

PIAAC Bibliography - 2008-2017

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2018|03

PIAAC Bibliography

2008 - 2017

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Ingo Konradt*

GESIS Papers 2018|03

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GESIS Papers

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1 Introduction to the PIAAC Bibliography

The present bibliography provides a literature overview for the Programme for the International Assessment of Adult Competencies (PIAAC). PIAAC assesses key cognitive (e.g. literacy and numeracy) and workplace skills of the adult population in over 40 countries. First data was published in 2013 (see OECD, 2013).

The PIAAC bibliography aims to gather the different research undertaken with PIAAC and sums up all contributions including:

- Publications of the theoretical conception of the assessed skill domains
- Publications of research results based on PIAAC data
- The technical conception of the study (as well as follow-up studies)
- Published PIAAC data files.

The review focuses on worldwide contributions in the form of articles, books, working papers, technical reports, and data published in English and in German. Conference presentations were not included in this review. Furthermore, the literature review is compiled chronologically and comprises publications since the conceptualization of PIAAC in 2008 until the third round of the first cycle in 2017. The abstracts of the published contributions were copied from the manuscripts. If no abstract was available, or if the abstract was available only in German, authors were asked for an English abstract. Some abstracts were either written by the editors or translated by professional translators; these cases are noticed.

The literature research for the review is based on several steps:

- Search in the literature databases Education Resources Information Center (ERIC) ($N=50$), Web of Sciences ($N=95$), and PsychINFO ($N=27$), using "PIAAC" as search keyword
- Search on the homepage of the Organisation for Economic Co-operation and Development (OECD) that initiated the PIAAC study
- Search in Google (Scholar) and ResearchGate
- Publications by data users that were reported to the Research Data Center PIAAC (RDC PIAAC) at GESIS.

Note that not all contributions could be collected worldwide, only those which were identified in the search procedure described above. Publications that have not been listed can be sent to fdz-piaac@gesis.org and will be included in the next version of this bibliography.

It is very important that authors cite the data used in publications about PIAAC. Please record the exact data that was used, for instance Scientific Use File (SUF) / Public Use File (PUF), the name and author(s) of the dataset, and if available, the version as well as the Digital Object Identifier (DOI). This procedure allows other interested readers to find your contributions. Available datasets are reported separately at the end of the bibliography. An example of data citation of the German Scientific Use File could be:

Rammstedt, B., Martin, S., Zabal, A., Konradt, I., Maehler, D., Perry, A., . . . Helmschrott, S. (2016). *Programme for the International Assessment of Adult Competencies (PIAAC), Germany – Reduced version*. Data file version 2.2.0 [ZA5845]. Cologne: GESIS Data archive. doi:10.4232/1.12660

The example above is formatted in the American Psychological Association (APA) style which is common in the social sciences and it is also used in this bibliography.

Table 1 gives an overview of the number of contributions reported in the present PIAAC bibliography. We report the most recent version of the data files. For instance, the first release of the PIAAC Public Use Files in 2013 was updated by the OECD in 2016; we therefore report the 2016 version here.

The contributions before 2013 focus mainly on the theoretical background of the study as well as the assessed skills. As can be seen from the table, since the first data release in 2013¹ the number of publications has constantly increased.

Table 1: Number of publications by year and type

Year	Content publications (<i>N</i>)	Technical reports (<i>N</i>)	Data files ¹ (<i>N</i>)
2008	1	0	0
2009	4	0	0
2010	1	0	0
2011	2	1	0
2012	3	0	0
2013	19	3	0
2014	47	2	1
2015	47	0	2
2016	56	7	37
2017	45	4	21
Total	225	17	61

Note. 1: The last version is reported.

¹ 24 countries participated in the 1st round (2011/2012) of PIAAC. The corresponding Public Use Files were initially released in 2013. Nine additional countries joined the 2nd round (2014/2015). The Public Use Files for the nine Round-2 countries and revised Public Use Files for Round-1 countries with updated data were released on 28 June 2016.

2 Publications

2.1 Publications in 2008

Title:

Schleicher, A. (2008). PIAAC: A new strategy for assessing adult competencies. *International Review of Education*, 54, 627. doi:10.1007/s11159-008-9105-0

Abstract:

At a time when governments face the challenges of maintaining competitiveness in a global economy, it is necessary to have high-quality comparative information regarding the fundamental skills of the adult population. Such information can help governments to evaluate policies and design more effective interventions. This article describes a strategy currently being developed by the OECD for assessing the literacy skills of adults, including familiarity with information and communication technologies and the ability to manage information, construct new knowledge and communicate with others. The work will enhance understanding of the effectiveness of education and training systems in developing basic cognitive skills and key generic work skills.

Published: 2008

Available at (open access): <http://www.oecd.org/edu/skills-beyond-school/41529787.pdf>

2.2 Publications in 2009

Title:

Gal, I., Alatorre, S., Close, S., Evans, J., Johansen, L., Maguire, T. & Tout, D. (2009). *PIAAC numeracy: A conceptual framework*. OECD Education Working Paper No. 35. Paris: OECD Publishing. Retrieved October 20, 2017, from http://www.oecd-ilibrary.org/education/piaac-numeracy-a-conceptual-framework_220337421165

Abstract:

Governments and other stakeholders have become increasingly interested in assessing the skills of their adult populations in order to monitor how well prepared they are to meet the challenges of the new information world. The current paper provides an overview of the conceptual framework for the assessment of numeracy developed for the OECD's Programme for the International Assessment of Adult Competencies (PIAAC). This builds on the numeracy framework developed for the Adult Literacy and Life Skills Survey (ALL). Numeracy is broadly defined and complemented with a definition of 'numerate behaviour'. Four facets of numerate behaviour are identified and described to guide the development of assessment tasks.

Published: November 24, 2009

Available at (open access): http://www.oecd-ilibrary.org/education/piaac-numeracy-a-conceptual-framework_220337421165

Title:

Jones, S., Gabrielsen, E., Hagston, J., Linnakylä, P., Megherbi, H., Sabatini, J., . . . Vidal-Abarca, E. (2009). *PIAAC literacy: A conceptual framework*. OECD Education Working Paper No. 34. Paris: OECD Publishing. Retrieved October 20, 2017, from http://www.oecd-ilibrary.org/education/piaac-literacy-a-conceptual-framework_220348414075

Abstract:

The current paper provides an overview of the conceptual framework for the assessment of numeracy developed for the OECD's Programme for the International Assessment of Adult Competencies (PIAAC).

Published: November 20, 2009

Available at (open access): http://www.oecd-ilibrary.org/education/piaac-literacy-a-conceptual-framework_220348414075

Title:

Rouet, J.-F., Bétrancourt, M., Britt, M. A., Bromme, R., Graesser, A. C., Kulikowich, J. M., . . . van Oostendorp, H. (2009). *PIAAC problem solving in technology-rich environments: A conceptual framework*. OECD Education Working Paper No. 36. Paris: OECD Publishing. Retrieved October 20, 2017, from http://www.oecd-ilibrary.org/education/piaac-problem-solving-in-technology-rich-environments-a-conceptual-framework_220262483674

Abstract:

Governments and other stakeholders have become increasingly interested in assessing the skills of their adult populations for the purposes of monitoring how well prepared they are for the challenges of the new information world. The current paper provides an overview of the conceptual framework developed for the assessment of problem solving in technology-rich environments for the OECD's Programme for the International Assessment of Adult Competencies (PIAAC). This covers the specific class of problems that people encounter when using information and communication technologies. These include problems where the existence of the problem is a consequence of the availability of new technologies, where the solution requires the use of computer-based applications or where the problem relates to the management or use of information technologies.

Published: November 20, 2009

Available at (open access): http://www.oecd-ilibrary.org/education/piaac-problem-solving-in-technology-rich-environments-a-conceptual-framework_220262483674

Title:

Sabatini, J. P., & Bruce, K. M. (2009). *PIAAC reading components: A conceptual framework*. OECD Education Working Paper No. 33. Paris: OECD Publishing. Retrieved October 20, 2017, from http://www.oecd-ilibrary.org/education/piaac-reading-component-a-conceptual-framework_220367414132

Abstract:

Governments and other stakeholders have become increasingly interested in assessing the skills of their adult populations in order to examine how well prepared they are to meet the challenges of the modern knowledge-based society. The current paper provides a conceptual framework for the assess-

ment of reading component skills in the OECD's Programme for the International Assessment of Adult Competencies (PIAAC). The assessment of component skills is intended to provide a greater level of information about the skills of individuals with low levels of literacy proficiency than has been available from previous international assessments. The 'component skills' identified for the assessment are vocabulary knowledge, sentence processing and passage comprehension.

Published: 2009

Available at (open access): http://www.oecd-ilibrary.org/education/piaac-reading-component-a-conceptual-framework_220367414132

2.3 Publications in 2010

Title:

Levy, F. (2010). *How technology changes demands for human skills*. OECD Education Working Paper No. 45. Paris: OECD. Retrieved October 20, 2017, from <http://www.oecd.org/edu/skills-beyond-school/45052661.pdf>

Abstract:

This paper places the competencies to be measured by the OECD's Programme for the International Assessment of Adult Competencies (PIAAC) in the context of the technological developments which are reshaping the nature of the workplace and work in the 21st century. The largest technological force currently shaping work is the computer. Computers are faster and less expensive than people in performing some workplace tasks and much weaker than people in performing other tasks. On the basis of an understanding of the kinds of work computers do well, it is possible to describe the work that will remain for people in the future, the skills that work requires and the way that computers can assist people in performing that work. The paper argues that a technology-rich workplace requires foundational skills including numeracy and literacy (both to be tested in PIAAC), advanced problem-solving skills or Expert Thinking (similar to the construct of Problem Solving in Technology-Rich Environments to be tested in PIAAC) and advanced communication skills or Complex Communication (not being tested in PIAAC).

Published: March 05, 2010

Available at (open access): <http://www.oecd.org/edu/skills-beyond-school/45052661.pdf>

2.4 Publications in 2011

Title:

Desjardins, R. & Rubenson, K. (2011). *An analysis of skill mismatch using direct measures of skills*. OECD Education Working Papers No. 63. Paris: OECD Publishing. Retrieved October 20, 2017, from http://www.oecd-ilibrary.org/education/an-analysis-of-skill-mismatch-using-direct-measures-of-skills_5kg3nh9h52g5-en

Abstract:

The focus of this study is on the potential causes of skill mismatch, the extent of skill mismatch, the sociodemographic make-up of skill mismatch, and the consequences of skill mismatch in terms of earnings as well as employer sponsored adult education/training. A distinction is made between skill

mismatch and education mismatch. The analysis is based on the 2003-2007 Adult Literacy and Life-skills Survey (ALLS) – a dataset similar to the one that is forthcoming from the Programme for International Assessment of Adult Competencies (PIAAC) in 2013. These studies contain direct measures of key foundation skills as well as measures of the use of certain generic skills at work which allow for a direct measure of skill mismatch. The analysis points to the complex ways in which mismatch is generated and the need for an accurate and up to date measure of mismatch, one that reflects the possibilities for skill gain and skill loss over the lifespan, and reflects differences in the quality of qualifications. Two key findings stand out. First, including supply and demand characteristics in an earnings function reveals that labour demand characteristics are more important than labour supply characteristics in explaining earnings differentials. In other words, skills matter for earnings but only if they are required by the job. This has direct implications for understanding better the causes of mismatch on earnings. Second, the skill content of jobs seems to be an even stronger determinant of participation in employer supported adult education/training than educational attainment or literacy proficiency. The influence of demand characteristics thus tends to outweigh the influence of supply characteristics when employers make the decision to support adult education/training. Addressing mismatch thus requires a careful consideration of both the demand and supply sides of the labour market, so as to understand better the variety of factors which may have a negative impact on the effectiveness of skill formation, skill maintenance, and also skill use.

Published: October 17, 2011

Available at (open access): http://www.oecd-ilibrary.org/education/an-analysis-of-skill-mismatch-using-direct-measures-of-skills_5kg3nh9h52g5-en

Title:

Upsing, B., Gissler, G., Goldhammer, F., Rölke, H. & Ferrari, A. (2011). Localisation in international large-scale assessments of competencies: Challenges and solutions. *Localisation Focus - The International Journal of Localisation*, 10(1), 44-57.

Abstract:

International comparative studies like the Programme for International Student Assessment (PISA) pose special challenges to the localisation of the test content. To allow for comparison between countries, the assessments have to be comparable with respect to measurement properties. Therefore, internationalisation and localisation are crucial steps to guarantee test equivalence across countries. The localisation of test items is different from the localisation of web-based contents or software as the test content has to be authentic within a country while the test's measurement properties have to be comparable across countries.

Using the PIAAC study (Programme for the Assessment of Adult Competencies) as an example, this paper describes all stages of the localisation process for an international large-scale assessment. The process ranges from the development of source items to translation, adaptation of layout issues and meta-data adaptations. The paper concludes with a discussion of lessons learned and open questions.

Published: 2011

Available at (open access): https://www.localisation.ie/sites/default/files/publications/Vol10_1UpsingGissleretAl.pdf

2.5 Publications in 2012

Title:

Desjardins, R. & Warnke, A. J. (2012). *Ageing and skills: A review and analysis of skill gain and skill loss over the lifespan and over time*. OECD Education Working Papers No. 72. Paris: OECD Publishing. Retrieved October 27, 2017, from http://www.oecd-ilibrary.org/education/ageing-and-skills_5k9csvw87ckh-en

Abstract:

The relationship between ageing and skills is becoming an important policy issue, not least in the context of population ageing. Data from the Programme for the International Assessment of Adult Competencies (PIAAC) will potentially add considerably to the understanding of the relationship between ageing and foundation skills. In particular, the fact that data from the 1994-1998 International Adult Literacy Survey (IALS) and the 2003-2007 Adult Literacy and Lifeskills Survey (ALL) will be linked with PIAAC offers a unique opportunity to examine trends over time at the cohort level for a wide range of countries. Specifically, repeated measures will enable an analysis of whether there is skill gain and skill loss over the lifespan of cohorts and overtime between cohorts. This is especially important because age-skill profiles observed on the basis of a single cross-section are difficult to interpret. With this as a backdrop, this paper has sought to provide an overview of what is known about age-skill profiles and to conduct an analysis that demonstrates how trend data based on repeated cross-sectional observations of direct measures of skill at the cohort level can be used to estimate skill gain and skill loss over the lifespan and over time.

Published: March 27, 2012

Available at (open access): http://www.oecd-ilibrary.org/education/ageing-and-skills_5k9csvw87ckh-en

Title:

Organisation for Economic Co-operation and Development (OECD). (2012). *Literacy, numeracy and problem solving in technology-rich environments: Framework for the OECD Survey of Adult Skills*. Paris: OECD Publishing. Retrieved October 27, 2017, from http://www.oecd-ilibrary.org/education/literacy-numeracy-and-problem-solving-in-technology-rich-environments_9789264128859-en

Abstract:

A basic level of literacy and numeracy is essential for full participation in modern societies. While very few people in most of the advanced countries could be regarded as illiterate or innumerate, recent studies have shown that there are, in fact, significant numbers of people with poor skills, and that low levels of skills are associated with lower wages and greater chances of unemployment and disengagement from the labour market. At the same time, technological changes, particularly the increasing presence of information and communication technologies in all areas of life, have led to a growing demand for higher-level cognitive skills that involve understanding, interpreting, analysing and communicating complex information.

In this context, policy makers need the most comprehensive and up-to-date information if they want to ensure that the supply of skills in the labour force matches labour-market demand. The Programme for the International Assessment of Adult Competencies (PIAAC), an international assessment of adult skills managed by the OECD, will be central in providing that information. Implemented by 25 coun-

tries in Europe, the Americas and Asia, PIAAC is compiling one of the richest sources of data regarding the skills that adults use in their work, home and communities, and related information, including family background, education, employment, income, civic participation and health. Results from the data, which are being collected from August 2011 to March 2012, will be Available at the end of 2013.

This report maps the development of the Programme, from determining what should be measured, to defining the meaning of PIAAC's three core domains, "literacy", "numeracy" and "problem solving in technology-rich environments", to designing assessment tasks and determining how those tasks will be interpreted. It summarises the draft frameworks, developed by dedicated experts, for each of the assessment domains, and includes examples of the items and stimuli used to measure proficiency in the three domains. In essence, it provides an overview and a look at the underpinnings of PIAAC.

Published: February 15, 2012

Available at (open access): http://www.keepeek.com/Digital-Asset-Management/oced/education/literacy-numeracy-and-problem-solving-in-technology-rich-environments_9789264128859-en#.Wg6ziHaDPMA#page1

Title:

St. Clair, R. (2012). The limits of levels: Understanding the international adult literacy surveys (IALS). *International Review of Education*, 58(6), 759-776.

Abstract:

The International Adult Literacy Survey (IALS), an initiative of the Organization for Economic Cooperation and Development (OECD), was carried out in the early to mid-1990s across more than 20 countries. It was followed in the early years of the 21st century by the Adult Literacy and Life Skills (ALL) survey and the Programme for the International Assessment of Adult Competencies (PIAAC, currently in data analysis). This article reviews the philosophical basis, theoretical underpinnings and data analysis of the original and subsequent IALS-based surveys. The purpose is to inform users of the survey data of what the surveys can, and cannot, provide. The author argues that the key use of these surveys is providing insights into population-level distribution of one form of literacy, namely a particular kind of text consumption in a developed society. He also points out the challenges regarding the use of the survey series for making international comparisons, for documenting change over time and for representing broad models of literacy. The tendency to use the survey findings for these uses is considered by the author as a misuse of the data, which leaves the potential of the IALS surveys to provide insights into the effectiveness and equity of different educational systems largely untapped.

Published: December, 2012

Available at: <http://eds.a.ebscohost.com/eds/detail/detail?vid=0&sid=51b1380b-73e1-49ad-9314-171ad3d899bc%40sessionmgr4009&tdata=JmxhbmC9ZGUmc2l0ZT1lZHMtbGl2ZQ%3d%3d#AN=85715555&tdb=asx>

2.6 Publications in 2013

Title:

Allen, J., Levels, M., & van der Velden, R. (2013). *Skill mismatch and use in developed countries: Evidence from the PIAAC study*. ROA Research Memorandum No. 2013/17. Maastricht: Maastricht University, Research Centre for Education and the Labour Market (ROA). Retrieved October 27, 2017, from <https://econpapers.repec.org/paper/unnumaror/2013017.htm>

Abstract:

In this paper we develop and test a new set of measures of skill mismatches, based on data on skill levels and skill use in the domains of literacy and numeracy from the PIAAC project. The measures we develop represent the extent of skill use relative to one's own skill level. We test the measures by examining their relation to a number of labour market outcomes. We subsequently examine how mismatches are distributed across and within a large number of countries, and use our results to reflect on possible causes and consequences of mismatches. We find that, in general, higher skill utilization is always beneficial in terms of productivity and job satisfaction, and that "overutilization" of skills therefore points more towards a fuller use of the available human capital, rather than to a serious skill shortage. We find an asymmetry in returns between literacy and numeracy skills: although numeracy skill *level* appears to pay higher dividends than literacy skill level, shifts in skill *utilization* within skill levels have greater consequences for literacy than for numeracy. The distribution of mismatches across and within countries is broadly consistent with the expectation that skills will be used more fully under competitive market conditions with few institutional or organizational barriers. Finally, skill mismatches are only quite weakly related to educational mismatches, reflecting the heterogeneity in skill supply and demand that cross-cuts the dividing lines set by formally defined qualification levels and job titles.

Published: 2013

Available at (open access): <https://econpapers.repec.org/paper/unnumaror/2013017.htm>

Title:

Central Statistics Office (2013). *PIAAC 2012. Survey results for Ireland from the OECD's Programme for the International Assessment of Adult Competences*. Dublin: Stationery Office. Retrieved October 27, 2017, from <http://www.oecd.org/skills/piaac/Ireland.pdf>

Abstract:

This report presents the results for Ireland of the OECD's Survey of Adult Skills, also known as the Programme for the International Assessment of Adult Competencies or PIAAC. The survey was carried out in Ireland between August 2011 and March 2012 by the Central Statistics Office on behalf of the Department of Education and Skills.

Published: 2013

Available at (open access): <http://www.oecd.org/skills/piaac/Ireland.pdf>

Title:

Friebe, J., Gebrande, J., & Schmidt-Hertha, B. (2013). What research will show us and what we need to understand about Competencies in Later Life. *Adult education and development*, 80, 86-90.

Abstract:

The International PIAAC study has collected data on competencies of adults in three domains in 25 countries, in many of them for the first time ever. The article provides an overview of central terms, main aims and the methodological approach of this OECD study. It also discusses its potentials and limitations. One limitation is the focus on the labour force, excluding adults older than 65 years, a fast growing part of many populations in times of demographic change. To remedy this limitation, an extensional study in Germany was carried out with 1339 adults in the age group 66–80, using the PIAAC instruments and complementing them with additional qualitative inquiries.

Published: 2013

Available at (open access): <https://www.dvv-international.de/adult-education-and-development/editions/aed-802013-post-2015/articles/what-research-will-show-us-and-what-we-need-to-understand-about-competencies-in-later-life/>

Title:

Goodman, M., Finnegan, R., Mohadjer, L., Krenzke, T., & Hogan, J. (2013). Literacy, numeracy, and problem solving in technology-rich environments among U.S. adults: Results from the Program for the International Assessment of Adult Competencies 2012: First look (NCES 2014-008). U.S. Department of Education. Washington, DC: National Center for Education Statistics. Retrieved October 27, 2017, from <https://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2014008>

Abstract:

This report presents results of the Program for the International Assessment of Adult Competencies (PIAAC). Results are reported for a representative sample of adults in the United States age 16 to 65 and are compared to an international average of adults in countries/regions that participated in the PIAAC 2012 assessment. The report presents average score results for three separate scales: literacy, numeracy, and problem solving in technology-rich environments and percentages of adults performing at different proficiency levels for each scale. Literacy and numeracy results are reported at Below Level 1, Level 1, Level 2, Level 3, and Level 4/5; problem solving in technology-rich environments is reported at Below Level 1, Level 1, Level 2, and Level 3. The report includes results for groups of adults as defined by various demographic characteristics (e.g., gender, age, race/ethnicity, and level of educational attainment) and level of skill use in and outside of work. Overall results in literacy and numeracy are compared to results from previous international assessments.

Published: 2013

Available at (open access): <https://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2014008>

Title:

Klaukien, A., Ackermann, D., Helmschrott, S., Rammstedt, B., Solga, H., & Wößmann, L. (2013). Grundlegende Kompetenzen auf dem Arbeitsmarkt [Basic skills in the labour market]. In B. Rammstedt (Ed.), *Grundlegende Kompetenzen Erwachsener im internationalen Vergleich. Ergebnisse von PIAAC 2012* [Adults basic skills in international comparison: Results of PIAAC 2012] (pp. 127-166). Münster: Waxmann.

