

TEODORA GENOVA**TORSTEN HUSÉN – A CO-FOUNDER AND CHAIRMAN OF IEA FROM 1962 TO 1978**

It is relatively easy to proof read life, but very difficult to predict it.
(an oft-repeated saying of Torsten Husén)

Abstract

This paper reviews the work and contribution of one of the most influential comparativists in education – Torsten Husén in the period when he was a co-founder and chairman of the International Association for the Evaluation of Educational Achievement (IEA) in the 60 and 70 decades of the 20th century. At that particular time, the first major cross-national and widely reported IEA surveys were carried out. The author places special emphasis on the exemplary First International Mathematics Study (FIMS), which “presents the results of the first completed survey of the achievements of thirteen-year-olds, pre-university mathematics and nonmathematics students in twelve countries” (Eckstein, 1977). As a result, the IEA initial studies revolutionized the reality of Comparative Education as a scientific field and an academic discipline in a way that it proved that such research was completely feasible.

Key words: achievement, Comparative Education, evaluation, feasibility, IEA, survey, Torsten Husén

Introduction

My interest in exploring the significance and contribution of Torsten Husén is derived from my overall interest in the Nordic, i.e. Scandinavian comparativists and their scientific achievements within the field of Comparative Education from the middle of the 20th century to the present day. Referring to the undoubtedly colossal presence of Husén in the educational context as a starting point and stressing on his founding membership and chairmanship of the International Association for the Evaluation of Educational Achievement (IEA) between 1962 and 1978 gives impetus to follow the process of development of the empirical science of Comparative Education through the performance of several cross-national surveys, which succeeded in determining the feasibility of research on educational achievements across countries. The First International Mathematics Study (FIMS), conducted and subsequently published in two volumes by Professor Torsten Husén himself in 1967, is taken as the center of attention exemplifying the importance of this transformational moment. According to King (1967, p. 359) “these two volumes represent a break-through in comparative studies of education”, concluding that “comparative studies have greatly extended their range of comparison, their efficacy, and their persuasiveness by this new pattern of co-operative enquiry” (p. 363).

Short Biography of Torsten Husén (1916-2009)

Considered by all means one of the most influential figures in Comparative Education according to the *Survey of Comparativists and Their Literature* (Cook, Hite & Epstein, 2004, Table 17) and regarded by his co-workers and some researchers in the sphere of education as “a cosmopolitan”, “a chief architect of the educational reforms”, “eminent in the world of education”, “a polyhistor”, “a great educator”, an inspiring “doctorfather”, and “an impressive personality in Comparative Education”, Torsten Husén's reputation in Comparative Education and beyond it is entirely undisputed.

“The life's work of the Swedish educationalist Torsten Husén, which had lasted for more than 60 years, came to an end with his death on 2nd July 2009 at the age of 93. With his extensive basic research that opened up new perspectives, Husén undoubtedly became the best-known internationally of all Nordic scholars in the field of education. He was active as a source of far-reaching educational policy initiatives from the very beginning of his career and participated with cogent arguments in both domestic and international educational discussions” (Academia Scientiarum Fennica, 2009).

Limited by the scope of this paper, only a few of Husén's greatest merits are mentioned here. He was a Professor emeritus of Stockholm University, had honorary doctorates from universities in Europe and the United States. He was a member of the Royal Swedish Academy of Sciences, a foreign member of the United States National Academy of Education, Polish Academy of Sciences, and Finnish Academy of Sciences. He was also an honorary member of the American Academy of Arts and Sciences. He served on various UNESCO committees and was a consultant to the OECD. Throughout the 1960s and 1970s, ministries of education from various countries, along with the International Institute for Educational Planning (IIEP) and the UNESCO Institute for Education in Hamburg, increasingly asked Professor Husén to act as an expert consultant for different aspects of education. The OECD also asked him to participate in their reviews of educational policy. Husén was a chair of IEA between 1962 and 1978 and was appointed its honorary president in 1978. He was a co-editor-in-chief of the first and second editions of the *International Encyclopedia of Education* and a founding president of the International Academy of Education (IEA, 2011).

