, 2015). However, this is not the case for the sampled teachers in the PETS-QSDS. Even though “the percentage of teachers in the Philippines who receive some annual in-service training is high even when compared to levels in high income developed economies,” the sampled teachers still poorly fare in both content and pedagogy (The World Bank, 2016, p. 7). The PETS-QSDS suggested that longer duration of in-service training should be instituted given the quality of teachers in the Philippines (The World Bank, 2016). We argue, however, that in-service training providers should be regulated and monitored for quality control. Informal observations and feedback from teachers seem to deliver a single message: in-service training providers sacrifice quality by hiring less competent trainers potentially because their professional fees are lower.

### *Standardizing teacher quality in Philippine basic education*

The recent reform in Philippine basic education does not only call for quality professional development for teachers, but also a call to revisit the National Competency-based Teacher Standards (NCBTS) as it is no longer responsive to “the roles and functions of a K-12 teacher” (DepEd-TEC, 2017, p. 3). Revision of the NCBTS, hence, gave birth to the Philippine Professional Standards for Teachers (PPST) (RCTQ, 2017), which “makes explicit what teachers should know, be able to do, and value to achieve competence, improve student learning outcomes, and eventually quality education” (DepEd-TEC,



2017, p. 4). The PPST is composed of seven domains: (1) content knowledge and pedagogy, (2) learning environment, (3) diversity of learners, (4) curriculum and planning, (5) assessment and reporting, (6) community linkages and professional engagement, and (7) personal growth and professional development (DepEd-TEC, 2017). The PPST further elaborates career stages of teachers in developmental progression: career stage 1 or beginning teachers, career stage 2 or proficient teachers, career stage 3 or highly proficient teachers, and career stage 4 or distinguished teachers (DepEd-TEC, 2017).

#### *Quality pre-service training of teachers*

In response to the changing landscape of education across the country, teacher education institutions (TEIs) revisited their teacher education curriculum. The new teacher education curriculum covers both the roles and functions of a K-12 teacher as well as the domains of the PPST. This new curriculum is also being implemented using the outcomes-based education (OBE) approach as mandated by the Commission on Higher Education (CHED). Findings from the study of Espinosa et al. (2015) show that indeed the teacher education curriculum in the country needs reform because of two reasons: (1) even though the current teacher education curriculum is heavy on content, the content knowledge of in-service teachers seem to be problematic, and (2) the inadequate pedagogy courses in the current pre-service teacher education programs seem to take its toll on the pedagogical knowledge of in-service teachers as they are unable to discern the 'principle' behind their teaching from their 'strategies' in teaching.

#### *Recognizing the teaching profession by increasing the salary of teachers*

Recognition through remuneration is another factor affecting quality teaching in any country across the world. The World Bank (2016) reported that "cross-country comparisons indicate that teachers in the Philippines are relatively well paid" (p. 12) and that the "starting salary of teachers in the Philippines is relatively high" (p. 12) compared to other East Asian countries using per capita gross domestic product (GDP). Recent developments, such as the implementation of the Tax Reform for Acceleration and Inclusion (TRAIN) law in 2017, was not accounted for in the report. Hence, it is hereby recommended that the current economic situation of teachers be studied in greater detail.

#### *Concluding remarks*

While Education 4.0 will be a continued response of educational institutions to the increasingly ubiquitous nature of technology, the post-truth era will also be a continued impediment to 21<sup>st</sup> century classrooms. Hence, a call to develop critical thinking in the curriculum has been the battle cry of educational institutions across the world. Critical thinking, however, is not a straightforward skill that can be developed via conventional methods of teaching; rather it requires a high-level of conceptual knowledge intertwined with an appropriate pedagogy. Unfortunately, with the seemingly low status of teacher quality in the country, battling with the repercussions of the post-truth era will be a challenging task for teachers. Standardizing teacher quality and institutionalizing professional development for teachers had been the response of the Philippine Government. However, this reform has just started and should be studied in greater detail to further develop and enhance our education system.

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