Abstract:

The Programme for the International Assessment of Adult Competencies, PIAAC, aims at producing high-quality data. This chapter summarizes the core features of the international and national design under which the study was conducted in order to reach this goal. The international PIAAC consortium elaborated a set of comprehensive standards and guidelines and by that provided a framework of best practices in survey methodology. Participating countries had to adhere to these standards and were supposed to implement them given their national circumstances. In the first sections of this chapter the survey instruments, the survey design as well as scaling and the estimation of plausible values at the international level are briefly described. Subsequently, information is provided on sampling and data collection in Germany. A total of 5 465 individuals participated in PIAAC Germany, which corresponds to a response rate of 55% that exceeds the international minimum response rate of 50%. Survey weighting was implemented to minimize the total survey error and the potential for bias. Nonresponse bias analyses were conducted to further ensure quality assurance.

Published: 2013

Available at (open access, full text):

https://www.gesis.org/fileadmin/piaac/Downloadbereich/PIAAC_Ebook.pdf

Title:

Maehler, D. B., Massing, N., Helmschrott, S., Rammstedt, B., Staudinger, U. M., & Wolf, C. (2013). Grundlegende Kompetenzen in verschiedenen Bevölkerungsgruppen [Basic skills of different population groups]. In B. Rammstedt (Ed.), *Grundlegende Kompetenzen Erwachsener im internationalen Vergleich. Ergebnisse von PIAAC 2012* [Adults basic skills in international comparison: Results of PIAAC 2012] (pp. 77-126). Münster: Waxmann.

Abstract: This chapter of the German PIAAC report focuses on differences in literacy and numeracy between population subgroups across countries. Thereby skill differences related to birth cohorts, gender, educational attainment as well as migration background were analyzed. The results show that in all participating countries, the skills are for instance highly correlated with formal education. In most countries, there are considerable differences in proficiency between people with and without an immigrant background or between people from different birth cohorts. However, all of these differences decrease substantially when the influence of other factors – such as educational attainment in the case of birth cohorts – is taken into account.

Published: 2013

Available at (open access, full text):

https://www.gesis.org/fileadmin/piaac/Downloadbereich/PIAAC_Ebook.pdf

Title:

Massing, N., Ackermann, D., Martin, S., Zabal, A., & Rammstedt, B. (2013). Controlling interviewers' work in PIAAC – The Programme for the International Assessment of Adult Competencies. In P. Winker, N. Menold, & R. Porst (Eds.), *Interviewers' deviations in surveys. Impact, reasons, detection and prevention* (pp. 117-130). Frankfurt am Main: Peter Lang. <http://dx.doi.org/10.3726/978-3-653-02596-5>

Abstract:

PIAAC is an international comparative survey initiated by the OECD (Organization for Economic Cooperation and Development). Its goal is the assessment of adult skills and competencies to develop an

empirically-based foundation for political interventions. PIAAC is a cross-sectional survey that is being conducted in 25 countries from all over the world. To ensure that the survey data is comparable across countries, the International Consortium of PIAAC has defined specific and extensive quality standards.² Each participating country had to comply with these standards and adapt them to the national context as quality control mechanisms. In this chapter, the international quality standards related to interviewer control and their implementation in Germany will be presented. In addition, we will describe the interviewer trainings conducted in Germany and discuss the potential of such trainings in preventing interview falsification.

Published: 2013

Available at (full text): <https://www.peterlang.com/view/product/18347>

Title:

Organisation for Economic Co-operation and Development (OECD). (2013). Organisation for Economic Co-operation and Development (OECD) skills outlook 2013: First results from the Survey of Adult Skills. Paris: OECD Publishing. Retrieved October 27, 2017, from http://www.oecd-ilibrary.org/education/oecd-skills-outlook-2013_9789264204256-en

Abstract:

This first *OECD Skills Outlook* presents the initial results of the Survey of Adult Skills (PIAAC), which evaluates the skills of adults in 22 OECD member countries and two partner countries. The PIAAC survey was designed to provide insights into the availability of some key skills and how they are used at work and at home through the direct assessment of key information processing skills: literacy, numeracy and problem-solving in technology-rich environments. The book examines the social and economic context, the supply of key information processing skills, who has these skills at what level, the supply of and demand for these skills in the labour market, the acquisition and maintenance of skills over a lifetime, and how proficiency in these skills translates into better economic and social outcomes.

Published: 2013

Available at (open access): http://www.oecd-ilibrary.org/education/oecd-skills-outlook-2013_9789264204256-en

Title:

Organisation for Economic Co-operation and Development (OECD). (2013). *The Survey of Adult Skills – Reader's companion*. Paris: OECD Publishing. Retrieved October 20, 2017, from [https://www.oecd.org/skills/piaac/Skills%20\(vol%202\)-Reader%20companion--v7%20eBook%20\(Press%20quality\)-29%20oct%200213.pdf](https://www.oecd.org/skills/piaac/Skills%20(vol%202)-Reader%20companion--v7%20eBook%20(Press%20quality)-29%20oct%200213.pdf)

Abstract:

This reader's companion for the Survey of Adult Skills explains what the survey measures and the methodology behind the measurements, provides content of the background questionnaires, examines the relationship between this survey and other skills surveys, as well the issues of 'key competencies' and measurements of human capital.

² PIAAC Technical Standards and Guidelines, December 2011 (OECD 2011). The only version that is publicly accessible dates from October 2008 (OECD 2008).

Published: October 08, 2013

Available at (open access): [https://www.oecd.org/skills/piaac/Skills%20\(vol%202\)-Reader%20companion--v7%20eBook%20\(Press%20quality\)-29%20oct%200213.pdf](https://www.oecd.org/skills/piaac/Skills%20(vol%202)-Reader%20companion--v7%20eBook%20(Press%20quality)-29%20oct%200213.pdf)

Title:

Organisation for Economic Co-operation and Development (OECD). (2013). *Time for the U.S. to reskill? What the Survey of Adult Skills says*. Paris: OECD Publishing. Retrieved October 20, 2017, from http://www.oecd-ilibrary.org/education/time-for-the-u-s-to-reskill_9789264204904-en

Abstract:

The 'basic skills' of literacy and numeracy are among the most fundamental attributes of human beings and their civilization, lying at the root of our capacity to communicate and live and work together, to develop and share knowledge, science and culture. Their contribution to workforce skills have increasingly been recognized as critical to economic success, while evidence on gaps in adult basic skills and the link with economic and social outcomes has also been growing, both at national and international level (e.g. International Survey of Adult Skills of 1994-98 and Adult Literacy and Life Skills Survey of 2003-2007). Most tellingly, there has been a belated realization that despite universal basic education in advanced countries, some adults have slipped through the net, leaving them with very weak literacy and numeracy. All of these factors underline the importance of the OECD's new international Survey of Adult Skills.

This report on skills in the US draws out the policy implications of the Survey for the US, while also making use of some additional data collected for the Survey on the US alone. The study does not directly evaluate relevant US policies and programs – such as schooling and adult education. Instead it identifies in the results of the Survey some key lessons about the strategic objectives and directions which should form a frame for policy development in the US, including policy on adult learning and schooling.

Published: November 12, 2013

Available at (open access): http://www.oecd-ilibrary.org/education/time-for-the-u-s-to-reskill_9789264204904-en

Title:

Rammstedt, B. (2013). *Grundlegende Kompetenzen Erwachsener im internationalen Vergleich: Ergebnisse von PIAAC 2012* [Adults basic skills in international comparison: Results of PIAAC 2012]. Münster: Waxmann.

Abstract:

PIAAC, the OECD Programme for the International Assessment of Adult Competencies, assesses how well prepared adults in the various countries are for the challenges of the knowledge society. To this end, key basic skills of the population in over 20 countries worldwide were measured and compared. The skills measured were literacy, numeracy, and problem solving in technology-rich environments. PIAAC furnishes information on the extent to which the adult populations differ in terms of these basic skills and on the factors that determine their acquisition and maintenance. In addition, it assesses the impact of these skills on social, and especially on economic, participation. This allows conclusions to be drawn about the quality of education systems and the extent to which the basic skills are used on the labor market.

The results thus provide policy makers and educational practitioners with an empirically sound basis on which to identify need for change and develop appropriate support measures.

This book presents and discusses in international comparison the proficiency scores that adults in Germany achieved in the three basic skills and the extent to which proficiency in these skills differs across educational groups and generations, for example. An examination of the associations between the basic skills and key labor market characteristics (e.g., participation in and the demands of the labor market) and between the basic skills and income rounds of the report. In Germany, PIAAC was commissioned by the Federal Ministry for Education and Research (BMBF) with the participation of the Federal Ministry of Labor and Social Affairs (BMAS). GESIS – Leibniz Institute for the Social Sciences was responsible for conducting the study. [Translated on behalf of editors]

Published: 2013

Available at (open access): https://www.gesis.org/fileadmin/piaac/Downloadbereich/PIAAC_Ebook.pdf

Title:

Rammstedt, B. (2013). PIAAC 2012: Die wichtigsten Ergebnisse im Überblick. In B. Rammstedt (Ed.), *Grundlegende Kompetenzen Erwachsener im internationalen Vergleich – Ergebnisse von PIAAC 2012* [Adults basic skills in international comparison: Results of PIAAC 2012] (pp. 11-20). Münster: Waxmann.

Abstract:

Overview of the main results of PIAAC in Germany. [Notice from editors]

Published: 2013

Available at (open access, full text):

https://www.gesis.org/fileadmin/piaac/Downloadbereich/PIAAC_Ebook.pdf

Title:

Rammstedt, B., Ackermann, D., Helmschrott, S., Klaukien, A., Maehler, D. B., Martin, S., . . . Zabal, A. (2013). *PIAAC 2012: Die wichtigsten Ergebnisse im Überblick* [PIAAC 2012: Overview of the main results]. Münster: Waxmann.

Abstract: Overview of the main results of PIAAC in Germany. [Notice from editors]

Published: 2013

Available at (open access):

http://www.bildungsserver.de/onlineresource.html?onlineresourcen_id=50918

Title:

Rammstedt, B., Ackermann, D., Helmschrott, S., Klaukien, A., Maehler, D. B., Martin, S., . . . Zabal, A. (2013). *PIAAC 2012: Overview of the main results*. Münster: Waxmann.

Abstract: Overview of the main results of PIAAC in Germany. [Notice from editors]

Published: 2013

Available at (open access):

https://www.gesis.org/fileadmin/piaac/Downloadbereich/PIAAC_Zusammenfassung_engl.pdf

Title:

Rammstedt, B., & Maehler, D. B. (2013). Lehren ziehen: PIAAC – eine internationale Studie zur Untersuchung von Alltagsfertigkeiten Erwachsener [Lessons learned: PIAAC - an international study to investigate everyday adult skills]. *dis.kurs*, 20(4), 4-7.

Abstract:

The contribution "Lessons learned: PIAAC - an international study to investigate everyday adult skills" describes the literacy results of PIAAC for all participating countries and focuses on adult skills by education levels in Germany.

Published: 2013

Available at (full text): <https://www.dvv-vhs.de/service/magazin-diskurs/>

Title:

Rammstedt, B., & Zabal, A. (2013). Das Programme for the International Assessment of Adult Competencies (PIAAC). In B. Rammstedt (Ed.), *Grundlegende Kompetenzen Erwachsener im internationalen Vergleich – Ergebnisse von PIAAC 2012* [Adults basic skills in international comparison: Results of PIAAC 2012] (pp. 21-29). Münster: Waxmann.

Abstract:

The Programme for the International Assessment of Adult Competencies (PIAAC) is an initiative of the Organisation for Economic Co-operation and Development (OECD). This introductory chapter provides an overview of central features and innovative aspects of the first round of PIAAC in which 24 countries – including Germany – participated. It thus sets the stage for the reporting of the PIAAC results from a German national perspective in the subsequent chapters of the book. The key adult competences literacy, numeracy, and problem solving in technology-rich environments were measured using state of the art design and methodology, with exacting standards and guidelines to achieve comparability between countries and data sets with the highest possible quality. The organizational structure of PIAAC at an international and national level is also described.

Published: 2013

Available at (full text, open access):

https://www.gesis.org/fileadmin/piaac/Downloadbereich/PIAAC_Ebook.pdf

Title:

Statistics Canada (2013). Skills in Canada: First Results from the Programme for the International Assessment of Adult Competencies (PIAAC). Ottawa: Minister of Industry. Retrieved October 27, 2017, from <http://www.statcan.gc.ca/pub/89-555-x/89-555-x2013001-eng.pdf>

Abstract:

This report presents the first results of the Programme for the International Assessment of Adult Competencies (PIAAC), an initiative of OECD. PIAAC provides internationally comparable measures of three

skills that are essential to processing information: literacy, numeracy, and problem solving in technology-rich environments (referred to as PS-TRE). The report provides information about the literacy, numeracy, and PS-TRE skills for the Canadian population aged 16 to 65. It provides results for Canada as a whole, as well as for all the provinces and territories. In addition, it looks at the relationships between skills proficiency and a range of socio-demographic characteristics (e.g., age, gender, level of education) across the entire Canadian population. It also reports on first results on the literacy, numeracy, and PS-TRE skills of Aboriginal populations, immigrants, and official-language minority communities.

Published: 2013

Available at (open access): <http://www.statcan.gc.ca/pub/89-555-x/89-555-x2013001-eng.pdf>

Title:

Statistik Austria. (2013). *Schlüsselkompetenzen von Erwachsenen. Erste Ergebnisse der PIAAC-Erhebung 2011/2012* [Key adult skills. First results of the PIAAC survey 2011/2012]. Wien: Statistik Austria.

Abstract:

This publication shows how Austria's population is positioned in terms of proficiency in key skills compared to the other participating countries. A further focus is on the national distribution of the key skills by sociodemographic characteristics. In conclusion, the publication addresses the social and economic impact of these key skills that can be derived from the data. [Source: From the preface; translated on behalf of editors].

Published: 2013

Available at (open access): http://www.oecd.org/skills/piaac/Austria_piaac-erhebung_2011_12.pdf

Title:

Zabal, A., Martin, S., Klaukien, A., Rammstedt, B., Baumert, J., & Klieme, E. (2013). Grundlegende Kompetenzen der erwachsenen Bevölkerung in Deutschland im internationalen Vergleich [Adults basic skills in Germany and in international comparison]. In B. Rammstedt (Ed.), *Grundlegende Kompetenzen Erwachsener im internationalen Vergleich – Ergebnisse von PIAAC 2012* [Adults basic skills in international comparison: Results of PIAAC 2012] (pp. 31-76). Münster: Waxmann.

Abstract:

The Programme for the International Assessment of Adult Competencies (PIAAC) assesses three key competence domains: literacy, numeracy, and problem-solving in technology new environments. This chapter presents the main results for countries participating in the first round of PIAAC separately for each domain with a focus on the German results. First, the frameworks developed by international expert groups for each of the competence domains are introduced; these frameworks define the central constructs, the cognitive processes involved, and provide a rationale for the operationalizations. The measurement instruments are illustrated (including sample items), and an explanation and description of the resulting proficiency scales (a separate scale for each domain) is provided. This includes score-point ranges and descriptions of each proficiency level. Second, the distribution of the adult population (between 15 and 65 years of age) over the different proficiency levels and the country means and variation of proficiency scores are reported. Results for German adult population are com-

pared to those of the other participating countries and the OECD average. To conclude, the relationship between PIAAC and previous international surveys of adult competences and PISA is addressed.

Published: 2013

Available at (full text, open access):

https://www.gesis.org/fileadmin/piaac/Downloadbereich/PIAAC_Ebook.pdf

2.7 Publications in 2014

Title:

Ackermann-Piek, D., & Massing, N. (2014). Interviewer behavior and interviewer characteristics in PIAAC Germany. *methods, data, analyses*, 8(2), 199-222. doi:10.12758/mda.2014.008

Abstract:

Interviewers are the first in line when it comes to data collection. Therefore, it is important that they perform their tasks diligently, so that the data they collect are comparable and that errors are minimized. This paper analyzes how interviewers conducted interviews for the Programme for the International Assessment of Adult Competencies (PIAAC) and which kinds of mistakes they made. We approached these questions with audio interview recordings collected during the fieldwork of PIAAC in Germany (carried out in 2011/ 2012), as well as with an interviewer survey conducted with the German PIAAC interviewers. First, we introduce the data and the coding scheme used to evaluate interviewers' behavior with audio recordings. Subsequently, we describe the interviewers' actual behavior with regard to standardized interviewing techniques and investigate whether interviewer characteristics are associated with data quality. Our results demonstrate that interviewers do deviate from the expected behavior in all the aspects we examined. However, we identified only few associations with interviewers' background characteristics.

Published: 2014

Available at (open access): <http://www.ssoar.info/ssoar/handle/document/42887>

Title:

Autorengruppe Bildungsberichterstattung. (2014). *Bildung in Deutschland 2014. Ein indikatorengestützter Bericht mit einer Analyse zur Bildung von Menschen mit Behinderungen* [Education in Germany 2014. An indicator-based report including an analysis of the situation of people with special educational needs and disabilities]. Bielefeld: W. Bertelsmann Verlag.

Abstract:

The report *Bildung in Deutschland 2014* [Education in Germany 2014] is the fifth in a series of extensive presentations of the current state of the German education system. Following the lead concept of lifelong learning, the report outlines the performance of the various sectors and levels of the education system: from pre-primary level, through primary and secondary school, vocational education and training, and higher education, to further education and training. With its data-based analysis of educational parameters, procedural aspects, and the results and outcomes of education processes, the report is in line with the "Overall Strategy on Education Monitoring" declared by the Standing Conference of the Ministers of Education and Cultural Affairs of the Federal Republic of Germany (KMK) for the school sector as far back as 2006. As it addresses major problems and current challenges, the re-

port constitutes a basis for education policy decisions. With its broad approach, the report targets policy makers, administrators, and practitioners in the field of education. Moreover, it makes current information available to the interested public and to researchers, as well as for training purposes. [from author's introduction; translated on behalf of editors]

Published: 2014

Available at (open access): <https://www.bildungsbericht.de/de/bildungsberichte-seit-2006/bildungsbericht-2014/bildung-in-deutschland-2014>

Title:

Bonfanti, S., & Xenogiani, T. (2014). Migrants' skills: Use, mismatch and labour market outcomes – A first exploration of the International Survey of Adult Skills (PIAAC). In OECD/EU (2014) (Ed.), *Matching economic migration with labour market needs* (pp. 249-312). Paris: OECD Publishing.

Abstract:

The purpose of this chapter is to explore the newly available Survey of Adult Skills (PIAAC) to provide a detailed picture of migrants' literacy and numeracy skills and how they compare with those of natives, and how they are utilised and valued in the labour market. The chapter provides a description of the Survey of Adult Skills and the differences between migrants and natives in terms of their literacy and numeracy proficiency levels. A discussion follows on the extent to which language and foreign qualifications explain part of such differences. Moreover, the chapter analyses the labour market outcomes (employment, incidence of overqualification and wages) of migrants relative to natives and discusses how these differ across migrant groups as well as the role played by literacy proficiency and other relevant factors. The analysis of wages pays special attention to the returns to schooling, literacy and numeracy proficiency as well to professional experience, distinguishing between the experience acquired abroad and that acquired in the host country. The chapter concludes by summarising the main findings and their relevance for policy and makes proposals for future work.

Published: September 18, 2014

Available at: http://www.oecd-ilibrary.org/social-issues-migration-health/matching-economic-migration-with-labour-market-needs/migrants-skills-use-mismatch-and-labour-market-outcomes-a-first-exploration-of-the-international-survey-of-adult-skills-piaac_9789264216501-11-en

Title:

Brödel, R. (2014). PIAAC und die Grundbildungsarbeit – Entwicklung und Anerkennung professioneller Grundbildung [PIAAC and basic skills education – Development and recognition of professional basic skills education]. *DIE - Zeitschrift für Erwachsenenbildung*, 21(3), 30-32. doi: 10.3278/DIE1403W

Abstract:

Based on the assumption that the findings of the PIAAC study may provide an impetus for the development of needs-based support opportunities, the author identifies where room for improvement exists in the area of basic skills education for adults. At the same time, he warns against substantively narrowing adult education in favor of skills- and outcome-oriented formats. [Translated on behalf of editors]

Published: 2014

Available at (open access): https://www.wbv.de/de/journals/zeitschriften/die-zeitschrift-fuer-erwachsenenbildung/artikel/shop/detail/name/_/0/1/DIE1403W030/nb/0/category/797.html

Title:

Cabrales, A., Dolado, J. J., & Mora, R. (2014). *Dual labour markets and (lack of) on-the-job training: PIAAC evidence from Spain and other EU countries*. CEPR Discussion Paper No. DP10246. Retrieved January 25, 2018, from <https://ssrn.com/abstract=2526359>

Abstract:

Using the Spanish micro data from the Programme for the International Assessment of Adult Competencies (PIAAC), we first document how the excessive gap in employment protection between indefinite and temporary workers leads to large differentials in on-the-job training (OTJ) against the latter. Next, we find that the lower specific training received by temporary workers is correlated with lower literacy and numeracy scores achieved in the PIAAC study. Finally, we provide further PIAAC cross-country evidence showing that OJT gaps are quite lower in those European labour markets where dualism is less entrenched than in those where it is more extended.

Published: November 2014

Available at: <https://ssrn.com/abstract=2526359>

Title:

Cingano, F. (2014). *Trends in income inequality and its impact on economic growth*. OECD Social, Employment and Migration Working Papers No. 163. Paris: OECD Publishing. Retrieved October 20, 2017, from http://www.oecd-ilibrary.org/social-issues-migration-health/trends-in-income-inequality-and-its-impact-on-economic-growth_5jxrjncwxv6j-en

Abstract:

In most OECD countries, the gap between rich and poor is at its highest level since 30 years. Today, the richest 10 per cent of the population in the OECD area earn 9.5 times the income of the poorest 10 per cent; in the 1980s this ratio stood at 7:1 and has been rising continuously ever since. However, the rise in overall income inequality is not (only) about surging top income shares: often, incomes at the bottom grew much slower during the prosperous years and fell during downturns, putting relative (and in some countries, absolute) income poverty on the radar of policy concerns. This paper explores whether such developments may have an impact on economic performance.

Drawing on harmonised data covering the OECD countries over the past 30 years, the econometric analysis suggests that income inequality has a negative and statistically significant impact on subsequent growth. In particular, what matters most is the gap between low income households and the rest of the population. In contrast, no evidence is found that those with high incomes pulling away from the rest of the population harms growth. The paper also evaluates the "human capital accumulation theory" finding evidence for human capital as a channel through which inequality may affect growth. Analysis based on micro data from the Adult Skills Survey (PIAAC) shows that increased income disparities depress skills development among individuals with poorer parental education background, both in terms of the quantity of education attained (e.g. years of schooling), and in terms of its quality (i.e. skill proficiency). Educational outcomes of individuals from richer backgrounds, however, are not affected by inequality.