Brief History of IEA

IEA became a legal entity in 1967, but its origins date back to 1958 when a group of scholars, educational psychologists, sociologists, and psychometricians, among which Torsten Husén had a leading role, met at the UNESCO Institute for Education in Hamburg, Germany, to discuss problems of school and student evaluation, “which then was a rather new subject among educators, at least in Europe” (Husén, 1997). “The representatives of 12 educational research institutes from the same number of countries in 1961 decided to constitute themselves as the International Association for the Evaluation of Educational Achievement, later well-known under the acronym I.E.A.” (Husén, 1997). “The basic idea of the founders of IEA was that the world could be conceived as a huge educational laboratory where different national practices could lend themselves to comparisons that would yield

new insights into the determinants of educational outcomes, serving as a basis for the improvement of the quality of education” (De Landsheere, 1997).

The first IEA studies in the 1960s and 1970s of the 20th century, which were conducted while Husén was the first chairman of the association, are as follows: The Pilot Twelve-Country Study (1959-1961); The First International Mathematics Study (FIMS) (1964); The Six-Subject Study (1970-1971). These subsequently led to the following studies in the 1980s: The Second International Mathematics Study (SIMS) (1980-1982); the Second International Science Study (SISS) (1983-1984), etc. In the 1990s, the first study in a four-year cycle of assessments in mathematics and science was launched under the name The Third International Mathematics and Science Study (TIMSS 1995), now known as the Trends in International Mathematics and Science Study. Regular data collections for TIMSS have taken place in 1999 (also known as TIMSS-Repeat), 2003, 2007, 2011 and currently the sixth cycle 2015. The first decade of the new century brought two meaningful developments to IEA studies: creating a base for new cycles (civic education, advanced mathematics and science), and entering new areas of assessment (computer and information literacy of students, teacher education). Another assessment series, the Progress in International Reading Literacy Study (PIRLS), has been conducted in five-year intervals in 2001, 2006, 2011 and the expected fourth cycle in 2016. PIRLS investigates changes over time in children's reading achievement at the fourth grade, regarded as an important transition point in their development as readers, and gathers information on reading education and children's early experiences at home and school in learning to read (IEA, 2011).

Presently, the unique role and network of IEA with almost 57 years of history, over 30 cross-national research studies, about 70 member countries and a secretariat in Amsterdam, the Netherlands, has contributed substantially to the development of a world-wide community of experts in educational evaluation. IEA studies are an important data source for those working to enhance student learning at the international, national, and local levels. By reporting on a wide range of topics and subject matters, IEA studies contribute to a deep understanding of educational processes within individual countries, and across a broad international context (IEA).

The period from 1962 to 1978: a Time of Ground-laying and Feasibility

In the introductory part of chapter V of *The Learning Society Revisited*, Husén (1986, p. 169) accounts for the short history of comparative studies in education with a strict empirical approach at the time when IEA was established. Neville Postlethwaite, the first executive director of IEA between 1962 to 1972, and a successor to the chairmanship of the association between 1978 and 1986, explains in depth the emerging necessity for conducting empirical studies at that time in *International Review on Education* (1969, p. 131): “The last two decades have seen an upsurge in many countries of educational surveys of an empirical research kind. In some cases it has been the policy makers who have recognised that it is necessary to have evidence as a basis from which to make decisions resulting in change in an educational system, e.g. Sweden and the United Kingdom where governments have commissioned specific surveys. In other cases it is the educational research workers (many of whom started in the discipline of psychology) who have initiated the

surveys and the policy makers are slowly learning the value of the evidence produced”.

