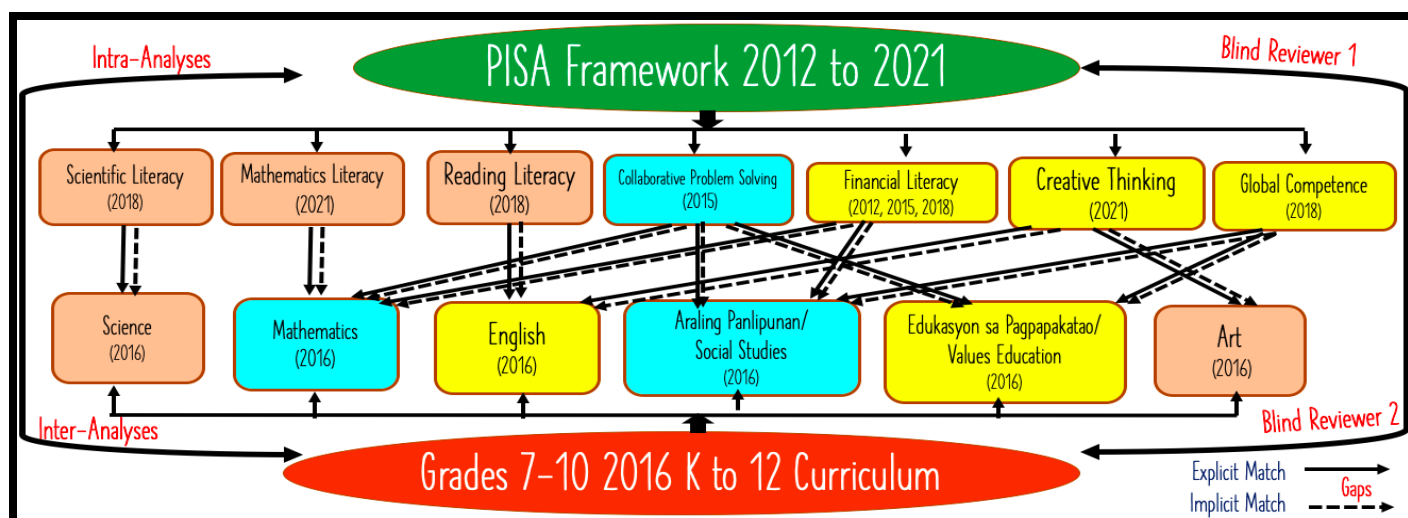




Is the K to 12 Curriculum Aligned with PISA?

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This policy brief presents the results of the analysis made on six subject areas in the 2016 Grade 7 to 10 Curriculum of the Department of Education made available in its website as reference in the development of learning resources, assessment tools, and training of teachers in the Philippines. The analysis focused on the alignment of the curriculum with the competencies assessed in the Program for International Student Assessment (PISA), administered for 15-year old learners by the Organization for Economic Co-operation and Development (OECD). The Philippines for the first time participated in PISA 2018 together with other 78 countries in the world. The results of such assessment are considered a possible indicator of the effectiveness of the K to 12 Program that the country has implemented as a result of the Enhanced Basic Education Act in 2013 (Republic Act 10533). The results could likewise inform policies on needed updating of the curriculum and learning resources and the upskilling of teachers.

The Republic Act No. 10533 or known as the Enhanced Basic Education Act in 2013 has aimed to design a basic education curriculum that makes the Filipino graduates locally and globally competitive. The law has also envisioned for the immediate attainment of international benchmarks. The Department of Education (DepEd) set the country's participation in international large-scale assessments of students' learning like the Program for International Student

Assessment (PISA) to gather indicators of the effectiveness and efficiency of the K to 12 program (DepEd Order 29, s. 2017). Hence, in 2018, the Philippines joined for the first time the computer-based triennial PISA given to 15-year-old learners where sampled junior and senior high school students from public and private sectors represented the 17 regions in the country. The 2018 PISA results released in December 2019 placed the Philippines at the bottom in reading literacy and second from the bottom in mathematics and scientific literacies among 79 participating countries (DepEd, 2019). The DepEd's *Sulong Edukalidad* Program has been launched upon the release of the PISA results in 2019 to set areas for reform and to address the need to improve not only access to, but also most specially the quality of education in the country.

The Philippine Normal University, being the National Center for Teacher Education, aims to contribute to this noteworthy endeavor of DepEd by providing evidence-based advice in crafting policies and programs for the improvement of the quality of education in the country. The analysis of the six areas in the K to 12 Curriculum for Grades 7 to 10 vis-à-vis seven areas in PISA, namely: reading literacy, mathematics literacy, scientific literacy, global competence, creative thinking, financial literacy, and collaborative problem solving hopes to be an input to the said policies. The three (3) major assessment areas in PISA were mapped to the competencies in one subject area in the K to 12 curriculum and the four (4) innovative assessment areas were mapped with two to three curriculum areas where they are expected to be integrated. These are: a) reading literacy with English Curriculum; b) scientific literacy with Science Curriculum; c) mathematics literacy with Mathematic Curriculum; d) global competence with Araling Panlipunan and Edukasyon sa Pagpapakatao Curricula; e) financial literacy with Mathematics and Araling Panlipunan Curricula; f) creative thinking with Art and Communication Arts English curricula; and g) collaborative problem solving with Mathematics, Araling Panlipunan, and also Edukasyon sa Pagpapakatao Curricula. Through document analysis done by subject area experts whose analysis was blind reviewed by nationally-recognized experts, gaps were found in the six areas in the curriculum (Belmi & Mangali, 2020; David & Reyes, 2020; Golla & Reyes, 2020; Hibanada, Dellomos, & Romero, 2020; Romero, 2020; Rungduin & Papango, 2020; Yeban & Florendo, 2020). The gaps were the competencies assessed in the seven areas in PISA from 2012 including those set for 2021 cycle that are not mapped to the competencies in the grade levels and subject areas in the curriculum that were examined.