It follows that policies to reduce income inequalities should not only be pursued to improve social outcomes but also to sustain long-term growth. Redistribution policies via taxes and transfers are a key tool to ensure the benefits of growth are more broadly distributed and the results suggest they need not be expected to undermine growth. But it is also important to promote equality of opportunity in access to and quality of education. This implies a focus on families with children and youths – as this is when decisions about human capital accumulation are made -- promoting employment for disadvantaged groups through active labour market policies, childcare supports and in-work benefits.

Published: December 09, 2014

Available at (open access): http://www.oecd-ilibrary.org/social-issues-migration-health/trends-in-income-inequality-and-its-impact-on-economic-growth_5jxrjncwxv6j-en

Title:

Dinis da Costa, P., Rodrigues, M., Vera-Toscano, E., Weber, A. (2014). *Education, adult skills and social outcomes: Empirical evidence from the survey on adult skills (PIAAC 2013)*. European Commission, Joint Research Centre, Institute for the Protection and Security of the Citizen. Luxembourg: Publications Office of the European Union.

Abstract:

It has widely been acknowledged that education is a major source of economic prosperity and social well-being. Education is not only an important factor in the productivity and innovative capacity of an economy, but is also a prerequisite for social and cultural changes in patterns of consumption and leisure behaviour to achieve a sustainable lifestyle. It puts people in a position to take well-informed decisions about the future, to assume responsibility for these decisions and to judge how their personal behaviour will affect future generations. Thus, we are then well aware that education gives access to knowledge that helps individuals and society to be more stable and resilient in times of change. These social returns can take the form of "market outcomes" such as productivity or earnings and "non-market outcomes" such as health, civic participation and more generally social capital. Deeper understanding of the contribution of education to the provision of these social outcomes is a desirable goal. While the educational system is the primary agent for the acquisition of such knowledge, learning may also take place in the family, the workplace and among our social acquaintances all throughout our lives. Nowadays, constant changes taking place in society encourage individuals that besides grasping occupation-specific skills they must also stock some other various information processing skills to help them cope with this rapid changing environment, especially in the labor market. The Survey of Adult Skills (PIAAC) was designed to provide information on some of these key skills in society. It directly measures proficiency in several information-processing skills –namely literacy, numeracy and problem solving in technology-rich environment. Simultaneously, it provides insights on key social outcomes such as the level of trust in others, participation in associative, religious, political or charity activities (volunteering), political efficacy or the sense of influence on the political process, and self-assessed health status. The main findings on the relationship between education in its different forms (years of attainment, skills and adult lifelong learning) and the different social outcomes are presented in this report.

Published: July 24, 2014

Available at (open access): <https://publications.europa.eu/en/publication-detail/-/publication/969114b0-6aef-4497-bd63-0b25c1e0cce8/language-en>

Title:

Dobischat, R., & Schnurgatz, R. (2014). PIAAC und die berufliche Ausbildung – Befunde zur Ausbildungsreife junger Erwachsener [PIAAC and vocational education and training – Findings on the apprenticeship-entry maturity of young adults]. *DIE - Zeitschrift für Erwachsenenbildung*, 21(3), 47-49. doi:10.3278/DIE1403W

Abstract:

Based on the PIAAC results, the authors attest to the international competitiveness of the German vocational education and training system and refute the allegation that trainees in Germany lack apprenticeship-entry maturity. At the same time, they criticize companies' recruitment practices, which, in their view, are characterized by increasing academization and the exclusion of certain applicant groups. [Translated on behalf of editors]

Published: 2014

Available at (open access): <https://www.die-bonn.de/id/31221/about/html/>

Title:

Eckert, T. (2014). PIAAC kritisch hinterfragt – Eine Auseinandersetzung mit PIAAC's Zielen [Critically questioning PIAAC – An analysis of PIAAC's objectives]. *DIE - Zeitschrift für Erwachsenenbildung*, 21(3), 44-46. doi:10.3278/DIE1403W

Abstract:

This contribution critically analyzes PIAAC and its objectives. It examines the extent to which PIAAC points to unused skill potential and a need for improvement in the areas of skill acquisition and transfer. The theoretical and methodological foundations of the PIAAC study are also analyzed, revealing problems and deficits for which the author proposes solutions. [Translated on behalf of editors]

Published: 2014

Available at (open access): <https://www.die-bonn.de/id/31220/24551/about/html/>

Title:

Erpenbeck, J. (2014). Stichwort »Kompetenzen«. *DIE - Zeitschrift für Erwachsenenbildung*, 21(3), 20-21. doi:10.3278/DIE1403W

Abstract: Contribution deals with concept of competence. [Notice from editors]

Published: 2014

Available at (open access): https://www.wbv.de/journals/zeitschriften/die-zeitschrift-fuer-erwachsenenbildung/artikel/shop/detail/name/_/0/1/DIE1403W020/facet/DIE1403W020////////nb/0/category/730.html

Title:

Europäische Kommission. Generaldirektion Beschäftigung, Soziales und Integration. (2014). EU employment and social situation. *Quarterly review*. Luxemburg: Amt für Veröffentlichungen.

Abstract:

Developing relevant skills, activating the existing skills supply and using skills effectively are crucial for making economies more productive and internationally competitive and for stimulating sustainable, inclusive economic growth. International competitiveness country rankings show that the most competitive countries tend to have a better educated and more skilled population/workforce than less competitive ones. This supplement will focus [i] on the impact of skills beyond those acquired through initial education on individual's outcomes in the labour market and [ii] on the impact of work history on person's level of skill. The latter will be extensively analysed in the forthcoming (2014) Employment and Social Developments in Europe 2014. Direct ways of measuring skills, like the OECD's Programme for the International Assessment of Adult Competencies (PIAAC), also known as the Survey of Adult Skills, complement the indirect ways of doing so based on educational attainment. PIAAC provides comparable and valuable information on skills which was not previously available. This information sheds some light on the differences in human capital availability across the EU and its main partners. Although an important one, education is not the only way of acquiring skills. They are also acquired by working and doing other activities throughout the course of one's life. This article gives an overview of the availability of human capital in the EU from the skills perspective by providing information about skills proficiency across various socio-demographic groups. Skills proficiency, beyond the skills acquired through initial education, is shown to be positively and independently associated with the individual's probability of participating in the labour market, being employed and having higher wages and better social outcomes. An individual who had 46 more score points than another in literacy proficiency, was on average 20% more likely to be active and 10% more likely to be employed and could expect on average a 7% increase in his hourly wage. Improving the skills proficiency of poorly skilled groups should allow them obtain some of those benefits.

Published: October 8, 2014

Available at (open access): <https://publications.europa.eu/en/publication-detail/-/publication/604c06f6-ef50-456c-beee-249d1be6da0f/language-en>

Title:

Evans, J. (2014). New PIAAC results: Care is needed in reading reports of international surveys. *Adults Learning Mathematics*, 9(1), 37-52.

Abstract:

Results from the Survey of Adult Skills, also known as PIAAC (Programme for the International Assessment of Adult Competencies), were recently made available for 24 participating countries. PIAAC involves several developments in relation to the earlier international "adult skills" surveys (IALS in the 1990s and ALL in the 2000s), notably the use of computer administration of the survey. In this paper, I focus on understanding these studies, by considering conceptual issues, methodological validity of research design and execution, and presentation of results. I consider several of the sample items for numeracy published by OECD (2012). And I discuss illustrative results from Australia made available in February 2013, by the Australian Bureau of Statistics. The paper shows when and how to be sceptical when reading international survey reports. It also opens up questions concerning the relevance of the results, and the other types of research that may be needed, in different national and local contexts.

Published: 2014

Available at (open access): <https://files.eric.ed.gov/fulltext/EJ1068201.pdf>

Title:

Flake, R., Malin, L., Middendorf, L., & Seyda, S. (2014). *Qualifizierung von An- und Ungelernten. Eine empirische Bestandsaufnahme der Lebenssituation und Potenziale*. IW-Analysen No. 100. Cologne: The German Economic Institute (IW).

Abstract:

This analysis investigates the situation of Germany's semi- and unskilled workers – particularly in the labour market. All indicators examined (gainful employment, income, further education, position in the company) show them to be worse off than those with a vocational or further training qualification or a university degree. When the semi- and unskilled succeed in entering the labour market – which the young do less often than older workers – the majority find themselves in a strongly segmented market which requires no vocational or company-specific skills, provides no opportunity for enhancing competences by training on the job and seldom offers the chance of further education. In the short term the key to improving the status of the semi- and unskilled is to give them a second chance to acquire additional skills. It makes sense, both from the employee's and employer's point of view, to do this in the form of modular certificates with the option of acquiring a full vocational qualification. In the long run, reforms to pre-school, primary and secondary education will, together with better career advice, reduce the numbers of those dropping out of school and vocational training.

Published: 2014

Available at: <https://www.iwkoeln.de/studien/iw-analysen/beitrag/regina-flake-lydia-malin-lena-middendorf-susanne-seyda-qualifizierung-von-an-und-ungelernten-190142>

Title:

Friebe, J., & Knauber, C. (2014). Kompetenz im höheren Lebensalter – Vorstellung erster Ergebnisse von CiLL [Competence in older age – Presentation of first results of CiLL]. *DIE - Zeitschrift für Erwachsenenbildung*, 21(3), 39-41. doi:10.3278/DIE1403W

Abstract:

The contribution presents first results of "Competencies in Later Life" (CiLL), a German PIAAC supplement study. Using the same instruments and assessments that were applied in the PIAAC main study, CiLL measures proficiency in the domains of literacy, numeracy, and problem solving in technology-rich environments in persons aged between 66 and 88 years – an age group that was excluded from PIAAC. [Translated on behalf of editors]

Published: 2014

Available at (open access): https://www.wbv.de/journals/autoren-herausgeberverzeichnis/specialsearch/F/shop/detail/6/_/0/1/DIE1403W039/special/author.hrsg/Friebe,%20Jens.html?cHash=b18bf4d0e19e9196db12d5c04a75b407

Title:

Friebe, J., Knauber, C., Weiß, C., & Setzer, B. (2014). Alltagskompetenzen und Lernprozesse im höheren Lebensalter. Ergebnisse und Perspektiven der PIAAC-Erweiterungsstudie „Competencies in Later Life“. *Zeitschrift Für Gerontologie Und Geriatrie*, 47(7), 563-569. doi:10.1007/s00391-014-0804-9

Abstract:

This article deals with the study "Competencies in later life" (CiLL), a parallel study to the German program for the international assessment of adult competencies (PIAAC) survey which assesses the level and distribution of skills of the adult population in a representative study. Assuming the growing importance of learning and education in a society challenged by demographic changes, the first section of the paper outlines the qualitative research of learning activities of focus groups in the daily life of elderly people. The second section of the paper presents the survey design and exemplary findings of the quantitative CiLL study. Initial results show that basic skills of the elderly are highly influenced by personal and sociodemographic variables, particularly by educational background. The data available indicate that the participation of the elderly in adult education and the options available for competence development have to be increased.

Published: 2014

Available at: <https://link.springer.com/article/10.1007%2Fs00391-014-0804-9>

Title:

Gabler, S., Häder, S., & Kolb, J.-P. (2014). A simulation approach to estimate inclusion probabilities for PIAAC Germany. *methods, data, analyses*, 8(2), 267-280. doi:10.12758/mda.2014.011

Abstract:

In PIAAC (Programme for the International Assessment of Adult Competencies) inclusion probabilities have to be known for every respondent at each sampling stage in all participating countries. However, in some cases it is not possible to calculate inclusion probabilities for a sample survey analytically - although the underlying design is probabilistic. In such cases, simulation studies can help to estimate inclusion probabilities and thus ensure that the necessary basis for the calculation of design weights is available. In this section, we present a Monte Carlo simulation using the German sample data. During the selection process for PIAAC Germany an error had occurred. Because of that, it was not possible to determine the inclusion probabilities analytically. Therefore a simulation study with 10,000 runs of the erroneous selection process was set up. As a result it was possible to compute the inclusion probabilities for the sample of PIAAC Germany.

Published: 2014

Available at (open access): <http://www.ssoar.info/ssoar/handle/document/42891>

Title:

Gal, I., & Tout, D. (2014). *Comparison of PIAAC and PISA frameworks for numeracy and mathematical literacy*. OECD Education Working Papers No. 102. Paris: OECD Publishing. Retrieved October 20, 2017, from http://www.oecd-ilibrary.org/education/comparison-of-piaac-and-pisa-frameworks-for-numeracy-and-mathematical-literacy_5jz3wl63cs6f-en

Abstract:

This paper describes key aspects of the frameworks for the assessment of adult numeracy and mathematical literacy in PIAAC and PISA, which are OECD two flagship programs for international comparative assessment of competencies. The paper examines commonalities and differences in how the constructs of adult numeracy and mathematical literacy were assessed in PIAAC and PISA, and sketches selected challenges associated with interpretation of results from these surveys.

Published: May 27, 2014

Available at (open access): http://www.oecd-ilibrary.org/education/comparison-of-piaac-and-pisa-frameworks-for-numeracy-and-mathematical-literacy_5jz3wl63cs6f-en

Title:

Gebrande, J., & Setzer, J. (2014). Lesekompetenz. In J. Friebe, B. Schmidt-Hertha, & R. Tippelt (Eds.), *Kompetenzen im höheren Lebensalter. Ergebnisse der Studie "Competencies in Later Life" (CiLL)* (pp. 61-80). Bielefeld: Bertelsmann.

Abstract:

Contribution describes the literacy of older adults (more than 65 years), using data from the German follow-up study Competencies in Later Life (CiLL). [Notice from editors]

Published: 2014

Available at (full text):

https://www.wbv.de/shop/themenbereiche/erwachsenenbildung/shop/detail/name/_/0/1/85---0014/facet/85---0014////////nb/0/category/167.html

Title:

Goglio, V., Meroni, E. C. (2014). *Adult participation in lifelong learning: Technical briefing*. European Commission, Joint Research Centre, Institute for the Protection and Security of the Citizen. Luxembourg: Publications Office of the European Union.

Abstract:

This technical briefing deals with adult participation in lifelong learning. In particular, it focuses on the implications associated to the use of different statistical sources (LFS, AES/CVTS and PIAAC), characterized by different reference periods and different definitions of lifelong learning. The main objective of the technical briefing is to examine the impact of using a 12-month or 4-week reference period on access to and intensity of adult learning. But technical briefing also includes a review of the state of the art in the field of measurement of adult perception to lifelong learning, and some statistics about the variance according to different labour market status and age groups.

Published: November 11, 2014

Available at (open access): <https://publications.europa.eu/en/publication-detail/-/publication/ccd49cda-ebde-4c26-a388-d2e7ede60a9c/language-en>

Title:

Goldhammer, F., Naumann, J., Stelter, A., Tóth, K., Rölke, H., & Klieme, E. (2014). The time on task effect in reading and problem solving is moderated by task difficulty and skill. *Journal of Educational Psychology*, 106(3), 608-626. doi:10.1037/a0034716

Abstract:

Computer-based assessment can provide new insights into behavioral processes of task completion that cannot be uncovered by paper-based instruments. Time presents a major characteristic of the task

completion process. Psychologically, time on task has 2 different interpretations, suggesting opposing associations with task outcome: Spending more time may be positively related to the outcome as the task is completed more carefully. However, the relation may be negative if working more fluently, and thus faster, reflects higher skill level. Using a dual processing theory framework, the present study argues that the validity of each assumption is dependent on the relative degree of controlled versus routine cognitive processing required by a task, as well as a person's acquired skill. A total of 1,020 persons ages 16 to 65 years participated in the German field test of the Programme for the International Assessment of Adult Competencies. Test takers completed computer-based reading and problem solving tasks. As revealed by linear mixed models, in problem solving, which required controlled processing, the time on task effect was positive and increased with task difficulty. In reading tasks, which required more routine processing, the time on task effect was negative and the more negative, the easier a task was. In problem solving, the positive time on task effect decreased with increasing skill level. In reading, the negative time on task effect increased with increasing skill level. These heterogeneous effects suggest that time on task has no uniform interpretation but is a function of task difficulty and individual skill.

Published: 2014

Available at: <http://psycnet.apa.org/PsycARTICLES/journal/edu/106/3>

Title:

Hämäläinen, R., Cincinnato, S., Malin, A., & De Wever, B. (2014). VET workers' problem-solving skills in technology-rich environments: European approach. *International Journal for Research in Vocational Education and Training*, 1(1), 57-80.

Abstract:

The European workplace is challenging VET adults' problem-solving skills in technology-rich environments (TREs). So far, no international large-scale assessment data has been available for VET. The PIAAC data comprise the most comprehensive source of information on adults' skills to date. The present study (N = 50 369) focuses on gaining insight into the problem-solving skills in TREs of adults with a VET background. When examining the similarities and differences in VET adults' problem-solving skills in TREs across 11 European countries, two main trends can be observed. First, our results show that only a minority of VET adults perform at a high level. Second, there seems to be substantial variation between countries with respect to the proportion of VET adults that can be identified as "at-risk" or "weak" performers. For the future, our findings indicate the variations that can be used as a starting point to identify beneficial VET approaches.

Published: 2014

Available at (open access): <http://www.ijrvet.net/index.php/IJRVET/article/view/18>

Title:

Heisig, J. P., & Solga, H. (2014). Kompetenzen, Arbeitsmarkt- und Weiterbildungschancen von gering Qualifizierten in Deutschland. Befunde aus PIAAC. In Projektträger im Deutschen Zentrum für Luft-/Raumfahrt (Ed.), *Kompetenzen von gering Qualifizierten. Befunde und Konzepte. Alphabetisierung und Grundbildung Erwachsener* (Vol. 3, pp. 11-31). Bielefeld: W. Bertelsmann Verlag.

Abstract:

Based on the OECD study "Programme for the International Assessment of Adult Competencies - PIAAC" from 2011/12, we have access to current information about fundamental reading and basic arithmetic competences in individuals with low-level formal qualifications in Germany and in international comparison.

Published: 2014

Available at (open access): <http://www.ssoar.info/ssoar/handle/document/52111>

Title:

Heisig, J. P., & Solga, H. (2014). *Skills inequalities in 21 countries - PIAAC results for prime-age adults*. WZB Discussion Paper No. SP I 2014-503. Berlin: WZB. Retrieved October 20, 2017, from <https://www.econstor.eu/handle/10419/105504?locale=de>

Abstract:

Only few previous studies have explored cross-national variation in the relationship between educational certificates and competences. In this paper, we investigate the certificate-competence relationship, operationalized as skills gaps by level of educational attainment. More importantly, we scrutinize how two aspects of educational stratification processes, vertical stratification and occupation-specificity, affects skills gaps. Using data on 25-54 year olds from the 2011/12 round of the Programme for the International Assessment of Adult Competencies (PIAAC), we find that more occupation-specific education systems produce smaller differences in basic general skills between adults with low and intermediate levels of education. Higher levels of vertical stratification, by contrast, result in larger low-intermediate skills gaps. None of the two stratification aspects can however explain variations in the skills gaps between intermediate and high educated adults. We conclude by discussing the implications of our findings for labor market research.

Published: 2014

Available at (open access): <https://www.econstor.eu/handle/10419/105504?locale=de>

Title:

Helmschrott, S., & Martin, S. (2014). Nonresponse in PIAAC Germany. *methods, data, analyses*, 8(2), 243-266. doi:10.12758/mda.2014.010

Abstract:

Nonresponse is of concern for the quality of survey data, because it may introduce bias into the collected sample. To date, only few studies deal with nonresponse in skills or educational surveys. This paper aims at contributing to this field by identifying the main factors that influenced participation in the first wave of PIAAC Germany, a survey assessing skills of the adult population, conducted in 2011/2012. Using bi- and multivariate analyses, we found that age, citizenship, the level of education, the type of house the sampled persons live in, and municipality size were the main factors influencing response to PIAAC Germany. Our findings suggest that, for the effective reduction of nonresponse in skills or education studies, researchers should target persons with a low level of education, foreigners, those living in larger housing units, and big-city dwellers by using appropriate measures at the different stages of the survey process.

Published: 2014

Available at (open access): <http://www.ssoar.info/ssoar/handle/document/42890>

Title:

Klemm, U. (2014). PIAAC und die Erwachsenenbildung. *Zeitschrift für internationale Bildungsforschung und Entwicklungspädagogik*, 37(2), 29-34.

Abstract:

The concise resume that could be drawn from the German PIAAC study would be: Every sixth German adult reads and calculates at a ten-year-old student's competence level and every tenth German adult cannot handle a "mouse". Or, according to PIAAC: the German educational system apparently doesn't offer all people the chance to achieve basic competences that exceed over an elementary level. Though these results are statistically valid and reliable, they reduce without further differentiation PIAACs overall intentions.

Published: 2014

Available at:

http://www.pedocs.de/volltexte/2016/12082/pdf/ZEP_2_2014_Klemm_PIAAC_und_die_Erwachsenenbildung.pdf

Title:

Levels, M., van der Velden, R., & Allen, J. (2014). Educational mismatches and skills: New empirical tests of old hypotheses. *Oxford Economic Papers*, 66(4), 959-982. doi:10.1093/oep/gpu024

Abstract:

This article empirically explores how the often reported relationship between educational mismatches and wages can best be understood. Exploiting the newly published Programme for International Assessment of Adult Competencies (PIAAC) data, we are able to achieve a better estimation of the classical Duncan and Hoffman ORU model than previous papers by controlling for heterogeneity of observable skills. Our findings suggest that (i) a considerable part of the effect of educational mismatches can be attributed to skills heterogeneity, and (ii) that the extent to which skills explain educational mismatches varies by institutional contexts, particularly the extent to which collective wage bargaining is regulated. These observations suggest that skills matter for explaining wage effects of education and educational mismatches, but also that the extent to which this is the case depends on collective wage bargaining.

Published: 2014

Available at: <https://academic.oup.com/oep/article/66/4/959/2362187>

Title:

Lunze, K., & Paasche-Orlow, M. K. (2014). Limited literacy and poor health: The role of social mobility in Germany and the United States. *Journal Of Health Communication*, 19 (sup 2), 15-18. doi:10.1080/10810730.2014.946115

Abstract:

The Organization for Economic Cooperation and Development (OECD) implemented the Program for the International Assessment of Adult Competencies (PIAAC) to provide policymakers with nationally representative profiles of knowledge, skills, and competencies. Results among participating countries indicate that the United States and Germany stand out as having the strongest relationship between literacy skills and self-reported health. Our analysis addresses factors that could mediate the particularly strong link between low literacy and poor health in these two countries and possible remedies for the problem. In particular, PIAAC results also reveal that the United States and Germany share the most entrenched multigenerational literacy problem among the countries in the PIAAC survey. In spite of the many social differences that currently distinguish Germany and the United States, these countries share the lowest level of social mobility for education. Promoting social mobility by making higher education more accessible for those whose parents did not have the chance to access it might thus not only promote literacy and social capital, but indirectly also promote public health. Given the PIAAC findings, the concept of social mobility and opportunities to dissolve the educational stratification merit more attention in public health research.