In the years preceding the designated period, i.e. 1956 through 1961, Husén happened to meet some 15-20 researchers regularly once or even twice a year in Hamburg. He points out that “at the beginning, the main topics were school failures, tests, examinations and evaluation – the latter a rather new concept at least on the European side of the Atlantic. Out of these meetings grew a rather new speciality in educational research, empirically oriented comparative education” (Husén, 1997). Torsten Husén was strongly supported by Professor Arthur Foshay of Teachers College, Columbia University, who in a research memorandum proposed a cross-national longitudinal study of “the intellectual development of school children” and Professor Arnold Anderson, who had just founded the Center for Comparative Education at the University of Chicago. Their mutual cooperation led to a pilot study which was aimed at exploring whether it was empirically possible to compare school achievements across countries. The pilot study was reported in 1961 and published the next year in *Educational Achievements of Thirteen-Year-Olds in Twelve Countries* (Foshay et al., 1962). The pilot study suggested a decisive and enormous step forward in developing an empirical science of comparative education. Husén explains further that “in a document sent out in 1962 it was stated: ‘Since the end of the Second World War there has been an increasing realization that educational research and comparative education could be greatly strengthened if cross-national studies with a component of objective measurement could be carried out, thus bringing to bear the experience of educational research on international comparisons’” (Husén, 1997, p. 2).

On one hand, this first IEA project was notoriously successful, and on the other hand it also served as a starting point for further international surveys of the association. “The Pilot Study not only demonstrated the feasibility of a multinational educational survey, but also provided information which was useful in the generation of hypotheses for future IEA surveys” (Postlethwaite, 1974, p. 157). Husén and his team of researchers, who were inspired by the success of the first pilot survey, continued with a full-scale international survey of mathematics education conducted with representative national samples of students at the beginning and the end of secondary schooling in the same number of 12 countries, but two different. The First International Mathematics Study (FIMS) was carried out in 1964 and resulted in the publication of two volumes under the authorship and editorship of Husén – *International Study of Achievement in Mathematics: A Comparison of Twelve Countries* (Husén, 1967). Compared to the pilot study, the whole enterprise of FIMS was conducted in a much more scientific way in terms of instrument construction, sampling, etc. in Husén’s own words. While the pilot study of 1962 was “concerned with many of the administrative and methodological problems entailed in such international collaborative work” (Eckstein, 1977) and the *feasibility* of cross-national comparisons, the mathematics study of 1967 presented the results of the first completed survey of the achievements of school pupils and was described “as a first step in an attempt to look at ‘productivity’ in comparative education” (Fattu, 1967, p. 525).

Under the leadership of Husén during the period when he was a chairman of IEA a third international survey named The Six-Subject Survey was initiated in

1966 with a 3-year preparatory phase. It was described as a very ambitious cross-national study of achievements in reading, science, literature, civic education, English as a foreign language, and French as a foreign language comprising 20 countries this time. An enormous number of publications followed the survey including some of the most major ones: Bloom, B. S. (1969): *Cross-national study of educational attainment: Stage I of the I.E.A. investigation in six subject areas* (Vols. 1-2). Washington, DC: Office of Education (DHEW); Comber, L. C. & Keeves, J. P. (1973): *Science education in nineteen countries: An empirical study*. Stockholm: Almqvist & Wiksell; Passow, A. H., Noah, H. J., Eckstein, M. A. & Mallea, J. R. (1976): *The national case study: An empirical comparative study of twenty-one educational systems*. Stockholm: Almqvist & Wiksell; Peaker, G. F. (1975): *An empirical study of education in twenty-one countries: A technical report*. Stockholm: Almqvist & Wiksell; and Walker, D. A. (1976): *The IEA Six Subject Survey: An empirical study of education in twenty-one countries*. Stockholm: Almqvist & Wiksell. Eckstein (1977, p. 350) makes a distinction between the various publications: "In addition to the reports on each of the six subject studies, three volumes deal with the project as a whole: Peaker's report on the methodology (research design and analytical procedures), Walker's summary review of the project findings, and a comparative study of the relation between achievement levels and educational, social, economic, and other national characteristics by Passow and others".