The following are found to be the gaps in selected areas in the Grades 7 to 10 of the K to 12 Curriculum:

1. **Reading Literacy.** The reading comprehension in the English Curriculum reflects the text processing skills of *locating, understanding, reflecting, and evaluating* in PISA reading literacy framework but it does not explicitly reflect literacy behaviors in digital and non-digital environments which PISA considers when teaching text processing in relation to source of information. PISA emphasizes interaction of reader, text and task in influencing learner's performance, which is not clearly articulated in the curriculum document.
2. **Mathematics Literacy.** The Mathematics Curriculum is aligned with the mathematics literacy framework except that it does not emphasize contextualization of content in real-life situations that requires processing of information, reasoning at higher level, and interpreting and evaluating personal, occupational, societal, and scientific problems which PISA emphasizes.
3. **Scientific Literacy.** The Science Curriculum captures mostly the content requirements in scientific literacy except that it fails to explicitly include the history of the earth and universe emphasized in PISA. The distribution of content topics and competencies in the curriculum is not proportionately and appropriately spread across grade levels based on the cognitive demand and scientific literacy defined in PISA.
4. **Global Competence.** The two areas such as Araling Panlipunan and Edukasyon sa Pagpapakatao integrate global competencies but they do not cover some content, skills, attitudes and values emphasized in PISA.
5. **Creative Thinking.** The English and Art Curricula integrate PISA creative thinking indicators but emphasis is more on generating creative ideas than with generating diverse ideas and evaluating and improving ideas. Both curricula focus more on creative expression than on knowledge creation and problem solving that PISA emphasizes.
6. **Financial Literacy.** The Mathematics and Araling Panlipunan Curricula particularly that on Economics integrate a little of the competencies set for financial literacy but they lack integration of the requisite content on money and transactions, planning and managing finances, risk and rewards, and financial landscape being the areas where financial literacy is best integrated.
7. **Collaborative Problem Solving.** The Mathematics, Araling Panlipunan and Edukasyon sa Pagpapakatao Curricula integrate a little the collaborative problem-solving competencies in PISA, which are viewed as essential 21st century skills specific to finding solutions to national or global crisis and the curricula do not cover problem-solving competencies of *planning and executing* and *monitoring and evaluating*.

The following are the recommendations based on the findings on the analysis of the K to 12 curriculum vis-à-vis PISA as possible input to policy review and development.

1. **English Curriculum for Grades 7 to 10.** The English Curriculum, classroom instruction, learning resources, and assessment should explicitly integrate the demand for reading literacy through interaction of the reader, text and task from multiple sources in digital and non-digital environments. It should also integrate creative thinking skills like generating diverse ideas, evaluating and improving ideas, and knowledge creation and problem solving.
2. **Mathematics Curriculum for Grades 7 to 10.** The Mathematics Curriculum, classroom instruction, and learning resources should aim for the development and assessment of mathematical reasoning and high-level individual and collaborative problem solving and critical thinking in personal, occupational, societal, and scientific contexts. It should also explicitly target the development of financial literacy competencies that are emphasized in PISA since Mathematics is the most appropriate area for the development of financial literacy in the K to 12 curriculum.
3. **Science Curriculum for Grades 7 to 10.** The Science Curriculum, classroom instruction, learning resources, and assessment should explicitly include the history of the earth and the universe as a content. The curriculum should be unpacked to proportionately distribute the content and competencies across grade levels based on the cognitive demand and scientific literacy as defined in PISA.
4. **Araling Panlipunan Curriculum for Grades 7 to 10.** The Araling Panlipunan Curriculum, classroom instruction, learning solutions, and assessment should integrate global competencies (e.g., global language and intercultural relations), cognitive skills and processes (e.g., evaluating information and sources, explaining complex situations); and attitudes and behavioral skills (e.g., sense of interconnectedness, responsibility for others in the world) emphasized in PISA. There should also be competencies for the development of collaborative problem solving as well as financial literacy integrated particularly in Economics.
5. **Edukasyon sa Pagpapakatao Curriculum for Grades 7 to 10.** The Edukasyon sa Pagpapakatao Curriculum, classroom instruction, and learning solutions should also explicitly target integration of the global competencies with emphasis on the development and assessment of attitudes and values that promote intercultural relations and understanding as well as the development of collaborative problem solving skills as they are considered in PISA as essential in real life.
6. **Art Curriculum for Grades 7 to 10.** The Art Curriculum, classroom instruction, and learning resources should also integrate development and assessment of creative thinking skills among learners like generating diverse ideas, evaluating and improving ideas, and knowledge creation and problem solving as they are valued essential in PISA.
7. **Teacher Upskilling.** The identified gaps in the basic education curriculum based on PISA framework be integrated in the professional development programs for teachers that deepen their content knowledge and pedagogy including their upskilling in using computer-based assessment and formats used in international student assessment.

Acknowledgement

The author wants to acknowledge the contribution of the Philippine Normal University President Dr. Bert J. Tuga, former President Dr. Ester B. Ogena, and former Officer-in-Charge, Dr. Ma.Antoinette C. Montealegre, as well as Rex Institute for Student Excellence (RISE) headed by Mr. Don Timothy I. Buhain and its General Manager, Mr. Dexter C. Ngo, for having supported this study that she led together with her colleagues who worked on specific areas in the study, which she cited as reference for the policy brief, and all the 14 experts from the different universities who reviewed the report on the analysis made on the seven assessment areas in PISA.

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