Published: October 2014

Available at: <http://www.tandfonline.com/doi/abs/10.1080/10810730.2014.946115>

Title:

Maehler, D., Massing, N., & Rammstedt, B. (2014). *Grundlegende Kompetenzen Erwachsener mit Migrationshintergrund im internationalen Vergleich: PIAAC 2012*. [Basic skills of adults with a migration background in international comparison: PIAAC 2012]. Münster: Waxmann.

Abstract:

The migration report on the Programme for the International Assessment of Adult Competencies (PIAAC) contrasts the basic skills of the adult population with and without a migration background in Germany and in international comparison. As in most of the other countries, persons with a migration background in Germany have, on average, lower basic skills than those without a migration background. These skill disparities can be explained, in particular, by differences in structural background characteristics such as education background and socioeconomic status. [Translated on behalf of editors]

Published: 2014

Available at (open access): <http://www.ssoar.info/ssoar/handle/document/39604>

Title:

Maehler, D. B., Massing, N., Helmschrott, S., Rammstedt, B., Staudinger, U. M., & Wolf, C. (2014). Erhebliche Kompetenzunterschiede im Erwachsenenalter nach Bildungsgruppen: Ergebnisse von PIAAC 2012 [Substantial skill differences in adulthood by educational groups]. *Informationsdienst Soziale Indikatoren (ISI)*, 52, 1-5.

Abstract:

One of the key tasks of education systems is to impart basic skills, for example in reading, writing, and arithmetic, thereby preparing pupils for the future. The results of the PISA study, in particular, have shown that, in Germany, attendance at different school types is associated with clear proficiency dif-

ferences in different skill domains. It is therefore expected that a strong association also exists between formal education and basic skills in adulthood. Previous studies on adult skills have furnished empirical evidence in support of this assumption (Lehmann 1997; Wölfel et al. 2011). It can be assumed that formal education (and training) and skills mutually reinforce each other: On the one hand, school and vocational training impart basic skills; on the other hand, there is a high probability that persons who have deficits in basic skills will leave the education and training system earlier. In addition, an indirect effect of the education system is expected because attitudes, for example toward learning and reading, fostered within the education system increase the probability that people will undergo further education and training in later life, thereby maintaining and expanding their skills (OECD 2013). [Translated on behalf of editors]

Published: 2014

Available at (open access): <http://www.ssoar.info/ssoar/handle/document/39617>

Title:

Martin, S., Helmschrott, S., & Rammstedt, B. (2014). The use of respondent incentives in PIAAC: The field test experiment in Germany. *methods, data, analyses*, 8(2), 223–242. doi:10.12758/mda.2014.009

Abstract:

In PIAAC, each participating country was required to attain a response rate of at least 50 percent, as long as evidence was provided that there was either no or only low nonresponse bias in the data. Achieving 50 percent is a challenge for face-to-face surveys in most Western countries and also in Germany. Previous research showed that the use of incentives is an effective tool to increase response rates in different kinds of surveys. However, incentives may have differential effects on certain socio-demographic groups, because the perceived benefits of an incentive are subjective. To assess the effects of incentives on response rate and nonresponse bias, an experiment with three incentive treatments (10 Euro-coin, 25 Euro and 50 Euro in cash) was implemented in the German PIAAC field test. Results show that response rates increased as the incentive increased. With regard to nonresponse bias, the results are less explicit. According to logistic regressions, the main factors for participation in the 50 Euro condition are age, citizenship, and municipality size and in the 25 Euro condition, only municipality size. Bivariate analyses put these results into perspective. For all treatment groups, a low potential for bias is visible, and there is no statistical evidence that response distributions of the realized sample across treatments are different.

Published: 2014

Available at (open access): <http://www.ssoar.info/ssoar/handle/document/42889>

Title:

Motschilnig, R. (2014). Active citizenship and non-work related aspects of PIAAC. *Lifelong Learning in Europe*, 1.

Abstract:

This article focuses on the relation between active citizenship and literacy proficiency levels, one of the three skills groups measured in PIAAC. Unfortunately importance of these non-work related benefits of (increased) literacy levels and therefore also of adult learning are often not recognized enough. [from author's introduction]

Published: March 28, 2014

Available at (open access): <http://www.elmmagazine.eu/articles/active-citizenship-and-non-work-related-aspects-of-piaac/>

Title:

Naumann, J., Goldhammer, F., Rölke, H., & Stelter, A. (2014). Erfolgreiches Problemlösen in technologie-reichen Umgebungen. *Zeitschrift für Pädagogische Psychologie*, 28(4), 193-203. doi:10.1024/1010-0652/a000134

Abstract:

Using Field Trial data from the Programme for the International Assessment of Adult Competencies (PIAAC) from the German (N = 661) and Canadian (N = 411) Field Trials, we show that success in technology-based problem solving is predicted by the number of actions taken during problem solving. The association was reversely U-shaped. The probability of succeeding on a problem-solving task was highest at an above-average number of actions. The association between actions taken and problem solving was further moderated by task characteristics. Especially in tasks involving long navigation sequences a strong positive association between the number of actions and task success was obtained. Against expectations, the association of actions and probability of task success was higher in well-defined than in ill-defined tasks. Results for the German and the Canadian samples ran parallel.

Published: 2014

Available at (open access): <https://econtent.hogrefe.com/doi/pdf/10.1024/1010-0652/a000134>

Title:

Organisation for Economic Co-operation and Development (OECD). (2014). *Education at a Glance 2014: OECD Indicators*. Paris: OECD Publishing. Retrieved October 20, 2017, from <http://www.oecd-ilibrary.org/docserver/download/9614011e.pdf?expires=1513943625&tid=id&accname=guest&checksum=F5BA4C8DCD08765C70FF388C0174A454>

Abstract:

Education at a Glance: OECD Indicators is the authoritative source for accurate and relevant information on the state of education around the world. It provides data on the structure, finances, and performance of education systems in the OECD's 34 member countries, as well as a number of partner countries. In the 2014 edition, new material includes:

- Data from the Survey of Adult Skills, a product of the OECD Programme for the International Assessment of Adult Competencies (PIAAC), on attainment, employment, intergenerational education mobility, earnings, and social outcomes related to skills proficiency.
- New indicators on private institutions, on what it takes to become a teacher, and on the availability of, and participation in, professional development activities for teachers.
- Data from the 2013 OECD Teaching and Learning International Survey (TALIS) in several indicators.
- Analysis of the impact of the recent economic crisis on the interplay among educational attainment, employment, earnings and public finance.
- More in-depth information related to upper secondary completion rates.

- A detailed examination of the types and use of student loans.
- For the first time, data from Colombia and Latvia.

Published: 2014

Available at (open access): <http://www.oecd-ilibrary.org/docserver/download/9614011e.pdf?expires=1513943625&tid=id&tacname=guest&checksum=F5BA4C8DCD08765C70FF388C0174A454>

Title:

Perry, A., & Rammstedt, B. (2014). Grundkompetenzen Erwachsener: Deutschland im internationalen Vergleich [Adult basic skills: Germany in international comparison]. *Spektrum Wissenschaft*, 17-18.

Abstract:

Every three years, the PISA Test assesses pupils' skills and knowledge, thereby allowing educational success to be compared across countries. With the PIAAC study, results for adults are now available for the first time. One key finding up front: In PIAAC, too, Germany's performance was mediocre compared to other countries. Adult literacy skills in Germany are below the average of the participating OECD countries; numeracy skills are slightly above average. And finally, in the assessment of computer and Internet skills, performance in Germany corresponded to the international average. Japan and Finland are the highest-performing countries in reading and everyday mathematics; Spain and Italy are at the bottom of the league. [Source: From author's introduction; translated on behalf of editors]

Published: 2014

Available at: <http://www.spektrum.de/magazin/grundkompetenzen-erwachsener-deutschland-im-internationalen-vergleich/1219861>

Title:

Perry, A., Wiederhold, S., & Ackermann-Piek, D. (2014). How can skill mismatch be measured? New approaches with PIAAC. *methods, data, analyses*, 8(2), 137-174. doi:10.12758/mda.2014.006

Abstract:

Measuring skill mismatch is problematic, because objective data on an individual skill level are often not available. Recently published data from the Program for the International Assessment of Adult Competencies (PIAAC) provide a unique opportunity for gauging the importance of skill mismatch in modern labor markets. This paper systematically compares existing measures of skill mismatch in terms of their implications for labor market outcomes. We also provide a new measure that addresses an important limitation of existing measures, namely, assigning a single competency score to individuals. We find that the importance of skill mismatch for individual earnings differs greatly, depending on the measure of mismatch used.

Published: 2014

Available at (open access): <http://www.ssoar.info/ssoar/handle/document/42884>

Title:

Rammstedt, B., & Maehler, D. B. (2014). PIAAC and its methodological challenges. *methods, data, analyses*, 8(2), 125 -136. doi:10.12758/mda.2014.005

Abstract:

This article gives an overview of the Programme for the International Assessment of Adult Competencies (PIAAC) and introduces the methodological challenges in implementing the survey - especially those encountered in Germany. Adherence to high methodological standards is a prerequisite to participation in PIAAC and to inclusion of the national data of the respective participating countries in the international dataset (OECD, 2010). Depending on the standard in question, and on national circumstances, compliance is a challenging undertaking. This Special Issue discusses methodological challenges at different levels, and steps taken to implement PIAAC standards in Germany. The aspects addressed include sample design, survey instruments, field work preparation, data collection, and estimation standards. In this introductory article, we outline the central elements of the PIAAC design and the methodological challenges of the survey, and we present the other six articles in this special issue.

Published: 2014

Available at (open access): <http://www.ssoar.info/ssoar/handle/document/42893>

Title:

Rammstedt, B., & Maehler, D. B. (2014). PIAAC: Eine internationale Studie zur Untersuchung von Alltagsfertigkeiten Erwachsener [PIAAC: An international study to assess adult everyday skills]. *DIE - Zeitschrift für Erwachsenenbildung*, 21(3), 26-29. doi:10.3278/DIE1403W

Abstract:

With the Programme for the International Assessment of Adult Competencies, the OECD assessed adult literacy, numeracy and problem-solving skills for the first time in 24 industrialized countries. Based on key findings of the study, the present paper shows how the German participants performed in international comparison, how the scores they achieved are distributed across proficiency levels, and what associations exist with other factors, such as age and educational attainment. [Translated on behalf of editors]

Published: 2014

Available at (open access): <https://www.die-bonn.de/zeitschrift/32014/kompetenz-05.pdf>

Title:

Scheunpflug, A. & Franz, J. (2014). Der Mehrwert einer Begleitstudie – Competencies in Later Life – CiLL [The added value of an accompanying study – Competencies in Later Life CiLL]. *DIE - Zeitschrift für Erwachsenenbildung*, 21(3), 42-43. doi:10.3278/DIE1403W

Abstract:

In empirical education research, large-scale assessments are often flanked by accompanying studies. This is also the case with PIAAC, whose accompanying study is entitled Competencies in Later Life (CiLL). What can be expected of the accompanying studies of major, and sometimes international, surveys? This contribution explores the added value that the CiLL study provides for PIAAC. The authors begin by identifying the connection points between PIAAC and CiLL. Building on this, they

demonstrate in what respect CiLL expands PIAAC and deepens the insights gained from that study. [Translated on behalf of editors]

Published: 2014

Available at (open access): <https://www.wbv.de/journals/zeitschriften/die-zeitschrift-fuer-erwachsenenbildung/specialsearch/-/shop/detail/2/Detail/0/32/DIE1403W.html?cHash=8dea562978212199714a1f38f05db649>

Title:

Schmidt-Hertha, B. (2014). PIAAC – Rezeption und Interpretation: PIAAC im Spiegel von Presse und Positionspapieren [PIAAC – Reception and interpretation: PIAAC as reflected in press reports and position papers]. *DIE - Zeitschrift für Erwachsenenbildung*, 21(3), 33-35. doi:10.3278/DIE1403W

Abstract:

Public reporting following the publication of the results of large-scale assessments may differ in its perception and interpretation of the findings. Focusing on the perspectives of journalists, education policy makers and associations, this contribution provides an overview of the media response to the Programme for the International Assessment of Adult Competencies (PIAAC). [Translated on behalf of editors]

Published: 2014

Available at (open access): https://www.wbv.de/journals/zeitschriften/die-zeitschrift-fuer-erwachsenenbildung/artikel/shop/detail/name/_/0/1/DIE1403W033/facet/DIE1403W033////////nb/0/category/730.html

Title:

Schmidt-Hertha, B., Gebrande, J., & Friebe, J. (2014). Competencies in later life. *Lifelong Learning in Europe*, 1. Retrieved October 24, 2017, from <http://www.elmmagazine.eu/articles/competencies-in-later-life/>

Abstract:

The article provides an overview on two studies on competencies in adulthood, PIAAC and CiLL. Limitations in the sample of PIAAC (16- to 65-year-old people) led to a further study called CiLL, which analyses the 66- to 80-year-old population in Germany. Study design and first results of the interviews and assessments are presented and potentials of competencies in later life are discussed with regard to six aspects. In conclusion, consequences for education policy and adult education practitioners are suggested.

Published: March 27, 2014

Available at (open access): <http://www.elmmagazine.eu/articles/competencies-in-later-life/>

Title:

Schöll, I. (2014). Was aus PIAAC folgen muss – Plädoyer für ein Bundesamt zur Grundbildungssicherung [What must follow on from PIAAC – A plea for a federal agency for the assurance of basic skills education]. *DIE - Zeitschrift für Erwachsenenbildung*, 21(3), 36-38. doi:10.3278/DIE1403W036

Abstract:

PIAAC shows that many adults in Germany lack basic skills. It thus depicts a problem situation whose solution requires new structures. Against this background, the author makes a plea for the establishment of a federal agency for the assurance of basic skills education in order to create a nationwide, federal-government-funded service for the provision of basic skills courses. [Translated on behalf of editors]

Published: 2014

Available at (open access): https://www.wbv.de/journals/zeitschriften/die-zeitschrift-fuer-erwachsenenbildung/artikel/shop/detail/name/_/0/1/DIE1403W036/nb/0/category/797.html

Title:

Schrader, J., & Wanka, J. (2014). »Viele Menschen können ihr Potenzial nicht ausschöpfen« Im Gespräch mit Dr. Johanna Wanka, Bundeministerin für Bildung und Forschung" ["Many people cannot realize their full potential." Interview with Dr. Johanna Wanka, Federal Minister of Education and Research] (Interview). *DIE - Zeitschrift für Erwachsenenbildung*, 21(3), 22-24. doi:10.3278/DIE1403W

Abstract:

The central question addressed by the PIAAC special issue is the way in which the CiLL and PIAAC results have entered into adult education discourse on the part of practitioners, researchers, and policy makers. In Germany, PIAAC was funded by the Federal Ministry of Education and Research (BMBF) with the participation of the Federal Ministry of Labor and Social Affairs (BMAS). How have education policy makers received the PIAAC findings? Are education policy measures being launched? What education policy strategies does PIAAC give rise to? Editor Prof. Dr. Josef Schrader puts these and other questions to Federal Minister for Education and Research, Prof. Dr. Johanna Wanka. [Translated on behalf of editors]

Published: 2014

Available at (open access): https://www.bildungsserver.de/onlinersource.html?onlinersourcen_id=54242

Title:

Solga, H. (2014). Education, economic inequality and the promises of the social investment state. *Socio-Economic Review*, 12(2), 269-297. doi:10.1093/ser/mwu014

Abstract:

Since the mid-1990s, there has been a debate about the social investment state model in advanced societies. Such an orientation towards preventive investment in education rather than redistribution (or social spending) raises the question of whether, and if so, what kinds of relationships exist between educational and economic inequalities. Based on an international comparison of 20 advanced economies, the results of the analyses suggest that the role of education as an 'equalizer' should not be overestimated. Direct redistribution is much more likely than education to combat poverty in advanced societies. Yet increasing the mean literacy rate by reducing the proportion of low-literate adults is also positively associated with less economic inequality. Welfare states with 'double liability'—investing in children's education and in more equal family conditions—therefore perform best in terms of economic inequality.

Published: March 26, 2014

Available at: <https://academic.oup.com/ser/article/12/2/269/2270295>

Title:

Statistik Austria. (2014). *Schlüsselkompetenzen von Erwachsenen (PIAAC). Vertiefende Analysen der PIAAC-Erhebung 2011/12* [Adult key skills (PIAAC). In-depth analyses of the PIAAC Survey 2011/12]. Wien: Statistik Austria.

Abstract:

In October 2013, following an initial broad-based examination of the Austrian results of the Programme for the International Assessment of Adult Competencies (PIAAC), researchers from various specialist disciplines collaborated with Statistik Austria's PIAAC Team to prepare in-depth analyses, which are now presented in this report. The contributions cover a wide range of priority topics – from the consideration and analysis of individual factors, such as sex and age, and their associations with the PIAAC key skills, to the impact of these skills on labor market participation or income. The impact of different learning activities (formal education, e.g., school and higher education; non-formal education, e.g., courses and seminars; informal learning, e.g., on-the-job learning) on skill acquisition is also examined. One specific focus of the report is on individuals with poor skills and on the living situation of these persons. The analyses focus mainly on the situation in Austria. In some of the contributions, the viewpoint is broadened to include countries that are of interest for comparison purposes, thereby incorporating an international perspective. [Source: From the preface; translated on behalf of editors]

Published: 2014

Available at (open access):

https://www.bmb.gv.at/schulen/unterricht/ba/schulabbruch_schluesselkompetenzen.pdf?61edi7

Title:

Tsatsaroni, A., & Evans, J. (2014). Adult numeracy and the totally pedagogised society: PIAAC and other international surveys in the context of global educational policy on lifelong learning. *Educational Studies in Mathematics*, 87(2), 167-186. doi:10.1007/s10649-013-9470-x

Abstract:

This paper aims to discuss the emergence, form and likely effects of international surveys of adults' skills by locating them in the global context of policies on education and Life Long Learning (LLL). It focuses on adults' numeracy and discusses its conceptualisation and assessment in the Project for the International Assessment of Adult Competencies (PIAAC), which is the most recent survey. Drawing on critical theoretical resources about new forms of governance in education and transformations in the pedagogic discourse, the paper further substantiates existing critiques of global policy trends, namely that they are motivated by human capital approaches to education and LLL. In particular, we show that the apparently commonsensical appeal of evaluative instruments like PISA and PIAAC is based on a competency model of knowledge, which embodies a narrow notion of competence. Relatedly, the notional curricula promoted by such surveys potentially articulate a more radical idea of LLL, captured by Bernstein's conception of trainability as the mode of socialisation into a Totally Pedagogised Society. The paper presents a dual approach to understanding international adult performance surveys in general--in that, besides deploying the theoretical resources already indicated, it also raises a number

of methodological issues relevant to the valid interpretation of these studies' results. Ultimately, it argues for the importance of mobilising resources from critical educational perspectives to support the development of potentially powerful knowledge like numeracy and to prevent its being reduced to a narrow competency.

Published: October 2014

Available at: <https://link.springer.com/article/10.1007%2Fs10649-013-9470-x>

Title:

Vera-Toscano, M., Meroni, E. C. (2014). *Formal qualifications and individuals' skills. Evidence from the Survey of Adult Skills (PIAAC)*. European Commission, Joint Research Centre, Institute for the Protection and Security of the Citizen. Luxembourg: Publications Office of the European Union.

Abstract:

The role played by the educational system regarding the provision of adequate skills is indisputable. Cognitive skills, which are the key for successful participation in the labour market, in social and civic activities and in further education and training, are mainly developed through formal education attainment at young ages. As educational attainment increases, individuals are exposed to higher levels of training and should develop greater abilities and be more skillful at processing information. Thus, the aim of this technical briefing is to look into and compare the distribution of educational attainment and the level of skills by country, as a starting point to assess the efficiency of the different educational systems in providing the appropriate level of skills to citizens.

Published: 2014

Available at (open access): <https://publications.europa.eu/en/publication-detail/-/publication/cd0f6b3e-254f-47db-94e4-6f9617ba8427/language-en>

Title:

Zabal, A. (2014). The challenge of meeting international data collection standards within national constraints. *methods, data, analyses*, 8(2), 175-198. doi:10.12758/mda.2014.007

Abstract:

The Programme for the International Assessment of Adult Competencies (PIAAC) is an international OECD study that compares key competencies of adults (16-65 years) in the participating countries. In order to obtain high quality data and to ensure equivalence of measurement across countries, the international PIAAC Consortium produced a very detailed and elaborate set of standards and guidelines for all aspects of the national implementations. In Germany, a comprehensive set of measures and procedures was put in place for the PIAAC fieldwork. Some of the international requirements for data collection were not meaningful within the national context and required certain adaptations. This article describes various key fieldwork measures in Germany and discusses how specific measures relate to central international data collection standards. Reflecting on this national experience, some of the possibilities and limitations of national compliance to international standards are discussed.

Published: 2014

Available at (open access): <http://www.ssoar.info/ssoar/handle/document/42886>

2.8 Publications in 2015

Title:

Adalet McGowan, M., & Andrews, D. (2015). *Labour market mismatch and labour productivity: Evidence from PIAAC data*. OECD Economics Department Working Papers No. 1209. Paris: OECD Publishing. Retrieved December 17, 2017, from http://www.oecd-ilibrary.org/economics/labour-market-mismatch-and-labour-productivity_5js1pzx1r2kb-en

Abstract:

This paper explores the link between skill and qualification mismatch and labour productivity using cross-country industry data for 19 OECD countries. Utilising mismatch indicators aggregated from micro-data sourced from the recent OECD Survey of Adult Skills (PIAAC), the main results suggest that higher skill and qualification mismatch is associated with lower labour productivity, with over-skilling and under-qualification accounting for most of these impacts. A novel result is that higher skill mismatch is associated with lower labour productivity through a less efficient allocation of resources, presumably because when the share of over-skilled workers is higher, more productive firms find it more difficult to attract skilled labour and gain market shares at the expense of less productive firms. At the same time, a higher share of under-qualified workers is associated with both lower allocative efficiency and within-firm productivity – i.e. a lower ratio of high productivity to low productivity firms. While differences in managerial quality can potentially account for the relationship between mismatch and within-firm productivity, the paper offers some preliminary insights into the policy factors that might explain the link between skill mismatch and resource allocation.