The First International Mathematics Study (FIMS)

Among the above mentioned three cross-national surveys conducted by IEA under the auspices of Husén, the First International Mathematics Study (FIMS) is taken as an example to prove the true potential for implementing international surveys at a time when school systems were undergoing various major reforms in many countries across the globe. In this survey there were 5 450 schools involving 133,000 pupils across 12 countries (King, 1967). Husén (1973, p. 312) accounts for "four target populations at the 13 year and pre-university level were sampled and tested in all the countries, consisting of: (1) All the pupils who were 13:0-13:11 on the day of testing; (2) All the pupils at the grade level where the majority of pupils of age 13:0-13:11 were to be found; (3) All pre-university pupils studying mathematics as an integral part of their course for future training or as part of their pre-university studies; and (4) All the pre-university pupils studying mathematics as a compulsory part of their studies, and the remainder who did not take mathematics at all". The team of workers deliberately chose mathematics "as the subject least culturally involved" "to make their study most objective". "Mathematics is also peculiarly suitable for a survey of this kind because of its international intelligibility, and still more its obvious usefulness. Moreover, for quantitative surveys it is a particularly apt field of study" (King, 1967).

The implementation process of this survey was conducted by relating input factors, such as the social background of students, teacher competence, curriculum characteristics and teaching practices, to outcomes in terms of achievement and attitudes toward school learning, thus enabling the cross-national comparisons to be made on a much firmer basis. Then, Husén and his co-workers tried to identify factors which were decisive in influencing student achievement. In order to carry out

meaningful comparisons between countries and to identify such factors, they needed to establish internationally valid yardsticks by means of which the standards of pupils at certain grade or age levels or at certain terminal points (for instance at the end of the pre-university school) could be assessed.

Contrary to the supposition of critics who have argued that IEA in the early days failed to take account of differences in the selectivity of secondary schools in different countries, one of the prime motivations for conducting FIMS was to produce empirical evidence relative to the question of whether newly implemented comprehensive schools systems in various European countries were having a negative effect on educational achievement, when compared with more traditional and selective systems of secondary education. Issues specific to mathematics education were of secondary interest to the leaders of this first study. King (1967) explains that “they have shown how the empirical concepts and apparatus previously used in psychology and sociology can be taken into the schools to discover and test mathematical practices, attainment, and expectation internationally; they have pushed enquiries beyond the immediate environment of the schools into the ambitions, assumptions, and methods of teachers and other educational personnel; and to some degree they have been able to show a picture of educational fashions and practices undergoing change”. The primary aim of this survey was to test a variety of hypotheses related to outcomes of different patterns of mathematics education set within various social and cultural contexts and to develop new strategies resulting in voluminous and complex data for Comparative Education. This IEA study repeatedly indicated that it was not designed to compare countries and it was not conceived of as an “international contest”. Many of the hypotheses could not be tested unless cross-national differences were considered (Fattu, 1967). Husén (1973, p. 311) describes the objectives of the study in the following way: “The International Project for the Evaluation of Educational Achievements (IEA) was not launched primarily to compare countries. The cooperating research centers did by no means intend to conduct a kind of “cognitive Olympics”. The overall aim was to relate certain social, economic and pedagogic characteristics of the different systems to the outcomes of instruction in terms of student achievement and attitudes. The IEA project was designed to study the relationships between education and the salient social and economic factors for each country”.

This international survey of mathematics achievement is regarded by many researchers and critics at the time as “a significant and impressive work in comparative education. The distinguished group of researchers who conducted the study have assembled an immense data bank that can be studied profitably for a long time in the future” (Fattu, 1967, p. 525). This proposition is evidenced by the in-depth interest of this paper in the FIM survey. King (1967, p. 362) concludes on the doubtlessly positive outcomes of the study: “Without any doubt, the International Study of Achievement in Mathematics will go down in educational history as a revolutionary example of the application of science to education. It will be long valued as a mine of important information, and as an example of method (its primary objective)” and adds on that “the great merit of the present survey is precisely that it has done a pioneering job” (p. 359).

Conclusion

This paper discusses the key contribution of the Swedish educationalist Torsten Husén, who is by all means the most prominent representative among the Nordic comparativists, in relation to his outstanding work and strong influence on the development of the empirically oriented science of Comparative Education in the 1960s and 1970s of the 20th century. That was the time when the International Association for the Evaluation of Educational Achievement (IEA) was established and the first cross-national surveys on students' achievements were implemented – The Pilot Twelve-Country Study, The First International Mathematics Study, and The Six-Subject Study under the auspices of Husén as a co-founder and a chairman of IEA between 1962 and 1978.

