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## EDUCATIONAL REFORM IN THE FEDERAL REPUBLIC OF GERMANY AFTER THE "PISA-SHOCK"

The current state of the world and its trends in globalization, the growing competition between countries, which necessitate the search for effective tools for ensuring the quality of education as a guarantee of economic success, intensify the implementation of various international comparative studies of students' educational achievement. Such studies provide educators and society with valid information for finding the best ways to improve education systems. The most prominent of such programms is international comparative assessments of student achievement in mathematics and science (TIMSS), in reading (PIRLS) [3] and the programme for international student assessment (PISA); it is an international survey which aims to evaluate education systems worldwide by testing the skills and knowledge of 15-year-old students [1]. These studies examine the state of education in participating countries based on the assessment of student achievement levels at the end of primary and secondary school.

It is worth mentioning that global best practices show that the implementation of such monitoring with the subsequent systematic analysis of the results obtained is a reliable way of determining the real

state of education and the level of preparation of students. International monitoring comparative studies based on standardized (unified) tools (tests, questionnaires, interviews, class visits according to unified protocols and video recordings of classes) make it possible to compare educational and methodological systems of different countries, to find effective training methods, to improve national education systems following on from the results.

The European choice of Ukraine necessitates the study, synthesis, critical reflection and creative application of European experience in this area. The experience of Germany in this regard is of particular importance to Ukraine, as Germany has undergone a difficult way of developing an effective system for monitoring the quality of education, and through the participation of Germany in these studies has significantly improved the quality of school education, especially after the "PISA-shock". Since 1969, after reading literacy evaluation among the seventh grade pupils (German: Nationale Gymnasium-Lese-Untersuchung), initiated by the then-government, the Federal Republic of Germany did not participate in international comparative studies of students' educational achievement. In 1993, after a long break, Germany participated in the international programme TIMSS (Third International Mathematics and Science Study). In 2001, Germany participated in anther authoritative study PISA (Programme for International Student Assessment) another authoritative study). German officials had high hopes for the first results and expected that their country – the birthplace of Albert Einstein and Wolfgang von Goethe – would end up at the top of the international rankings.

But the results were sweeping. German 15-year-olds performed well below the average of OECD countries, ranking 27th out of 30 countries in reading, 28th in mathematics, and 25th in science. Moreover, the results were highly inequitable; the gap between the highest performers and the lowest performers was higher than in any other industrialized country [2].

The "PISA shock," as it was called in German society, spurred policymakers into action. German government adopted an extensive series of reforms, including: lengthening the school day from roughly 4 hours in most cases to the 6.5 hours that is common in most industrialized countries; vastly expanding early childhood education, including making early education and care an entitlement for all children age 1 and older; providing more autonomy to schools; reforming tracking at the secondary

level; creating national standards for student performance [2].

In the result, in a few short years, Germany climbed to the top of the international rankings on PISA, and it has remained there, although performance has stalled in recent years. The reforms had an immediate impact on raising student performance, but the improvement was limited. That is why improvement in PISA scores has stalled in recent years. Germany now faces challenges to build a stronger foundation of educational improvement. One area that needs more attention is building a strong teaching profession.

Initial teacher education in Germany is fairly strong, despite the fact that teacher-training institutions are autonomous and there is limited system coherence. Teacher-candidates must pass a rigorous test to enter teacher education programs, and they spend a year working in schools with skilled mentors. All teachers in Germany have a master's degree and specialize in a content area. But ongoing professional learning is relatively weak, and there is no career ladder to encourage teachers to continually develop their skills.

Despite all education challenges, Germany's success in the past decade and a half offers lessons for other countries. One big lesson that German society has learned from "PISA-shock" is about the equity in education. Another lesson is about the importance of building public demand for improvement. A third lesson is about the timing of the reforms. Unlike some countries, which implemented tests soon after developing standards for student performance, Germany rolled out the implementation of standards in a careful, deliberate way, giving time for schools and teachereducation institutions to adjust to the new expectations before putting in place tests to measure whether students have met them.

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