Published: April 28, 2015

Available at (open access): http://www.oecd-ilibrary.org/economics/labour-market-mismatch-and-labour-productivity_5js1pzx1r2kb-en

Title:

Adalet McGowan, M., & Andrews, D. (2015). *Skill mismatch and public policy in OECD countries*. OECD Economics Department Working Papers No. 1210. Paris: OECD Publishing. Retrieved December 17, 2017, from http://www.oecd-ilibrary.org/economics/skill-mismatch-and-public-policy-in-oecd-countries_5js1pzw9lnwk-en

Abstract:

This paper explores the relationship between skill mismatch and public policies using micro data for 22 OECD countries from the recent OECD Survey of Adult Skills (PIAAC). Results suggest that differences in skill mismatch across countries are related to differences in public policies. After controlling for individual and job characteristics, well-designed product and labour markets and bankruptcy laws that do not overly penalise business failure are associated with lower skill mismatch. Given the negative relationship between skill mismatch and labour productivity, reducing skill mismatch emerges as a new channel through which well-designed framework policies can boost labour productivity. Skill mismatch is also lower in countries with housing policies that do not impede residential mobility (e.g. transaction costs on buying property and stringent planning regulations). Greater flexibility in wage negotiations and higher participation in lifelong learning as well higher managerial quality are also associated with a better matching of skills to jobs.

Published: April 28, 2015

Available at (open access): http://www.oecd-ilibrary.org/economics/skill-mismatch-and-public-policy-in-oecd-countries_5js1pzw9lnwk-en

Title:

Borgonovi, F., & Burns, T. (2015). *The educational roots of trust*. OECD Education Working Papers No. 119. Paris: OECD Publishing. Retrieved December 17, 2017, from http://www.oecd-ilibrary.org/education/the-educational-roots-of-trust_5js1kv85dfvd-en

Abstract:

Trust is important for social and economic well-being, for enhancing social cohesion and strengthening resilience, and for maintaining security and order in our societies. Trust is the foundation upon which social capital is built and it also is intimately related to human capital. This work examines the association between education and levels of interpersonal trust, using data from the OECD's Survey of Adult Skills (PIAAC). Our analysis demonstrated that education strengthens the cognitive and analytical capacities needed to develop, maintain, and (perhaps) restore trust in both close relationships as well as in anonymous others. It does so both directly, through building and reinforcing literacy and numeracy in individuals, and indirectly, through facilitating habits and reinforcing behaviours such as reading and writing at home and at work. Education and trust are thus fundamentally intertwined and dependent on each other. While all countries across the OECD have been striving to improve their education systems in terms of student achievement levels, this analysis suggests that there are also concrete elements that could be usefully addressed in order to reinforce and strengthen trust.

Published: May 21, 2015

Available at (open access): http://www.oecd-ilibrary.org/education/the-educational-roots-of-trust_5js1kv85dfvd-en

Title:

Brunello, G., & Rocco, L. (2015). *The effects of vocational education on adult skills and wages: What can we learn from PIAAC?* OECD Social, Employment and Migration Working Papers No. 168. Paris: OECD Publishing. Retrieved December 17, 2017, from http://www.oecd-ilibrary.org/social-issues-migration-health/the-effects-of-vocational-education-on-adult-skills-and-wages_5jrxfmjvw9bt-en

Abstract:

In this report we investigate the effects of vocational education and training (VET) on adult skills and labour market outcomes by using the PIAAC survey. Data comparability across countries, the breadth of countries involved, and the almost unique presence of information on assessed skills, training, earnings and employment makes this survey especially valuable to study the different facets of VET as compared to more academic education.

Published: June 29, 2015

Available at (open access): http://www.oecd-ilibrary.org/social-issues-migration-health/the-effects-of-vocational-education-on-adult-skills-and-wages_5jrxfmjvw9bt-en

Title:

Bussi, M., & Pareliussen, J. K. (2015). *Skills and labour market performance in Sweden*. OECD Economics Department Working Papers No. 1233. Paris: OECD Publishing. Retrieved December 17, 2017, from http://www.oecd-ilibrary.org/economics/skills-and-labour-market-performance-in-sweden_5js0cqvnzx9v-en

Abstract:

Both educational attainment and skills, as measured in the OECD Survey of Adult Skills (PIAAC), are high in Sweden. They are not perfect substitutes, but both are to some degree necessary for successfully integrating in the Swedish labour market. This paper describes the distribution of proficiency in literacy in the population and explores its determinants, and uncovers a strong relationship between literacy and the likelihood of being employed. The relationship between proficiency in literacy and the likelihood of participating in adult education is also explored. Lower employment prospects for immigrants are well explained by lower literacy proficiency, lower education and less favourable socio-economic backgrounds.

Published: May 28, 2015

Available at (open access): http://www.oecd-ilibrary.org/economics/skills-and-labour-market-performance-in-sweden_5js0cqvnzx9v-en

Title:

Cort, P., & Larson, A. (2015). The non-shock of PIAAC - Tracing the discursive effects of PIAAC in Denmark. *European Educational Research Journal*, 14(6), 531-548. doi:10.1177/1474904115611677

Abstract:

The results of the first PIAAC survey were published in October 2013. In the case of Denmark, the survey showed that Denmark is below the OECD average when it comes to reading skills, above average with regards to numeracy and on average with regards to IT skills. In this paper we analyse how the PIAAC results were covered by the media and how different stakeholders within the field of adult literacy took PIAAC as an opportunity to try to influence how the problem of adult literacy in Denmark should be represented. The analysis is based on Bacchi's *What's the problem represented to be?* approach to policy analysis (2009) and Kingdon (1984), and Zahariadis' (2003) multiple streams theory. The analysis shows that PIAAC did not provoke the same kind of national 'shock' as PISA and that adult literacy is low on the political agenda compared to basic schooling.

Published: 2015

Available at: <http://journals.sagepub.com/doi/pdf/10.1177/1474904115611677>

Title:

Cortina, K. S. (2015). PIAAC und PISA: Pädagogisch paradoxe Parallelen. *Zeitschrift für Pädagogik*, 61(2), 223-242. doi:10.3262/ZP1502223

Abstract:

The "Programme for the International Assessment of Adult Competencies" (PIAAC) is another important empirical study to investigate developments in the educational system of Germany beyond the 15-year olds that PISA is focused on. From a biographical viewpoint of competencies, this article com-

bines PIAAC and PISA results to address the question how the ranking of Germany across the age groups changes across different age groups with respect to mathematics and reading literacy. The cross-sectional analyses did not provide any evidence of a positive effect of the comprehensive German professional training system. In addition, the trend towards lesser impact of parental educational background in Germany, found over five waves of PISA, could not be replicated for the 16- to 24-year-old adults in PIAAC. In light of Germany's economic success, the consistency of Germany's position close to the international average for all age groups from age 16 to 65 in both literacy domains raises questions about the relevance of these competencies for educational development beyond their value as indicators for the efficacy of the school system.

Published: 2015

Available at:

https://www.beltz.de/fachmedien/erziehungs_und_sozialwissenschaften/zeitschriften/zeitschrift_fuer_paedagog-ik/article/Journal.html?tx_beltz_journal%5Barticle%5D=29900&tcHash=8a7d803963374becde3e7227241a1d0d

Title:

Cummins, P., Kunkel, S., & Walker, R. (2015). *Adult education and training programs for older adults in the U.S.: National results and cross-national comparisons using PIAAC data*. Washington, D.C.: American Institutes for Research. Retrieved October 20, 2017, from https://static1.squarespace.com/static/51bb74b8e4b0139570ddf020/t/55de28c6e4b0daf2d66f69ea/1440622790514/Cummins_Kunkel_Walker_PIAAC.pdf

Abstract:

Continuous learning over the life course is necessary to effectively compete in a knowledge-based global economy. Shifts in the age structure of the U.S. labor force combined with increased labor force participation among older adults add to the importance of gaining a better understanding of how adult education and training (AET) influences labor market outcomes for middle-aged and older workers. This study used data from the Program for the International Assessment of Adult Competencies (PIAAC) and the Survey of Consumer Finances (SCF) to examine the relationship in the U.S. between participation in AET programs and employment, labor force participation, income, and net worth for adults aged 45 to 65. Participation in an AET program in the 12 months preceding the survey significantly improved the log odds of both employment and labor force participation and significantly improved the log odds of moving up one income quintile. Lower income groups and the unemployed were less likely to participate in AET than higher income groups and the employed. We also compared outcomes of AET participation in the U.S. with those in Germany, Japan, Sweden, and the U.K. and examined policies for lifelong learning in those countries.

Published: February 18, 2015

Available at (open access):

<http://miamioh.edu/cas/academics/centers/scripps/research/publications/2015/02/Adult-Educational-and-Training-Programs-for-Older-Adults.html>

Title:

Dämmrich, J., Kosyakova, Y., & Blossfeld, H. P. (2015). Gender and job-related non-formal training: A comparison of 20 countries. *International Journal of Comparative Sociology*, 56(6), 433-459. doi:10.1177/0020715215626769

Abstract:

This article analyses gender differences in the participation in various types of job-related non-formal training in 20 societies and examines the relationship of these gender differences with country-specific institutional settings such as employment protection, family policies and the gender culture. Using data from the Programme for the International Assessment of Adult Competencies (PIAAC) and applying two-step multilevel regression analyses, two main findings are obtained: First, gendered participation clearly differs among training types, with women being less likely to participate in employer-financed training but more likely to participate in non-employer-sponsored training. These gender differences in training participation are crucial because they are likely to shape men's and women's career development in different ways, that is, by providing better future career prospects with the current employer for men and with a new employer for women. Second, country-specific settings can reduce gender differences in training participation: in countries with family policies supporting females' employment (e.g. good coverage of formal childcare and short parental leave), we found a lower training disadvantage of women in employer-financed training. In turn, gender differences in non-employer-sponsored training seem to be lower in countries with less rigid employment protection.

Published: 2015

Available at (open access): <http://journals.sagepub.com/doi/abs/10.1177/0020715215626769>

Title:

Desjardins, R. (2015). *Participation in adult education opportunities: Evidence from PIAAC and policy trends in selected countries*. Background paper for the Education for All Global Monitoring Report. Paris: UNESCO. Retrieved October 20, 2017, from <http://unesdoc.unesco.org/images/0023/002323/232396e.pdf>

Abstract:

This paper examines cross-country patterns of participation in adult education opportunities using comparative data made available by the OECD Survey of Adult Skills. Patterns are considered in relation to some of the mechanisms that drive unequal chances to participate, and some of the policy issues that surround the provision, governance and financing of different types of adult learning, as well as recent policy developments relevant to adult education in selected countries.

Published: 2015

Available at (open access): <http://unesdoc.unesco.org/images/0023/002323/232396e.pdf>

Title:

Desjardins, R., & Ederer, P. (2015). Socio-demographic and practice-oriented factors related to proficiency in problem solving: A lifelong learning perspective. *International Journal of Lifelong Education*, 34(4), 468-486. doi:10.1080/02601370.2015.1060027

Abstract:

This article explores the relative importance of different socio-demographic and practice-oriented factors that are related to proficiency in problem solving in technology-rich environments (PSTREs) and by extension may be related to complex problem solving (CPS). The empirical analysis focuses on the proficiency measurements of PSTRE made available by the Programme for the International Assessment of Adult Competencies, which is relevant for gaining insight on some of the factors related to CPS. The purpose was to examine the relationship between the broad information processing experience that individuals gather in different contexts over the lifespan, and the chances to develop problem-solving skills that adults receive in different socio-demographic profiles. Results reveal that socio-demographic factors such as age, education and immigration status as well as practice-oriented factors such as ICT use and reading practice at and outside work are strongly related to proficiency.

Published: 2015

Available at:

<http://www.tandfonline.com/doi/abs/10.1080/02601370.2015.1060027?journalCode=tled20>

Title:

Fridberg, T., Rosdahl, A., Halapuu, V., Valk, A., Malin, A., Hämäläinen, R., A. F. Anderssen, Bjørkeng, B., Størset, H., Sønnesyn, J., Larsson, A.-C., Lind, P., & Mellander, E. (2015). *Adult skills in the Nordic Region: Key information-processing skills among adults in the Nordic Region*. Denmark: Rosendahls-Schultz Grafisk.

Abstract:

Denmark, Estonia, Finland, Norway, and Sweden participated in the first round of the International Survey of Adults' Skills. The survey is a product of the Programme for the International Assessment of Adult Competencies (PIAAC) led by the Organisation for Economic Co-operation and Development (OECD). The survey assessed the proficiency in literacy, numeracy, and problem-solving in technology-rich environments of adults aged 16–65. This publication is the product of the Nordic PIAAC Network, consisting of members from all five countries. It concentrates on the comparative results from four Nordic countries and Estonia, forming a Nordic region with many common features. It supplements the series of national and international PIAAC reports by comparing the results from five countries, as well as comparing an aggregate of these countries to other country aggregates. The results published in this book draw on a unique Nordic database, which the Nordic PIAAC Network has produced. The database consists of PIAAC assessment data and background information, supplemented by social, educational, and labour market register data from the five countries.

Published: 2015

Available at (open access): <http://norden.diva-portal.org/smash/record.jsf?pid=diva2%3A811323&tswid=5607>

Title:

Gebrande, J., & Friebe, J. (2015). Grundkompetenzen, Bildungsverhalten und Lernen im höheren Lebensalter. *Zeitschrift für Pädagogik*, 61(2), 192-204. doi:10.3262/ZP1502192

Abstract:

On the basis of the study Competencies in Later Life (CiLL), the authors present cornerstones of competencies in later life. First results of the surveys and determinations of competencies are differentiated according to individual sections of the population. Of particular interest is the question of in how far continuing education plays a role in promoting basic and everyday competencies. It is shown that educationally active older people have higher competencies in dealing with age-specific tasks than people who do not participate in further education. Furthermore, older active people make use of further education in the context of social participation and civic involvement.

Published: 2015

Available at:

https://www.beltz.de/fachmedien/erziehung_und_sozialwissenschaften/zeitschriften/zeitschrift_fuer_paedagogik/article/Journal.html?tx_beltz_journal%5Barticle%5D=29898&tcHash=2e1d4a2c3173d63502b420a229d4dced

Title:

Green, A., Green, F., & Pensiero, N. (2015). Cross-country variation in adult skills inequality: Why are skill levels and opportunities so unequal in anglophone countries? *Comparative Education Review*, 59(4), 595–618. doi:10.1086/683101

Abstract:

This article examines cross-country variations in adult skills inequality and asks why skills in Anglophone countries are so unequal. Drawing on the Organization for Economic Cooperation and Development's recent Survey of Adult Skills and other surveys, it investigates the differences across countries and country groups in inequality in both skills opportunities and outcomes and uses pseudo-cohort analysis to establish trends over time and during the life course. The analysis shows that adults' skills in Anglophone countries, and particularly in the United States and England, tend to be more unequal than in other countries on a wide range of measures. This cannot be explained by intercohort differences, skills distributions among adult migrants, or levels and distributions of adult learning, but inequality in education levels provides a strong predictor of skills inequality among adults. Whereas research suggests that early selection drives skills inequality in compulsory schooling, certain forms of tracking, such as bifurcation into academic or apprenticeship/vocational education in upper secondary education, can have a mitigating effect.

Published: 2015

Available at (open access): <http://www.journals.uchicago.edu/doi/full/10.1086/683101>

Title:

Grotlüschen, A., Heinemann, A., & Nienkemper, B. (2015). Stärken zweier Leitstudien für die Weiterbildung PIAAC und leo. – Level-One Studie im Vergleich [Strengths of two lead studies for further education. A comparison between PIAAC and the leo. – Level-One Study]. In A. Grotlüschen & D. Zimper (Eds.), *Literaliitäts- und Grundlagenforschung* [Literacy research and basic research] (pp. 79–88). Münster u.a.: Waxmann.

Abstract:

The current PIAAC results confirm in international comparison the worrying data of the national Level-One Study conducted in 2011, which found that 14.5 percent of the population of working age were functional illiterates. With their results, both studies have a strong impact on current education policy discussions on the subject of basic skills education. In order to identify the strengths of both studies for the area of further education and training, the contribution contrasts in a brief overview the research design of the two studies. The data on further education and training collected by the respective studies are then compared. And finally, the complementarity rather than the comparability of the studies is highlighted. [Translated on behalf of editors]

Published: 2015

Available at (open access):

https://www.wbv.de/journals/zeitschriften/report/artikel/shop/detail/name/_/0/1/REP1403W029/facet/REP1403W029////////nb/0/category/735.html

Title:

Hämäläinen, R., De Wever, B., Malin, A., & Cincinato, S. (2015). Education and working life: VET adults' problem-solving skills in technology-rich environments. *Computers & Education*, 88, 38–47. doi:10.1016/j.compedu.2015.04.013

Abstract:

The rapidly-advancing technological landscape in the European workplace is challenging adults' problem-solving skills. Workers with vocational education and training need flexible abilities to solve problems in technology-rich work settings. This study builds on Finnish PIAAC data to understand adults' (N = 4503) skills for solving problems in technology-rich environments. The results indicate the critical issue that more than two thirds of adults with vocational education and training have weak skills or lack the skills in solving problems in technology-rich environments and that more than one fifth of these adults are at risk. Furthermore, this study indicates that the likelihood of having fragile problem-solving skills is six times higher for adults with vocational education and training than for adults with at least upper secondary qualification. Since the need for problem-solving in technology-rich environments is likely to increase in the future, this study also identifies the indicators for problem-solving skills differences. The models predicting problem-solving skills on the basis of theoretical assumptions as well as empirical support are presented. Our results indicate that adults' lower performance does not seem to be associated with the vocational education and training educational system itself, but is mostly due to age, education in years, occupation, and gender, as well as work-related and everyday life factors. In practice, the models help to develop new approaches to enable novel problem-solving skills in technology-rich environments based on the current European workplace needs.

Published: 2015

Available at: <https://www.sciencedirect.com/science/journal/03601315/88>

Title:

Hanushek, E. A., Schwerdt, G., Wiederhold, S., & Woessmann, L. (2015). Returns to skills around the world: Evidence from PIAAC. *European Economic Review*, 73, 103–130. doi:10.1016/j.eurocorev.2014.10.006

Abstract:

Existing estimates of the labor-market returns to human capital give a distorted picture of the role of skills across different economies. International comparisons of earnings analyses rely almost exclusively on school attainment measures of human capital, and evidence incorporating direct measures of cognitive skills is mostly restricted to early-career workers in the United States. Analysis of the new PIAAC survey of adult skills over the full lifecycle in 22 countries shows that the focus on early-career earnings leads to underestimating the lifetime returns to skills by about one quarter. On average, a one-standard-deviation increase in numeracy skills is associated with an 18 percent wage increase among prime-age workers. But this masks considerable heterogeneity across countries. Eight countries, including all Nordic countries, have returns between 12 and 15 percent, while six are above 21 percent with the largest return being 28 percent in the United States. Estimates are remarkably robust to different earnings and skill measures, additional controls, and various subgroups. Intriguingly, returns to skills are systematically lower in countries with higher union density, stricter employment protection, and larger public-sector shares.

Published: 2015

Available at: <https://www.sciencedirect.com/science/article/pii/S0014292114001433>

Title:

He, Q., & von Davier, M. (2015). Identifying feature sequences from process data in problem-solving items with *N*-Grams. In: L. van der Ark, D. Bolt, WC. Wang, J. Douglas, SM. Chow (Eds.), *Quantitative Psychology Research* (pp. 173-190). Cham: Springer International Publishing.

Abstract:

This article draws on process data from a computer-based large-scale program, the Programme for International Assessment of Adult Competencies (PIAAC), to address how sequences of actions recorded in problem-solving tasks are related to task performance and how feature sequences are identified for different groups. The purpose of this study is twofold: first, to explore and detect action sequence patterns of features that are associated with success or failure on a problem-solving item, and second, to mutually validate the results derived from two feature selection models. Motivated by the methodologies of natural language processing and text mining, we utilized *n*-gram model and two feature selection methods, chi-square statistic (CHI), and weighted log likelihood ratio test (WLLR), in analyzing the process data at a variety of aggregate levels. It was found that action sequence patterns significantly differed by performance groups and were consistent across countries. The two feature selection approaches resulted in a high agreement of feature identification.

Published: 2015

Available at: https://link.springer.com/chapter/10.1007/978-3-319-19977-1_13

Title:

Heisig, J. P., & Solga, H. (2015). Secondary education systems and the general skills of less- and intermediate-educated adults - A comparison of 18 countries. *Sociology of Education*, 88(3), 202-225. doi:10.1177/0038040715588603

Abstract:

We investigate the impact of external differentiation and vocational orientation of (lower and upper) secondary education on country variation in the mean numeracy skills of, and skills gaps between, adults with low and intermediate formal qualifications. We use data on 30- to 44-year-olds in 18 countries from the 2011–12 round of the Program for the International Assessment of Adult Competencies. We find that higher levels of external differentiation (tracking) amplify skills gaps between less- and intermediate-educated adults. This is mainly due to lower mean skills achievement of less-educated adults. By contrast, greater emphasis on vocational skills in upper-secondary education is positively related to numeracy skills for both less- and intermediate-educated adults. Gains are larger for the less educated, so the gap in numeracy skills tends to fall with the degree of vocational orientation. We discuss implications of our findings for research on educational and labor market inequalities.

Published: 2015

Available at (open access): <http://journals.sagepub.com/doi/abs/10.1177/0038040715588603>

Title:

Heisz, A., Notten, G., & Situ, J. (2015). The role of skills in understanding low income in Canada. In T. I. Garner, K. S. Short (Eds.), *Research on Economic Inequality* (Vol. 23, pp.153 – 184). Bingley: Emerald Group Publishing.

Abstract:

This research explores how skill proficiencies are distributed between low-income and not-in low-income groups using the results of a highly complex survey of the information-processing skills of Canadians between the ages of 16 and 65. We find that having measures of skills enhances our understanding of the correlates of low income. Skills have an independent effect, even when controlling for other known correlates of low income, and their inclusion reduces the independent effect of education and immigrant status. This result is relevant for public policy development as the knowledge of the skills profile of the low-income population can inform the design of efficient and effective programmes.

Published: 2015

Available at: <http://www.emeraldinsight.com/doi/abs/10.1108/S1049-258520150000023005>

Title:

Jerrim, J. (2015). *Emigrants from Great Britain: what do we know about their lives?* DoQSS Workings Papers No. 15-02. London: University College London. Retrieved October 20, 2017, from <http://repec.ioe.ac.uk/REPEc/pdf/qsswp1502.pdf>

Abstract:

Each year more than 300,000 individuals leave Great Britain to start a new life overseas. Indeed, recent estimates suggest that up to 4.7 million British nationals now live abroad. Yet, in contrast to the substantial literature on the economic and social welfare of immigrants into Great Britain, comparatively little is known about the lives of emigrants from this country. This report provides, to the author's knowledge, the first quantitative study of this important issue. Labour market and social outcomes are compared between emigrants and individuals who choose to remain in Great Britain. I find a number of significant differences between these groups, along with notable variation by country of destina-

tion. This continues to hold true for certain outcomes even when differences in observable characteristics are taken into account.