These early IEA studies were conducted with the primary aim to make cross-cultural, output-oriented educational comparisons. They all proved to be entirely successful, doing a pioneering job at that time. The pilot study proved the possibility to devise internationally valid achievement tests in some subjects, to make adequate translations into different languages and to conduct processing and analysis of the data from all the countries involved at one place. The success of this study led to The First International Mathematics Study, which represented the “IEA initial attempt to identify factors associated with differences in student achievement” (Nedrihed & Griffith, 1992, p.12). The overall aim of the third rather ambitious Six-Subject Survey was to use international tests in order to relate student achievement and attitudes to instructional, social, and economic factors, and from the results to establish generalizations of value to policy makers worldwide (ERIC). Without the successful performance of these early studies, which resulted in an immense bulk of publications thus enriching the potential of Comparative Education and building on its empirical approach to educational matters, one could not assume today's significant role of IEA in conducting large-scale comparative studies of students' educational achievement leading to improvements in quality of education across the globe.

References

- Academia Scientiarum Fennica (2009): <http://www.acadsci.fi/vuosikirja/2009/husen.pdf>.
- Cook, B. J., Hite, S. J. & Epstein, E. H. (2004): Discerning Trends, Contours, and Boundaries in Comparative Education: A Survey of Comparativists and Their Literature. *Comparative Education Review*, Vol. 48, No. 2, pp. 123-149.
- De Landsheere, G. (1997): IEA and UNESCO: A history of Working Co-operation. Paper on the accompanying CD to the UNESCO publication 50 Years of Education.
- Eckstein, M. A. (1977): Comparative Study of Educational Achievement. *Comparative Education Review*, Vol. 21, No. 2/3, pp. 345-357.
- Fattu, N. (1967): The International Math Survey: A Study Marred by Distorted Publicity. *The Phi Delta Kappan*, Vol. 48, No. 10, pp. 525-527.
- Foshay, A. W. et al. (1962): *Educational Achievements of Thirteen-Year-Olds in Twelve Countries*. Hamburg: UNESCO Institute for Education.
- Husén, T. (Ed.) (1967): *International Study of Achievement in Mathematics: A Comparison of Twelve Countries*. Vols. I-II. Stockholm and New York: Almqvist & Wiksell and John Wiley & Sons.

- Husén, T. (1973): The Standard of the Elite: Some Findings from the IEA International Survey in Mathematics and Science. *Acta Sociologica*, Vol. 16, No. 4, pp. 305-323.
- Husén, T. (1986): *The Learning Society Revisited*. Oxford, UK: Pergamon Press.
- Husén, T. (1997): Two UNESCO Endeavours in Education: The Hamburg Institute and the International Institute for Educational Planning. Personal memoirs. Paper on the accompanying CD to the UNESCO publication 50 Years of Education. Paris: UNESCO.
- King, E. (1967): Book Reviews: International Study of Achievement in Mathematics. Phase I. A Comparison of Twelve Countries by Torsten Husén. *International Review of Education*, Vol. 13, No. 3, pp. 359-363.
- Nedrişhed, E. A. & Griffith, J. E. (1992): *International Mathematics and Science Assessments: What Have We Learned?* National Center for Education Statistics. U.S. Department of Education. Office of Educational Research and Improvement.
- Postlethwaite, T. N. (1969): International Project for the Evaluation of Educational Achievement (IEA). *International Review of Education*, Vol. 15, No. 2, pp. 131-135.
- Postlethwaite, T. N. (1974): What Do Children Know? *Comparative Education Review*, Vol. 18, No. 2, pp. 157-163.
- <http://torstenhusen.com/files/IEA-TH.pdf>
- http://www.iea.nl/honorary_members.html

Teodora Genova
PhD Student in Comparative Education
Sofia University
Bulgaria
teodora.genova@gmail.com