Published: 2015

Available at (open access): <https://ideas.repec.org/p/qss/dqsswp/1502.html>

Title:

Jerrim, J. (2015). The link between family background and later lifetime income: How does the UK compare with other countries? *Fiscal Studies*, n/a-n/a. doi:10.1111/1475-5890.12081

Abstract:

The link between family background and labour market outcomes is an issue of great academic, social and political concern. It is frequently claimed that such intergenerational associations are stronger in Britain than other countries. But is this really true? I investigate this issue by estimating the link between parental education and later lifetime income, using three cross-nationally comparable datasets covering more than 30 countries. My results suggest that the UK is broadly in the middle of the cross-country rankings, with intergenerational associations notably stronger than in Scandinavia but weaker than in Eastern Europe. Overall, I find only limited support for claims that family background is a greater barrier to economic success in Britain than other parts of the developed world.

Published: 2015

Available at (open access): <https://ideas.repec.org/p/qss/dqsswp/1402.html>

Title:

Jerrim, J., & Macmillan, L. (2015). Income inequality, intergenerational mobility, and the Great Gatsby Curve: Is education the key? *Social Forces*, 94(2), 505-533. doi:10.1093/sf/sov075

Abstract:

It is widely believed that countries with greater levels of income inequality also have lower levels of intergenerational mobility. This relationship, known as the Great Gatsby Curve (GGC), has been prominently cited by high-ranking public policymakers, bestselling authors, and Nobel Prize-winning academics. Yet, relatively little cross-national work has empirically examined the mechanisms thought to underpin the GGC—particularly with regard to the role of educational attainment. This paper uses the cross-nationally comparable Programme for International Assessment of Adult Competencies (PIAAC) data set to shed new light on this issue. We find that income inequality is associated with several key components of the intergenerational transmission process—including access to higher education, the financial returns on education, and the residual effect of parental education upon labor-market earnings. Thus, consistent with theoretical models, we find that educational attainment is an important driver of the relationship between intergenerational mobility and income inequality. We hence conclude that unequal access to financial resources plays a central role in the intergenerational transmission of advantage.

Published: December 01, 2015

Available at (open access): <https://academic.oup.com/sf/article/94/2/505/2583794/Income-Inequality-Intergenerational-Mobility-and>

Title:

Jovicic, S. (2015). *Wage inequality, skill inequality, and employment: Evidence from PIAAC*. Schumpeter Discussion Papers No. 2015-007. Wuppertal: University of Wuppertal. Retrieved October 20, 2017, from <http://elpub.bib.uni-wuppertal.de/edocs/dokumente/fbb/wirtschaftswissenschaft/sdp/sdp15/sdp15007.pdf>

Abstract:

This paper investigates how much of the difference in wage distributions is related to differences in skill distributions and whether a compressed wage distribution is associated with high unemployment across core OECD countries. Some countries that have more compressed (dispersed) wage structures simultaneously have more compressed (dispersed) skill structures as well, and according to many economists, variations in skill inequality can explain variations in wage inequality across different countries. Firstly, this paper examines the relationship between skill compression and wage compression; secondly, wage compression is linked to labor market outcomes in terms of employment. Compressed wage structure (usually caused by labor market institutions) is often seen as a cause for high unemployment in the low-skill sector. Does the wage compression hypothesis hold? Based on the PIAAC survey of adult skills for seventeen OECD countries, this paper seeks to shed light on these two important topics.

Published: 2015

Available at (open access): <https://www.econstor.eu/handle/10419/121427>

Title:

Koettl, J., Sharma, S., Kupets, O., Mattoo, A., Ozden, C., & Vigo, J. M. (2015). The effects of aging on productivity: Diverse, not Alarming. In M. Bussolo, J. Koettl, E. Sinnott (Eds.), *Golden Aging: Prospects for Healthy, Active, and Prosperous Aging in Europe and Central Asia* (pp. 167-212). Washington, DC: World Bank. Retrieved February 02, 2018, from <https://openknowledge.worldbank.org/handle/10986/22018>

Abstract:

Explores how the age structure of the workforce affects aggregate productivity, and asserts that the impacts of aging on the dynamic channels of mobility, innovation, and entrepreneurship are more worrying than the effect of worker age alone on a firm's productivity. Though higher age is associated with deterioration in some skills, aging does not necessarily lead to a drop-off in skills; some seemingly inevitable effects of aging could reflect issues specific to an older cohort of workers rather than the process of aging that will at some point affect younger cohorts, and the medical literature suggests that future cohorts will do better as they age. The old may be better than the young at certain things, but worse at others, and grasping the comparative advantage potential of aging will prove beneficial. In Europe and Central Asia (ECA) and the Baltics, as in other developing regions, the rise in average educational levels in successive cohorts provides an important cohort effect.

Published: 2015

Available at (open access, full text): <https://openknowledge.worldbank.org/handle/10986/22018>

Title:

Le Mouel, M., & Squicciarini, M. (2015). *Cross-Country estimates of employment and investment in organisational capital: A task-based methodology using PIAAC data*. OECD Science, Technology and Industry Working Papers No. 8. Paris: OECD Publishing.

Abstract:

This work proposes a task-based methodology for the measurement of employment and investment in organisational capital (OC) in 20 OECD countries. It builds on the methodology of Squicciarini and Le Mouel (2012) and uses information from the OECD Programme for the International Assessment of Adult Competencies (PIAAC). OC is defined as firm-specific organisational knowledge resulting from the performance of tasks affecting the long-term functioning of firms, such as developing objectives and strategies; organising, planning and supervising production; and managing human resources. Cross-country heterogeneity in OC-related occupations emerges: while 20 occupational classes of the International Standard Classification of Occupations (ISCO 2008) are on average identified as being OC-related, country-specific values range between 14 (in Korea) and 24 occupations (in Poland). A core group of managerial occupations are consistently identified as OC occupations across countries, whereas differences arise in the selection of professionals and associate professionals in science and engineering, health, education, and business administration. Estimates suggest the share of OC occupations in total employment to amount to 16% on average, with country-specific values that vary between 9.5% (Denmark) and 26% (United Kingdom); and that total investment in OC, as a share of value-added, ranges from 1.4% in the Czech Republic to 3.7% in the United Kingdom, with an average 2.2% across all countries. Managers appear to account for less than half of total employment and investment in OC. Total investment in OC results higher in services than in manufacturing. In the services sector, on average half of investment in OC comes from small firms, while in manufacturing, 45% of investment in OC comes from large firms. Finally, the importance of OC investment in the public sector is investigated. With only few exceptions, investment in OC is higher in the public sector than in the private sector. These estimates of OC investment can be used to analyse its role with respect to skill use and mismatch, its impact on the routinisation of tasks and resulting polarisation of wage distribution, and its role in firms' integration and upgrading along global value chains (GVC).

Published: October 12, 2015

Available at (open access): http://www.oecd-ilibrary.org/science-and-technology/cross-country-estimates-of-employment-and-investment-in-organisational-capital_5jrs3smfqcjb-en

Title:

Meisel, K., & Mickler, R. (2015). PIAAC: Konsequenzen für Bildungspolitik und Praxis der Erwachsenenbildung. *Zeitschrift für Pädagogik*, 61(2), 205-222. doi:10.3262/ZP1502205

Abstract:

The contribution focuses on the consequences of the PIAAC study and draws attention to the circumstance that the reactions to the findings have so far not had sufficient impact either on further education policy or on the practice of continuing education. A closer look at the results within the context of other thematically related studies reveals the continuing relevance and importance of basic education. Feedback from politics, the media, or the specialist community does not provide evidence of a unified maxim for action; however, concrete demands from the side of those concerned can be formulated. Consequences necessarily ensuing from these demands, which are directed at further education policy and at the practice of continuing education, are specified and hampering framework conditions as well as misdirected prioritizations are identified.

Published: 2015

Available at:

https://www.beltz.de/fachmedien/erziehungs_und_sozialwissenschaften/zeitschriften/zeitschrift_fuer_paedagog-ik/article/Journal.html?tx_beltz_journal%5Barticle%5D=29899&tcHash=c7a5d162c9d9970007948e0f19f43af1

Title:

Meroni, E. C., Vera-Toscano, E., & Costa, P. (2015). Can low skill teachers make good students? Empirical evidence from PIAAC and PISA. *Journal of Policy Modeling*, 37(2), 308-323. doi:10.1016/j.jpolmod.2015.02.006

Abstract:

Using teachers' skills from the Survey of Adult Skills (PIAAC) and students' performance from the Programme for International Students Assessment (PISA) we exploit a multilevel model to investigate how much of the variation in student performance can be explained by teacher quality at the country level across a number of OECD countries. Results show how teachers' skills seem to have positive effects on student achievement and explain part of the variation between countries in students' achievement. National policies and efforts made from Education departments to improve teacher quality seem crucial to achieve both overall excellence and greater equity across countries.

Published: 2015

Available at (open access): <http://www.sciencedirect.com/science/article/pii/S0161893815000289>

Title:

Montt, G. (2015). *The causes and consequences of field-of-study mismatch: An analysis using PIAAC*. OECD Social, Employment and Migration Working Papers No. 167. Paris: OECD Publishing. Retrieved October 20, 2017, from http://www.oecd-ilibrary.org/social-issues-migration-health/the-causes-and-consequences-of-field-of-study-mismatch_5jrxm4dhv9r2-en

Abstract:

Field-of-study mismatch occurs when workers educated in a particular field work in another. It is conceptually distinct from qualifications or skills mismatch, although a part of qualifications and skills mismatch results from graduates from a particular field having to downgrade to find work in another field. Some studies have identified labour market dynamics related to field-of-study mismatch, but few (if any) have sought to directly understand the interplay between labour supply factors (the types of skills brought to the workplace) and the labour demand factors (the types of skills demanded by employers) in field-of-study mismatch. Using data from the Programme for International Assessment of Adult Competencies' Survey of Adult Skills (PIAAC), this paper shows that although students may choose to specialise in a particular field, it is not solely up to them to actually work in that field. In accordance with assignment theories, both the degree of saturation of a particular field in the labour market and the level of generic skills of a particular field predict the occurrence of field-of-study mismatch, highlighting that mismatch is the result of both labour supply- and demand-side factors. The paper then evaluates the costs to individuals – in terms of wages, risk of being out of work and job satisfaction. Findings suggest that the costs of field-of-study mismatch may only be high in terms of individual earnings when it is associated to qualification mismatch. For economies, field-of-study

mismatch, when associated with qualifications mismatch, can amount to important costs, meriting the attention of policy makers to better aligning course places to skill needs or by encouraging skill transferability across fields.

Published: July 01, 2015

Available at (open access): http://www.oecd-ilibrary.org/social-issues-migration-health/the-causes-and-consequences-of-field-of-study-mismatch_5jrxm4dhv9r2-en

Title:

Organisation for Economic Co-operation and Development (OECD). (2015). *Adults, computers and problem solving: What's the problem?* Paris: OECD Publishing. Retrieved October 20, 2017, from http://www.oecd-ilibrary.org/education/adults-computers-and-problem-solving_9789264236844-en

Abstract:

The report provides an in-depth analysis of the results from the Survey of Adult Skills related to problem solving in technology-rich environments, along with measures concerning the use of ICT and problem solving. The Nordic countries and the Netherlands have the largest proportions of adults (around 40%) who score at the higher levels in problem solving, while Ireland, Poland and the Slovak Republic have the smallest proportions of adults (around 20%) who score at those levels. Variations in countries' proficiency in problem solving using ICT are found to reflect differences in access to the Internet and in the frequency with which adults use e-mail. The report finds that problem-solving proficiency is strongly associated with both age and general cognitive proficiency, even after taking other relevant factors into account. Proficiency in problem solving using ICT is related to greater participation in the labour force, lower unemployment, and higher wages. By contrast, a lack of computer experience has a substantial negative impact on labour market outcomes, even after controlling for other factors. The discussion considers policies that promote ICT access and use, opportunities for developing problem-solving skills in formal education and through lifelong learning, and the importance of problem-solving proficiency in the context of e-government services.

Published: June 23, 2015

Available at (open access): http://www.oecd-ilibrary.org/education/adults-computers-and-problem-solving_9789264236844-en

Title:

Organisation for Economic Co-operation and Development (OECD). (2015). *OECD skills outlook 2015: Youth, skills and employability*. Paris: OECD Publishing. Retrieved October 20, 2017, from http://www.oecd-ilibrary.org/education/oecd-skills-outlook-2015_9789264234178-en

Abstract:

Young people around the world are struggling to enter the labour market. In some OECD countries, one in four 16–29 year-olds is neither employed nor in education or training. The *OECD Skills Outlook 2015* shows how improving the employability of youth requires a comprehensive approach. While education, social, and labour market policies have key roles to play, co-ordination between public policies and the private sector is also crucial. The publication, which builds on the results of the 2012 Survey of Adult Skills (PIAAC) presented in the first edition of the Skills Outlook, also presents examples of successful policies in selected countries.

Published: May 27, 2015

Available at: http://www.oecd-ilibrary.org/education/oecd-skills-outlook-2015_9789264234178-en

Title:

Paccagnella, M. (2015). *Skills and wage inequality: Evidence from PIAAC*. OECD Education Working Papers No. 114. Paris: OECD Publishing. Retrieved October 20, 2017, from http://www.oecd-ilibrary.org/education/skills-and-wage-inequality_5js4xfgl4ks0-en

Abstract:

This paper exploits data from the Survey of Adult Skills (PIAAC) to shed light on the link between measured cognitive skills (proficiency), (formal) educational attainment and labour market outcomes. After presenting descriptive statistics on the degree of dispersion in the distributions of proficiency and wages, the paper shows that the cross-country correlation between these two dimensions of inequality is very low and, if anything, negative. As a next step, the paper provides estimates of the impact of both proficiency and formal education at different parts of the distribution of earnings. Formal education is found to have a larger impact on inequality, given that returns to education are in general much higher at the top than at the bottom of the distribution. The profile of returns to proficiency, by contrary, is much flatter. This is consistent with the idea that PIAAC measures rather general skills, while at the top end of the distribution the labour market rewards specialized knowledge that is necessarily acquired through tertiary and graduate education. Finally, a decomposition exercise shows that composition effects are able to explain a very limited amount of the observed cross-country differences in wage inequality. This suggests that economic institutions, by shaping the way personal characteristics are rewarded in the labour market, are the main determinants of wage inequality.

Published: February 27, 2015

Available at (open access): http://www.oecd-ilibrary.org/education/skills-and-wage-inequality_5js4xfgl4ks0-en

Title:

Pforr, K., Blohm, M., Blom, A. G., Erdel, B., Felderer, B., Fräßdorf, M., . . . Rammstedt, B. (2015). Are incentive effects on response rates and nonresponse bias in large-scale, face-to-face surveys generalizable to Germany? Evidence from ten experiments. *Public Opinion Quarterly*, 79(3). doi:10.1093/poq/nfv014

Abstract:

In survey research, a consensus has grown regarding the effectiveness of incentives encouraging survey participation across different survey modes and target populations. Most of this research has been based on surveys from the United States, whereas few studies have provided evidence that these results can be generalized to other contexts. This paper is the first to present comprehensive information concerning the effects of incentives on response rates and nonresponse bias across large-scale surveys in Germany. The context could be viewed as a critical test for incentive effects because Germany's population is among the most survey-critical in the world, with very low response rates. Our results suggest positive incentive effects on response rates and patterns of effects that are similar to those in previous research: The effect increased with the monetary value of the incentive; cash incentives affected response propensity more strongly than lottery tickets do; and prepaid incentives could be more cost effective than conditional incentives. We found mixed results for the effects of incentives on

nonresponse bias. Regarding large-scale panel surveys, we could not unequivocally confirm that incentives increased response rates in later panel waves.

Published: 2015

Available at (open access): <https://academic.oup.com/poq/article/79/3/740/1916249/Are-Incentive-Effects-on-Response-Rates-and>

Title:

Pouliakas, K., & Russo, G. (2015). *Heterogeneity of skill needs and job complexity: Evidence from the OECD PIAAC Survey*. IZA Discussion Papers, No. 9392. Bonn: Institute for the Study of Labor.

Abstract:

We use information from the new OECD Survey of Adult Skills (PIAAC) to investigate the link between job tasks and cognitive skill demand in 22 advanced economies. Skill demand is operationalized by the assessed literacy and numeracy skills of workers with well-matched skills to their job duties. Jobs are categorised according to the nature of tasks, including the intensity of abstract reasoning, employee latitude, interactivity or manual work. The analysis confirms the significant relation between task complexity and higher skill needs. The significant relation holds independently of the endogenous supply of formal human capital, occupational or industrial structure and other job or individual characteristics. The results confirm the (indirect) mapping between tasks and skills as predicted by the task approach to labour economics. Given the marked heterogeneity in workplace practices adopted by employers, it is clear that enterprise level workplace development policies are warranted as enablers of skills matching and higher labour productivity.

Published: October 2015

Available at (open access): <https://www.econstor.eu/bitstream/10419/124903/1/dp9392.pdf>

Title:

Prins, E., & Monnat, S. (2015). Examining associations between self-rated health and proficiency in literacy and numeracy among immigrants and US-born adults: Evidence from the Program for the International Assessment of Adult Competencies (PIAAC). *Plos One*, 10(7), 25. doi:10.1371/journal.pone.0130257

Abstract:

This paper uses data from the Program for the International Assessment of Adult Competencies (PIAAC) to analyze the relationship between self-reported health (SRH) and literacy and numeracy proficiency for immigrants compared to U.S.-born respondents and for Hispanic versus Asian immigrants. The research questions were: (1) Are literacy and numeracy scores associated with adults' SRH? (2) Are associations between SRH and literacy and numeracy proficiency moderated by immigrant status? (3) Among immigrants, are literacy and numeracy scores more strongly associated with SRH for Hispanics versus Asians? Immigrants had significantly lower literacy and numeracy scores, yet reported better health than U.S.-born respondents. Ordinal logistic regression analyses showed that literacy and numeracy were both positively related to SRH for immigrants and U.S.-born adults, and should therefore be viewed as part of the growing evidence that literacy is an independent and significant social determinant of health. Second, U.S.-born and immigrant adults accrued similarly positive health benefits from stronger literacy and numeracy skills. Third, although Hispanic immigrants were more disadvantaged than Asian immigrants on almost all socioeconomic characteristics and had significantly lower

literacy and numeracy scores and worse SRH than Asian immigrants, both Hispanic and Asian immigrants experienced similar positive health returns from literacy and numeracy proficiency. These findings underscore the potential health benefits of providing adult basic education instruction, particularly for immigrants with the least formal schooling and fewest socioeconomic resources.

Published: July 01, 2015

Available at (open access): <http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0130257>

Title:

Prins, E., Monnat, S., Clymer, C., & Toso, B. W. (2015). How is health related to literacy, numeracy, and technological problem-solving skills among U.S. adults? Evidence from the Program for the International Assessment of Adult Competencies (PIAAC). *Journal of Research and Practice for Adult Literacy, Secondary, and Basic Education*, 4(3), 22-42.

Abstract:

This paper uses data from the Program for the International Assessment of Adult Competencies (PIAAC) to analyze the relationship between U.S. adults' self-reported health and proficiencies in literacy, numeracy, and technological problem solving. Ordinal logistic regression analyses showed that scores on all three scales were positively and significantly related to health. After controlling for respondents' socioeconomic and demographic characteristics, only literacy remained significant, but the magnitude of the literacy effect diminished substantially. These results suggest that socioeconomic resources such as formal education, parents' education, and employment are the "pathway or mechanism" through which literacy, numeracy, and technological problem solving are related to health. Therefore, literacy, numeracy, and technological problem solving should be viewed as social determinants of health. Policy implications include the need for literacy and ESL instruction, coupled with efforts to increase college completion and access to health insurance and support services for people with disabilities.

Published: 2015

Available at (open access):

<https://static1.squarespace.com/static/55a158b4e4b0796a90f7c371/t/57995fe7725e2582f34ddd00/1469669391938/COABE+Journal+Winter+2015.pdf>

Title:

Quintini, G. (2015). *Working and learning: A diversity of patterns*. OECD Social, Employment and Migration Working Papers No. 169. Paris: OECD Publishing. Retrieved December 20, 2017, from http://www.oecd-ilibrary.org/social-issues-migration-health/working-and-learning-a-diversity-of-patterns_5jrw4bz6hl43-en

Abstract:

The combination of work and study has been hailed as crucial to ensure that youth develop the skills required on the labour market so that transitions from school to work are shorter and smoother. This paper fills an important gap in availability of internationally-comparable data. Using the 2012 Survey of Adult Skills (PIAAC), it draws a comprehensive picture of work and study in 23 countries/regions. Crucially, it decomposes the total share of working students by the context in which they work (VET, apprenticeships or private arrangements) and assesses the link between field of study and students' work. The paper also assesses how the skills of students are used in the workplace compared to other workers and identifies the socio-demographic factors and the labour market institutions that increase

the likelihood of work and study. Finally, while it is not possible to examine the relationship between work and study and future labour market outcomes at the individual level, some aggregate correlations are unveiled.

Published: August 18, 2015

Available at (open access): http://www.oecd-ilibrary.org/social-issues-migration-health/working-and-learning-a-diversity-of-patterns_5jrw4bz6hl43-en

Title:

Rammstedt, B., Perry, A., & Maehler, D. B. (2015). Zentrale Ergebnisse von PIAAC aus deutscher Perspektive. *Zeitschrift für Pädagogik*, 61(2), 162-191. doi:10.3262/ZP1502162

Abstract:

The Program for the International Assessment of Adult Competencies (PIAAC) is an international comparative study on adult skills, namely literacy, numeracy, and problem solving in technology-rich environments. The present contribution gives a brief outline of the study's design and presents results from a German perspective. In literacy Germany is slightly below the OECD average, in numeracy slightly above. As expected, basic skills differ in all countries with individuals' educational achievements. The basic skills investigated in PIAAC are relevant to labor market indicators such as participation in the labor market and earnings.

Published: 2015

Available at (open access): <http://www.ssoar.info/ssoar/handle/document/47099>

Title:

Sabatini, J. (2015). *Understanding the basic reading skills of U.S. adults: Reading components in the PIAAC literacy survey*. Retrieved October 17, 2017, from <https://www.ets.org/s/research/report/reading-skills/ets-adult-reading-skills-2015.pdf>

Abstract:

Recent research paints a troubling portrait of the literacy skills of U.S. adults. Equally troubling is that these skills have remained relatively unchanged when compared to results from previous years of U.S. adult surveys, while other countries have been showing improvement, especially among adults with low basic skills.

Through a recent survey's deeper exploration of the most foundational, component skills, we have richer information from which we can gain insights and draw implications for policy, as well as for learning and instruction, for adults who score at the lowest levels of proficiency.

The ability to read fluently and for understanding - to be able to learn from text - is perhaps the most important foundational skill for U.S. adult citizens' health, well-being, and social and economic advancement. It is not only an essential skill when competing for jobs in the 21st century workforce, but is also a gateway to lifelong learning, education and training.

This critical report asserts that as a country, we must develop a comprehensive and sustained effort and investment to improve the literacy of our adults with low basic skills if we are to protect and enhance our communities, our economy and our democracy.

Published: 2015

Available at (open access): <https://www.ets.org/s/research/report/reading-skills/ets-adult-reading-skills-2015.pdf>

Title:

Squicciarini, M., Marcolin, L., & Horvát, P. (2015). *Estimating cross-country investment in training: An experimental methodology using PIAAC data*. OECD Science, Technology and Industry Working Papers No. 09. Paris: OECD Publishing. Retrieved January 25, 2018, from http://www.oecd-ilibrary.org/science-and-technology/estimating-cross-country-investment-in-training_5jrs3sftp8nw-en

Abstract:

The present work proposes a novel methodology for the measurement of investment in human capital in the form of training. Differently from existing studies, the expenditures-based approach pursued encompasses investment in formal and on-the-job training, as well as in informal learning and yields estimates that account for both the opportunity and the direct cost of the different forms of training considered. Using a wide array of data sources, including new and rich individual-level data collected through the OECD Programme for the International Assessment of Adult Competencies (PIAAC) survey as well as Labour Force Surveys (LFS) and System of National Accounts (SNA) data, the study proposes estimates of investment in training for the years 2011-2012. These cover 22 OECD countries and are provided at both the economy and industry levels. Estimates suggest that average total investment in training corresponds to 6.7% of gross value added (GVA), with investment in on-the-job training (amounting to 2.4% of GVA, on average) that are substantially in line with those of previous literature. Wide sector and country heterogeneity in the relative importance of investment in formal and on-the-job and informal learning also emerge. On average, production appears more intensive in on-the-job training (relative to other training types) than overall services, but not relative to business services only. Public-oriented services such as education and health services invest a greater (smaller) proportion of total training expenditure in formal (on-the-job) training than other sectors and the overall economy.

Published: 2015

Available at (open access): http://www.oecd-ilibrary.org/science-and-technology/estimating-cross-country-investment-in-training_5jrs3sftp8nw-en

Title:

Straesser, R. (2015). "Numeracy at work": A discussion of terms and results from empirical studies. *ZDM: The International Journal on Mathematics Education*, 47(4), 665-674. doi:10.1007/s11858-015-0689-0

Abstract:

With a broad understanding or definition of "work" as something that includes unpaid labour, this paper examines the relationship between numeracy and work, and analyses specific forms and constraints of workplace related numeracy. This is done by highlighting and commenting on existing literature that focuses on the role of workplace mathematics and the identification of vocational mathematics. Following a numeracy framework suggested by Goos et al. (2014), the paper analyses three case studies, and pays special attention to mathematical knowledge, dispositions to mathematics, and the role of tools in industrial contexts. Workplace related mathematics often mixes mathematical and extra-mathematical knowledge and procedures into one "instrument", hiding and/or changing math-

ematics as it is encountered in or known from classrooms. Insights gained from case studies are complemented by an analysis of the PIAAC survey study. The paper leads to four major results, including a comment on the use of the term "numeracy" and a remark on "critical orientation" of numeracy from a workplace perspective.

Published: July, 2015

Available at: <https://link.springer.com/article/10.1007/s11858-015-0689-0>

Title:

Straková, J. (2015). Strong vocational education: A safe way to the labour market? A case study of the Czech Republic. *Educational Research*, 57(2), 168–181. doi:10.1080/00131881.2015.1030853

Abstract:

Background: In its communications, the European Commission stresses the importance of vocational education and endorses apprenticeship training. Educational systems that have dual tracks of academic alongside vocational learning routes have been shown to generate better labour market outcomes for school leavers and smooth the school-to-work transition. On the other hand, dual tracked educational systems can reinforce the effect of social origin on educational performance: the differences between the achievement of students from a background characterised by low socio-economic status and students from high socio-economic status backgrounds are greater in a tracked system than in a comprehensive one. In addition to these general tendencies, the content and organisation of vocational education differ in individual countries, as do its strengths and weaknesses and impacts on the labour market prospects of young people.

Purpose: This paper studies vocational education in the Czech Republic: specifically, its apprenticeship track leading directly to the labour market. It seeks to answer questions about whether the Czech apprenticeship education system provides its students with the knowledge and skills necessary for success in the modern labour market, and whether it facilitates their transition from school to work. The paper also studies the impact of the high vocational specificity of the Czech education system on educational inequalities and the development of these inequalities over time.

Sample: The research questions are answered using statistical data and analyses of Czech data from international surveys of adult skills: the International Adult Literacy Survey (IALS) and the Organisation for Economic Co-operation and Development Programme for the International Assessment of Adult Competencies (PIAAC), which studied probability samples of adults aged 16–65 years. The IALS data were collected in 1998 and included 3132 cases, and the PIAAC data were collected in 2012 and included 6102 cases.

Design and methods: The IALS and PIAAC data were analysed using binary logistic regression. Descriptive statistics from PIAAC, statistical yearbooks of education and national surveys on the transition from school to work were also used to provide evidence.

Results: The analyses show that in spite of its high vocational specificity, the efficiency of the Czech education system in facilitating transition to the labour market is relatively low, as are the achievement outcomes of its apprentices. This high differentiation, moreover, contributes significantly and increasingly to educational inequalities. In the light of those findings, the paper discusses features of the Czech apprenticeship education system and intended policy measures that are aiming to retain the current structure of the system and foster apprenticeship education.

Published: April 2015

Available at:

<http://www.tandfonline.com/doi/abs/10.1080/00131881.2015.1030853?journalCode=rere20>

Title:

Sturman, L. (2015). What is there to learn from international surveys of mathematical achievement?. In R. C. Kadosh, A. Dowker, R. C. Kadosh, A. Dowker (Eds.) , *The Oxford handbook of numerical cognition* (pp. 430-442). New York, NY, US: Oxford University Press.

Abstract:

This chapter explores some recent headline findings from the mathematical surveys (TIMSS and PISA), the possible uses to which those findings could be put, and some potential abuses of the data. It also looks at issues related to apparently different findings from the two surveys of mathematical achievement/literacy within a country. As well as direct involvement in the international coordination of some of these international studies, the NFER has long-standing experience as the National Centre coordinating and administering international surveys on behalf of the UK education departments. These studies include TIMSS (mathematics and science) and PISA (reading, mathematical literacy, scientific literacy and problem solving), as well as other international surveys such as PIRLS (reading literacy), ICCS (civics and citizenship), PIAAC (adult competences), and ESLC (European languages). This perspective of experience gives the NFER's international comparisons team strong insight into the nature of the surveys, the richness of the datasets produced, the lessons that can, in theory, be learned from them, and key limitations of the lessons that can be drawn from them.

Published: 2015

Available at:

<http://www.oxfordhandbooks.com/view/10.1093/oxfordhb/9780199642342.001.0001/oxfordhb-9780199642342-e-037>

Title:

Tippelt, R. (2015). Kompetenzentwicklung im Lebenslauf [Skills development over the life course]. *Zeitschrift für Pädagogik*, 61(2), 157-161. doi:10.3262/ZP1502157

Abstract:

Skills development is an integral part of the concepts of lifelong learning and development over the life course. Empirical findings show that skills are developed not only in childhood and adolescence but are also of central importance in adulthood. Adopting a cross-national comparative or a social-differentiation perspective, the present essays describe on a representative basis the state of skills development in the residential population in Germany aged 16-65 years and 66-80 years. It must be asked whether, and if so how, further education practitioners and educational policy makers will incorporate these new findings into their formative actions. [Translated on behalf of editors]

Published: 2015

Available at:

https://www.beltz.de/fachmedien/erziehungs_und_sozialwissenschaften/zeitschriften/zeitschrift_fuer_paedagogik/article/Journal.html?tx_beltz_journal%5Barticle%5D=29896&tcHash=c4bd2a28441ad3276d89421700a00391

Title:

Tippelt, R. (2015). PIAAC: Kompetenzfeststellung und-debatte in Spanien. *ZEP: Zeitschrift für Internationale Bildungsforschung und Entwicklungspädagogik*, 38(4), 26-30.

Abstract:

In Spain, the international competence-based studies such as PISA and PIAAC are intensely discussed. This article informs about the understanding of competence underlying these studies, about methodologically and internationally relevant results as well as about the specific disillusioning results on the competencies in reading and in mathematics of the 16 to 65 years olds in Spain. Yet, in the processing cohort-specific differences become evident because the younger age cohort acquires higher competencies as it is possible for the older cohort. In expert discussions different assessments of the PIAAC study result and strategies for educational policy and for practice become apparent, to which an outsider perspective is added.

Published: 2015

Available at: https://www.waxmann.com/index.php?elD=download&tid_artikel=ART101866&tuid=frei

Title:

Vicherková, D., Kaduchová, P., Chudy, S., & Harits, I.M. (2015). Readers' ways by connecting outcomes of PISA and PIAAC research and today's Czech school practice. *IJAEDU-International E-Journal of Advances in Education*, 1(3), 175-182. doi:10.18768/ijaedu.82244

Abstract:

The aim of this article is to think about key issues of readers' comprehension literacy of specific category of research sample (fifteen and twenty-four) readers. To what extent is the information of both international researches implemented into reality and chosen curriculum.

In the first part of the article is introduced the basic terminology (literacy according to OECD, functional literacy and reader's literacy). It is essential to understand that it is not just about literacy skills, i.e. being able to read texts and understand them, but also the skills to find, process, and compare the information contained in the text, and reproduce text content.

In the second part the article thinks about and compares selected key data from international PISA and PIAAC research for specific category of research sample (fifteen and twenty-four years old readers). It is also worth considering whether the teaching community and the general public are aware of the need for specific measurements and the international comparison of literacy, in which the Czech Republic participates.

In the third part the article focuses on results of international research and practice in the selected curricula of pedagogic -educational institutions for the pupil population. On several examples of pupils task from Czech curriculum are explained the reading strategies. The discussed literacy strategies reflect the skill of the student to find information, process, compare, and evaluate it according to specification.

The main objective of this text is to reflect on the possibilities of linking the outputs of both readership surveys, such as functional literacy and school practice in our Czech environment.

Published: December 2015

Available at (open access): <http://ijaedu.ocerintjournals.org/download/article-file/225646>

Title:

Wiederhold, S. (2015). *Macroeconomic growth and lifelong learning*. Thematic Report, proceedings of LLLight'in'Europe research project. Retrieved October 27, 2017, from http://www.lllightineurope.com/fileadmin/lllightineurope/download/LLLight_Macroeconomic_Growth_and_LLL_thematicreport_TR6_20150922.pdf

Abstract:

PIAAC, a new international adult skill survey developed under the patronage of the OECD, offers novel insights on the role of cognitive skills in modern knowledge-based economies. Research based on these data shows that higher cognitive skills – measured across numeracy, literacy, and ICT domains – are systematically related to higher employment probabilities. Moreover, better cognitive skills are also associated with higher wages in all countries participating in PIAAC, with economically meaningful effect sizes. Among prime-age workers (35–54 years old), going up one out of five competency levels in numeracy skills is associated with increased hourly wages averaging some 18 percent across countries. But perhaps the most striking finding from the international analysis is the substantial heterogeneity in returns to skills across countries. Estimated returns to skills in the countries with the highest returns (the United States, Ireland, and Germany) are roughly twice as large as in the countries with the lowest returns (Sweden, the Czech Republic, and Norway). Intriguingly, returns to skills are systematically lower in countries with higher union density, stricter employment protection, and larger public-sector shares.

This new research adds to previous evidence showing that cognitive skills are closely linked to economic growth. An increase in educational achievement by 50 PISA points translates into 1 percentage point higher growth rates in the long run. Importantly, what matters for growth is the skills that people have actually learned, not how long people stayed at school. This evidence strongly calls for a focus on educational outcomes, not just attainment.

Given that human capital is a leading determinant of employment, earnings, and economic growth in modern knowledge-based economies such as the European Union, it is all the more worrying that many European countries show a rather poor performance in the recent PIAAC test when compared with the top-performing countries. This signals a dire need for reforms if the European Union wants to prosper in the future.

Regarding human capital accumulated at school, a number of rigorous studies show that a good governance framework of the school system and effective teachers are important for achieving high levels of skills among students. However, continuing structural and technological change of the economies clearly asks for skill adaptations and a process of lifelong learning after school. This puts the focus on policies that ensure that skills are effectively retained and used. Furthermore, skills also accumulate by regularly practicing them. This learning by doing seems to develop skills at a faster rate when there is substantial novelty and challenge in the scope of everyday activities undertaken by employees. An economy which has its production composed of intellectually complex activities also appears to grow faster. In fact, more than half of the real per capita income growth in the United States over the period 1980–2010 resulted from an increased complexity of jobs, while just about one-third came from growth in average years of schooling.

Published: 2015

Available at (open access):

http://www.lllightineurope.com/fileadmin/lllightineurope/download/LLLight_Macroeconomic_Growth_and_LLL_thematicreport_TR6_20150922.pdf.

2.9 Publications in 2016

Title:

Barrett, G. & Riddell, W.C. (2016). *Ageing and Literacy Skills*. OECD Education Working Papers No. 145. Paris: OECD Publishing. Retrieved December 17, 2017, from http://www.oecd-ilibrary.org/education/ageing-and-literacy-skills_5jlpd2twps1-en;jsessionid=2oovui43hr7ev.x-oecd-live-02

Abstract:

This paper examines the relationship between age and literacy using data from the International Adult Literacy Survey (IALS), the Adult Literacy and Life Skills Survey (ALL) and The Survey of Adult Skills, a product of the OECD Programme for the International Assessment of Adult Competencies (PIAAC). A negative partial relationship between literacy and age exists with literacy declining with age, especially after age 45. However, this relationship could reflect some combination of age and birth cohort effects. The analysis shows that in most participating countries the negative literacy-age profile observed in cross-sectional data arises from offsetting ageing and cohort effects. With some exceptions, more recent birth cohorts have lower levels of literacy and individuals from a given birth cohort lose literacy skills after they leave school at a rate greater than indicated by cross-sectional estimates. The results for birth cohort suggest that there is not a general tendency for literacy skills to decline from one generation to the next, but that the majority of the countries examined are doing a poorer job of developing literacy skills in successive generations.

Published: October 26, 2016

Available at (open access): http://www.oecd-ilibrary.org/education/ageing-and-literacy-skills_5jlpd2twps1-en;jsessionid=2oovui43hr7ev.x-oecd-live-02

Title:

Blossfeld, P. N., Blossfeld, G. J., & Blossfeld, H.-P. (2016). Changes in educational inequality in cross-national perspective. In M. J. Shanahan, J. T. Mortimer, & M. K. Johnson (Eds.), *Handbook of the life course* (Vol. II). New York: Springer.

Abstract:

In the process of educational expansion and reforms, the old sharp divisions between academic and vocational/technical tracks in the secondary school systems of modern societies have greatly diminished and the proportion of young people who have completed at least upper secondary education has risen impressively. Also, the enrollment in higher education has quickly grown in all modern countries and turned their tertiary educational systems into institutions of mass education. Using truly comparative data from the PIAAC study, we analyze how the educational attainment of men and women from families with different educational backgrounds has changed over time in 22 modern societies. The results show that there are great cross-national differences in the development of inequality of educational opportunity.

Published: 2016

Available at: https://link.springer.com/chapter/10.1007/978-3-319-20880-0_10

Title:

Brandt, N., & Sicari, P. (2016). *The skills of polish emigrants: Evidence from PIAAC*. OECD Economics Department Working Papers No. 1332. Paris: OECD Publishing.

Abstract:

Based on the OECD data from the Survey of Adult Skills (PIAAC) this paper sheds light on the skills of migrants. In line with earlier research the data show that migrants from Poland are more likely to have a tertiary degree than peers at home, but they often work in elementary professions abroad that do not match these high qualifications. This may well be at least partly a language issue, as migrants from Poland resemble migrants from other low-income countries in that their numeracy and literacy skills in the language of their host country is markedly lower than the average across all PIAAC participants, migrants or not. This gap is smaller, though, when looking only at migrants who report having been tested in a language that they use often and master well. The data reveal an interesting difference with migrants from higher-income countries, as their test results do not differ from the average, although they face the same language issues as other migrants. The reason may well be that only migrants from low-income countries can hope to earn higher wages abroad even if they work in low-skill professions, while migrants from higher-income countries need to master the language of their host country to do well. In fact, Polish migrants earn higher wages than their peers who stayed at home, even though they are particularly often overqualified.

Published: October 11, 2016

Available at (open access): http://www.oecd-ilibrary.org/economics/the-skills-of-polish-emigrants_5jlpq7tg3hxs-en

Title:

Chudy, S., & Vicherková, D. (2016). Application of selected outcomes from PISA and PIAAC researches to Czech curriculum and reading education. *Universal Journal of Educational Research*, 4(9), 2002-2010. doi:10.13189/ujer.2016.040910

This article deals with problematic fields which influence the level of reading strategies of fifteen to nineteen years old pupils (e.g. selected productive learning activities, work with diverse types of texts and information sources etc.). Moreover, the paper provides information about efficiency testing of pupils in selected reading strategies during entrance examination to high school and high school graduation exams. What is the connection between the trends in the Czech and foreign curriculum based upon the PISA and PIAAC outcome application? The aim of this paper is the reflection and analysis of key issues of the functional reading literacy, the methods employed were: content analysis of a selected part of the Czech curriculum, outcome comparison of international reading literacy researches PISA and PIAAC, reflection and analysis of approaches to test tasks for entrance examination to high school. This paper points out the complexity of curricular system, i.e. interdependence of primary, secondary and lifelong reading education.

Published: 2016

Available at: <https://files.eric.ed.gov/fulltext/EJ1113884.pdf>

Title:

Cincinnati, S., De Wever, B., Van Keer, H., & Valcke, M. (2016). The influence of social background on participation in adult education: Applying the cultural capital framework. *Adult Education Quarterly*, 66(2), 143-168. doi:10.1177/0741713615626714

Abstract:

In this article, we address the issue of participation in adult education building on the cultural capital framework. This theoretical framework suggests that (educational) practices are affected by one's social background and, more precisely, by the cultural resources handed down in the family context. To examine the validity of this theoretical framework, we build on data from the Programme for the International Assessment of Adult Competencies from 23 countries ($n = 120,789$). The Programme data allow using the variables parents' educational level (a proxy for social background), educational attainment, and readiness to learn as precursors of participation in adult education (both a proxy for cultural capital). Our findings suggest that the cultural capital framework is not fully suited to explain participation in adult education: Although social background has an (indirect) influence on participation, its effect does not concur with theoretical predictions, that is, mediated by the readiness to learn.

Published: 2016

Available at:

<http://journals.sagepub.com/doi/10.1177/0741713615626714#articlePermissionsContainer>

Title:

Coben, D., Miller-Reilly, B., Satherley, P., & Earle, D. (2016). Making the most of PIAAC: Preliminary investigation of adults' numeracy practices through secondary analysis of the PIAAC dataset. *Adults Learning Mathematics: An International Journal*, 11(2), 27-40.

Abstract:

The Programme for the International Assessment of Adult Competencies (PIAAC) assesses key information processing skills and collects information on how often people undertake a range of activities at work and in everyday life. We are exploring what secondary analysis of online anonymised PIAAC data can tell us about adults' numeracy practices. In the process we review the accessibility and user-friendliness of the data for novice researchers and practitioners in the hope of encouraging them to explore this rich resource and give a brief account of our experience of the process of accessing publicly-available PIAAC data for secondary analysis.

Published: 2016

Available at: <https://researchcommons.waikato.ac.nz/handle/10289/11408>

Title:

Danner, D., Blasius, J., Breyer, B., Eifler, S., Menold, N., Paulhus, D. L., Rammstedt, B., Roberts, R.D., Schmitt, M. & Ziegler, M. (2016). Current challenges, new developments, and future directions in scale construction. *European Journal of Psychological Assessment*, 32, 175-180.

Abstract:

Measurement instruments are the foundation for empirical research in the social sciences. Instruments are necessary for measuring latent constructs such as cognitive and non-cognitive skills in the Pro-

gramme for the International Assessment of Adult Competencies (PIAAC), personality characteristics in studies such as the International Social Survey Program (ISSP), or attitudes in international studies such as the European Social Survey (ESS). Measurement instruments also allow researchers, practitioners, and policy makers to describe individuals, groups, or societies, to assess patients in clinical settings, or to select, classify, or assist in the remediation of workers and students. Many policy, research, and applied decisions depend on measurement instruments and the quality of these decisions depends on the quality of the instruments, which is closely entwined with the scale development process (Ziegler, 2014). The aim of this editorial is to describe challenges and new developments in scale construction and discuss how they can facilitate the quality of measurement instruments.

Published: 2016

Available at: <https://doi.org/10.1027/1015-5759/a000375>

Title:

de la Rica, S., & Gortazar, L. (2016). *Differences in job de-routinization in OECD countries: Evidence from PIAAC*. IZA Discussion Papers No. 9736. Bonn: Forschungsinstitut zur Zukunft der Arbeit (IZA). Retrieved December 17, 2017, from <https://ideas.repec.org/p/iza/izadps/dp9736.html>

Abstract:

The aim of the paper is threefold. First, we compute differences on the degree of de-routinization of job contents across a harmonized and hence comparable sample of Anglo-Saxon, many European and even Asian advanced countries. We do so by using very precise information on job contents at the worker level, which allows for job task heterogeneity within occupations. Second we assess the extent to which computer adoption leads to the observed difference in the degree of de-routinization of job contents. Third, we test whether higher degrees of technology adoption are associated to higher wage inequality. Our results show remarkable differences in the degree of de-routinization of job contents across countries, being computer adoption at work a key significant driver of such differences. In particular, ICT use at work explains 13.4% (6.3%) of the cross-country unconditional (conditional) differences in de-routinization of job contents. Regarding the impact of adoption technology on wage inequality, our results indicate that although differences in ICT adoption explain an important and significant part of wage differentials, the effect is homogeneous for all the wage distribution, implying that we cannot find a significant association between wage inequality and technology adoption.

Published: 2016

Available at (open access): <https://ideas.repec.org/p/iza/izadps/dp9736.html>

Title:

Desjardins, R., Melo, V., & Lee, J. (2016). Cross-national patterns of participation in adult education and policy trends in Korea, Norway, and Vietnam. *Prospects: Quarterly Review of Comparative Education*, 46(1), 149-170.

Abstract:

Using comparative data, this article examines the level and distribution of participation in adult education (AE) opportunities among countries that participated in PIAAC (Programme for the International Assessment of Adult Competencies). It considers observed cross-country patterns in relation to some mechanisms that drive unequal chances to participate and to some policy issues that surround the

provision, governance, and financing of different types of adult learning. It also explores recent policy developments relevant to AE in three selected countries (Korea, Norway, and Vietnam).

Published: 2016

Available at: <https://link.springer.com/article/10.1007%2Fs11125-016-9384-3>

Title:

Evans, J. (2016). What to look for in PIAAC results. In K. Yasukawa, & S. Black (Eds.), *Beyond Economic Interests. International Issues in Adult Education* (pp. 41-58). Rotterdam: SensePublishers.

Abstract:

In October 2013, results from the Organisation for Economic Co-operation and Development (OECD) sponsored Programme for the International Assessment of Adult Competencies (PIAAC) for 24 participating countries (mostly in Europe, but also including North America, the Far East, and Australia) became available. As the successor to the International Adult Literacy Survey (IALS) in the 1990s and the Adult Literacy and Lifeskills (ALL) survey in the 2000s, PIAAC aims to provide information as an international comparative survey. In this chapter, I focus on how to understand these studies, by considering conceptual issues, methodological aspects (research design and execution), and presentation of results. I also discuss the types of results from Australia made available in October 2013, as well as preliminary results released by the Australian Bureau of Statistics (ABS) earlier in that year (ABS, 2013a, 2013b). The chapter aims to air questions concerning the relevance of these survey results to literacy and numeracy researchers and practitioners, and the types of further research possibly needed, in different national and local contexts. [Source: From the preface]

Published: 2016

Available at: https://link.springer.com/chapter/10.1007%2F978-94-6300-444-2_3

Title:

Falck, O., Heimisch, A., & Wiederhold, S. (2016). *Returns to ICT skills*. OECD Education Working Papers No. 134. Paris: OECD Publishing. Retrieved December 17, 2017, from http://www.oecd-ilibrary.org/education/returns-to-itc-skills_5j1zfl2p5rzq-en

Abstract:

How important is mastering information and communication technologies (ICT) in modern labour markets? We present the first evidence on this question, drawing on unique data that provide internationally comparable information on ICT skills in 19 countries from the OECD Programme for the International Assessment of Adult Competencies (PIAAC). Our identification strategy relies on the idea that Internet access is important in the formation of ICT skills, and we implement instrumental-variable models that leverage exogenous variation in Internet availability across countries and across German municipalities. ICT skills are substantially rewarded in the labour market: returns are at 8% for a one standard-deviation increase in ICT skills in the international analysis and are almost twice as large in Germany. Placebo estimations show that exogenous Internet availability cannot explain numeracy or literacy skills, suggesting that our identifying variation is independent of a person's general ability. Our results further suggest that the proliferation of computers complements workers in executing abstract tasks that require ICT skills.

Published: May 05, 2016

Available at (open access): http://www.oecd-ilibrary.org/education/returns-to-itc-skills_5jlzfl2p5rzc-en

Title:

Feinberg, I., Frijters, J., Johnson-Lawrence, V., Greenberg, D., Nightingale, E., & Moodie, C. (2016). Examining associations between health information seeking behavior and adult education status in the US: An analysis of the 2012 PIAAC data. *Plos One*, 11(2), 20. doi:10.1371/journal.pone.0148751

Abstract:

This paper presents data from the Program for the International Assessment of Adult Competencies with a focus on the interrelationships among health information seeking behavior (HISB), and health status or use of preventive health measures for U.S. adults both with and without a high school diploma. Key results of ordinal and binary logistic regression analyses indicated that, after controlling for demographic factors, (1) adults with a high school diploma use more text-based health information sources while adults without a high school diploma use more oral sources, (2) using the Internet as a source of health information is more strongly related to reporting excellent/very good health status than having a high school diploma, (3) those without a high school diploma who use the Internet report the largest increase in health status over any other health information source, and (4) for those with learning disability or vision problem, a high facility in reading English is an important predictor of whether the Internet is used as a health information source. The Internet appears to play a key role in both enhancing health status and enabling use of preventive measures for those with and without a high school diploma; although, individuals without a high school diploma who use the Internet for health information derive substantial benefit in health status.

Published: February 16, 2016

Available at (open access): <http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0148751>

Title:

Forster, A. G., Bol, T., & van de Werfhorst, H.G. (2016). Vocational education and employment over the life cycle. *Sociological Science*, 3, 473-494. doi:10.15195/v3.a21

Abstract:

Vocationally educated individuals often find employment sooner after school than those with a general educational qualification. A recent study has argued that the higher employment probability associated with a vocational qualification reverses in later life. The main explanation is that although having (occupation-)specific skills is an advantage when entering the labor market, specific skills also make the vocationally educated less flexible. This life cycle effect is hypothesized to be especially strong in countries where the vocational system provides highly occupation-specific skills. We test these two hypotheses on cross-national data from PIAAC 2012. Using logistic regressions with country fixed effects, we find that individuals with a vocational qualification have a higher employment probability than those with a general qualification at the start of their career, but this pattern reverses in later life. In contrast to earlier findings, we do not find that this effect varies systematically across countries with different vocational educational systems.

Published: 2016

Available at: <https://www.sociologicalscience.com/articles-v3-21-473/>

Title:

Goldhammer, F., Martens, T., Christoph, G., & Lüdtke, O. (2016). *Test-taking engagement in PIAAC*. OECD Education Working Papers No. 133. Paris: OECD Publishing. Retrieved December 17, 2017, from http://www.oecd-ilibrary.org/education/test-taking-engagement-in-piaac_5j1zfl6fhxs2-en

Abstract:

In this study, we investigated how empirical indicators of test-taking engagement can be defined, empirically validated, and used to describe group differences in the context of the Programme of International Assessment of Adult Competences (PIAAC). The approach was to distinguish between disengaged and engaged response behavior by means of response time thresholds. Constant thresholds of 3000 ms and 5000 ms were considered, as well as item-specific thresholds based on the visual inspection of (bimodal) response time distributions (VI method) and the proportion correct conditional on response time (P+>0% method). Overall, the validity checks comparing the proportion correct of engaged and disengaged response behavior by domain and by item showed that the P+>0% method performed slightly better than the VI method and the methods assuming constant thresholds. The results for Literacy and Numeracy by module revealed that there was an increase from Module 1 to Module 2 in the proportion of disengaged responses, suggesting a drop in test-taking engagement. The investigation of country differences in test-taking engagement by domain using the P+>0% method showed that the proportion of responses classified as disengaged was quite low. For Literacy, the proportion was well below 5% for the majority of countries; in Numeracy, the proportion was even smaller than 1% for almost all countries; while for Problem solving, the proportion of disengaged responses was more than 5% but usually well below 10%. There were significant differences in test-taking engagement between countries; the obtained effect sizes were small to medium. Population differences in test-taking engagement were highly correlated between the three domains, suggesting that test-taking engagement can be conceived as a consistent characteristic. Furthermore, there was a clear negative association between test-taking disengagement and proficiency in Literacy, Numeracy and Problem solving, respectively. Finally, subgroup differences for gender, age, educational attainment, and language proved to be insignificant or very small. Results suggest that males tend to be more disengaged, that disengagement increases with age in Problem solving, with lower educational attainment and when the test language is not the same as a testee's native language.

Published: May 05, 2016

Available at (open access): http://www.oecd-ilibrary.org/education/test-taking-engagement-in-piaac_5j1zfl6fhxs2-en

Title:

Golsteyn, B. H. H., Vermeulen, S., & de Wolf, I. (2016). Teacher literacy and numeracy skills: International evidence from PIAAC and ALL. *De Economist*, 1-25. doi:10.1007/s10645-016-9284-1

Abstract:

Using the OECD-studies PIAAC and ALL, this paper shows that teachers on average have better literacy and numeracy skills than other respondents in almost all of the 15 countries in the samples. In most countries, teachers outperform others in the bottom percentiles, while in some countries they perform better than others throughout the skill distribution. These results imply that the scope to improve teachers' skills varies between countries and that policy makers should take the shape of the skills distribution into account when designing interventions in order to most efficiently raise teachers' skills.

Published: 2016

Available at (open access): <https://link.springer.com/article/10.1007/s10645-016-9284-1>

Title:

Gorges, J., Maehler, D. B., Koch, T., & Offerhaus, J. (2016). Who likes to learn new things: Measuring adult motivation to learn with PIAAC data from 21 countries. *Large-scale Assessments in Education*, 4(1), 1-22. doi:10.1186/s40536-016-0024-4

Abstract:

Background: Despite the importance of lifelong learning as a key to individual and societal prosperity, we know little about adult motivation to engage in learning across the lifespan. Building on educational psychological approaches, this article presents a measure of Motivation-to-Learn using four items from the background questionnaire of the Programme for the International Assessment of Adult Competencies (PIAAC).

Methods: We used multiple-group confirmatory factor analyses for ordered categorical data to investigate the scale's dimensionality and measurement invariance across countries. Regression analyses were used to investigate the scale's criterion validity.

Results: Results show that the proposed four-item scale fits the data considerably better than the original six-item scale labeled Readiness-to-Learn. Further analyses support the scale's configural, metric (weak) and partial scalar (strong) measurement invariance across 21 countries. As expected, Motivation-to-Learn has significant relations to the working population's engagement in learning in terms of participation in non-formal education over the last 12 months. These relations remain relevant after taking literacy as an indicator of level of education into account.

Conclusion: The Motivation-to-Learn scale presented here may be used to indicate adult motivation in cross-country comparisons. The potential of using the scale in future PIAAC analyses and research on adult learning is discussed.

Published: 2016

Available at (open access): <https://link.springer.com/article/10.1186/s40536-016-0024-4>

Title:

Green, F., & Henseke, G. (2016). Should governments of OECD countries worry about graduate underemployment? *Oxford Review of Economic Policy*, 32(4), 514-537.

Abstract:

To assess potential public concerns, this paper examines theory and evidence surrounding graduate educational underemployment (overeducation) in this era of mass higher education. Using a new, validated, index of graduate jobs, we find that the prevalence of graduate underemployment across 21 countries is correlated with the aggregate supply-demand imbalance, but not with indicators of labour market flexibility. Underemployment's association with lower job satisfaction and pay is widespread. Yet in most countries there are external benefits (social trust, volunteering, and political efficacy) associated with higher education, even for those who are underemployed. Taken together with existing studies we find that, in this era of mass higher education participation, under-employment is a useful indicator of the extent of macroeconomic disequilibrium in the graduate labour market. We

conclude that governments should monitor graduate underemployment, but that higher education policy should be based on social returns and should recall higher education's wider purposes.

Published: October 13, 2016

Available at: <https://academic.oup.com/oxrep/article/32/4/514/2236182>

Title:

Grotlüschen, A. (2016). Literacy level I and below versus literacy level IV and above. *Zeitschrift für Weiterbildungsforschung-Report*, 39(2), 255-270.

Abstract:

Literacy as specified in the recent PIAAC survey (OECD 2013) is separated into competence levels. This allows a comparison of adults performing on literacy Level I and below versus those performing on Level IV and above. The PIAAC survey also contains variables on participation in adult education. Core findings confirm the Matthew effect for participation rates, but not for training hours.

Published: September 2016

Available at: <https://link.springer.com/article/10.1007/s40955-016-0068-7>

Title:

Grotlüschen, A., Mallows, D., Reder, S., & Sabatini, J. (2016). *Adults with low proficiency in literacy or numeracy*. OECD Education Working Papers No. 131. Paris: OECD Publishing. Retrieved December 17, 2017, from http://www.oecd-ilibrary.org/education/adults-with-low-proficiency-in-literacy-or-numeracy_5jm0v44bnmxx-en

Abstract:

This paper offers a comprehensive analysis of the information from the Survey of Adult Skills (PIAAC) regarding adults with low literacy and numeracy proficiency. The paper first describes the demographic and socio-economic characteristics of these populations. Although, they are more likely than the rest of the population to exhibit certain characteristics, such as lower levels of educational attainment, lower rates of unemployment or more disadvantaged backgrounds, adults with low literacy are found in among all socio-demographic groups and in all walks of life. The paper then explores the frequency with which adults with low proficiency engage in the reading, writing and numeracy practices and the relationship between these practices and a range of social and economic outcomes. For most outcomes, levels of engagement in literacy practices appear to be as strong predictors as proficiency, indicating the importance of encouraging more intense use of these skills both in and outside of work. The unique data from the Survey of Adult Skills regarding performance on the simple reading tasks (the so called "reading components") is also analysed. Adults with low proficiency are found to be able to easily recognise commonly used words in printed form but often have difficulty with processing the logic of sentences and reading extended passages for basic meaning. Adults with low proficiency are considerably less likely than their more proficient peers to participate in formal or non-formal adult education or training programmes, which is mostly due to the socio-demographic and employment characteristics of this population. However, the lower participation rates among the low proficient adults does not appear to be a consequence of their lack of motivation as much as of the presence of various obstacles to participation, such as lack of time and the cost of training.

Published: April 14, 2016

Available at (open access): http://www.oecd-ilibrary.org/education/adults-with-low-proficiency-in-literacy-or-numeracy_5jm0v44bnmxx-en

Title:

Gustafsson, J. E. (2016). Lasting effects of quality of schooling: Evidence from PISA and PIAAC. *Intelligence*, 57, 66-72. doi:10.1016/j.intell.2016.05.004

Abstract:

The aim was to investigate to what extent quality of compulsory schooling is reflected in adult literacy and numeracy performance levels. Data from five administrations of the PISA survey between 2000 and 2012 for 20 countries were analyzed, along with data from corresponding age cohorts for the same set of countries participating in the cross-sectional PIAAC survey. For each country the PISA data was used to estimate linear achievement trends for literacy, numeracy and science to indicate change in quality of schooling and for the PIAAC data mean differences were computed between a younger and an older age group. The PIAAC performance differences were strongly related to the PISA achievement trends ($r = 0.70$), and relations held up when controls were introduced for level of education attained ($\beta = 0.55$) and for general social and cultural development of the country ($\beta = 0.48$). It is concluded that quality of schooling has lasting impact on adult literacy and numeracy performance levels.

Published: 2016

Available at: <http://www.sciencedirect.com/science/article/pii/S0160289616300393>

Title:

Hampf, F., & Woessmann, L. (2016). *Vocational vs. general education and employment over the life-cycle: New evidence from PIAAC*. CESifo Working Paper No. 6116. Munich: CESifo Group Munich. Retrieved December 17, 2017, from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2871126

Abstract:

It has been argued that vocational education facilitates the school-to-work transition but reduces later adaptability to changing environments. Using the recent international PIAAC data, we confirm such a trade-off over the life-cycle in a difference-in-differences model that compares employment rates across education type and age. An initial employment advantage of individuals with vocational compared to general education turns into a disadvantage later in life. Results are strongest in apprenticeship countries that provide the highest intensity of industry-based vocational education.

Published: 2016

Available at (open access): https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2871126

Title:

He, J. & Van de Vijver, F. J. R. (2016). Response styles in factual items: Personal, contextual and cultural correlates. *International Journal of Psychology*, 51(6), 445-452. doi:10.1002/ijop.12263

Abstract:

This study investigated response styles in factual items and explored their associations with personal, contextual and cultural factors. Responses on various factual questions, cognitive tests and interviewers' observational data from a total of 152,514 respondents in 22 countries in the Programme for the International Assessment of Adult Competencies (PIAAC) were analysed. Indexes of extreme, midpoint and acquiescent response styles were extracted from Likert-scale and dichotomous responses of factual items. A general response style (GRS) with a positive loading of extreme response style and negative loadings of midpoint and acquiescent response styles was confirmed. This factor showed a similar cross-cultural patterning as another general factor from attitudinal and self-evaluative items of Likert scales in a previous study, which indicated the pervasiveness of response styles irrespective of types of survey items. In a multilevel analysis, the individual-level GRS was found to be negatively related to being male, educational level and literacy competency, and positively related to 3rd-person presence and background noise, and at country level negatively associated with socioeconomic development. Cross-level interactions were also found. Implications on the pervasiveness and nature of response styles are discussed.

Published: February 21, 2016

Available at: <http://onlinelibrary.wiley.com/doi/10.1002/ijop.12263/abstract>

Title:

Henseke, G. & Green, F. (2016). *"Graduate Jobs" in OECD countries*. OECD Education Working Papers No. 144. Paris: OECD Publishing.

Abstract:

A recurring issue for education policy-makers is the labour market effect of the long-term global mass expansion of higher education, particularly on what is a "graduate job". The traditional assumption is that graduate jobs are virtually coterminous with professional and managerial occupations. A new indicator of graduate jobs, termed ISCO(HE)2008, is derived using task-based data drawn from the The Survey of Adult Skills, a product of the OECD Programme for the International Assessment of Adult Competencies (PIAAC). The new classification shows that several jobs in ISCO major group 3 "Technicians and Associate Professionals" are also classed as graduate jobs in many countries. Altogether, 27.6% of jobs are classified as graduate jobs in the 15 OECD country-regions for which we have data. Considerable variation in the proportion of graduate jobs is found across industries and countries and in the short period from 2011 to 2013, the proportion of graduate jobs has become more diverse across countries.

Published: October 26, 2016

Available at (open access): http://www.oecd-ilibrary.org/education/graduate-jobs-in-oecd-countries_5jlphd30vdr0-en;jsessionid=2oovui43hr7ev.x-oecd-live-02

Title:

Jimeno, J. F., Lacuesta, A., Martínez-Matute, M. & Villanueva E. (2016). *Education, Labour Market Experience and Cognitive Skills*. OECD Education Working Paper No. 146. Paris: OECD Publishing. Retrieved October 27, 2017, from http://www.oecd-ilibrary.org/education/education-labour-market-experience-and-cognitive-skills_5jlphd2qj19n-en;jsessionid=2oovui43hr7ev.x-oecd-live-02

Abstract:

This paper examines how formal education and experience in the labour market correlate with measures of human capital available in The Survey of Adult Skills, a product of the OECD Programme for the International Assessment of Adult Competencies (PIAAC). The findings are consistent with the notion that, in producing human capital, work experience substitutes formal education at the bottom of the schooling distribution. First, the number of years of working experience correlates with literacy proficiency only among low-educated individuals. Secondly, low-educated workers who only perform simple tasks on their jobs (calculating percentages or reading emails) do better in numeracy and literacy tests than similar employees who did not perform those tasks. Thirdly, workers in jobs intensive in numeric tasks perform relatively better in the numeracy section of the PIAAC test than in the literacy part. Overall, our results suggest that the contribution of on-the-job learning to skill formation is about a third of that of compulsory schooling in most of the countries that participated in PIAAC.

Published: October 26, 2016

Available at (open access): http://www.oecd-ilibrary.org/education/education-labour-market-experience-and-cognitive-skills_5jlphd2qj19n-en;jsessionid=2oovui43hr7ev.x-oecd-live-02

Title:

Kena, G., Hussar W., McFarland J., de Brey C., Musu-Gillette, L., Wang, X., Zhang, J., Rathbun, A., Wilkinson-Flicker, S., Diliberti M., Barmer, A., Bullock Mann, F., & Dunlop Velez, E. (2016). *The Condition of Education 2016* (NCES 2016-144). U.S. Department of Education, National Center for Education Statistics. Washington, DC. Retrieved October 27, 2017, from <https://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2016144>

Abstract:

NCES has a mandate to report to Congress on the condition of education by June 1 of each year. The Condition of Education 2016 summarizes important developments and trends in education using the latest available data. The 2016 report presents 43 key indicators on the status and condition of education and are grouped under four main areas: (1) population characteristics, (2) participation in education, (3) elementary and secondary education, and (4) postsecondary education. Also included in the report are 3 Spotlight indicators that provide a more in-depth look at some of the data.

Published: 2016

Available at (open access): <https://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2016144>

Title:

Lane, M., & Conlon, G. (2016). *The impact of literacy, numeracy and computer skills on earnings and employment outcomes*. OECD Education Working Papers No. 129. Paris: OECD Publishing. Retrieved December 17, 2017, from http://www.oecd-ilibrary.org/education/the-impact-of-literacy-numeracy-and-computer-skills-on-earnings-and-employment-outcomes_5jm2cv4t4gzs-en

Abstract:

Using the 2012 PIAAC data, our analysis confirms that there are significantly higher earnings and employment returns to "both" increasing levels of formally recognised education, and to increasing levels of numeracy, literacy and information and communication technologies (ICT) skills proficiencies controlling for the level of education. Unsurprisingly, the labour market returns to changes in formally

recognised levels of education in general exceed the labour market returns associated with increasing levels of skills proficiency. In the case of literacy and numeracy proficiencies, improved literacy and numeracy skills narrow the labour market outcomes gap between individuals with different levels of formally recognised education, but do not close it completely. The analysis demonstrates more substantial returns to ICT skills. Furthermore, possession of higher levels of ICT skills and lower levels of formally recognised qualification are often associated with higher returns compared to individuals with higher levels of formally recognised education but lower ICT proficiency levels. In other words, ICT skills proficiencies often entirely compensate for lower formally recognised qualifications in the labour market. Contains the following annexes: (1) Country Literacy and Numeracy Profiles; and (2) Demographic Control Variables.

Published: March 21, 2016

Available at (open access): http://www.oecd-ilibrary.org/education/the-impact-of-literacy-numeracy-and-computer-skills-on-earnings-and-employment-outcomes_5jm2cv4t4gzs-en

Title:

Li, T., von Davier, M., & Hancock, G. R. (2016). *The prediction of labor force status: Implications from international adult skill assessments*. Research Report. ETS Research Report Series. doi:10.1002/ets2.12097

Abstract:

This report investigates the prediction of labor force status using observed variables, such as gender, age, and immigrant status, and more importantly, measured skill variables, including literacy proficiency and a categorical rating of educational attainment based on the 1994 International Adult Literacy Survey (IALS), the 2003 Adult Literacy and Life Skills Survey (ALL), and the 2011 Programme for the International Assessment of Adult Competencies (PIAAC) projects. We explored the regression relations in the past two decades for six trend countries and subnational regions that provide data for all assessments: the United States, Norway, the Netherlands, Italy, Canada's English-speaking region, and Canada's French-speaking region. Probit regression models with latent predictors were used in this cross-sectional study to investigate how those variables are structurally related to labor market outcomes. Results show the importance of literacy proficiency and education in determining individuals' labor force status across countries/regions, but with key differences among these countries/regions.

Published: 2016

Available at (open access): <http://onlinelibrary.wiley.com/doi/10.1002/ets2.12097/epdf>

Title:

Lind, P., & Mellander, E. (2016). *Relations between immigration and adult skills: findings based on PIAAC*. Working Paper No. 21. Uppsala: Institute for Evaluation of Labour Market and Education Policy.

Abstract:

The international survey of adult skills, PIAAC, records large differences in numeracy and literacy skills between immigrants and non-immigrants. We examine how these differences relate to the countries' average skills and skill rankings. Immigrants are defined by country of birth or in terms of languages spoken. For almost all countries, the differences in average skills between non-immigrants and the country's entire population are significant but small. Regarding skill rankings significant differences

are found only for Sweden and these are found to be sensitive to the treatment of individuals that could not conduct the skill tests due to language difficulties.

Published: 2016

Available at: <https://www.econstor.eu/bitstream/10419/166022/1/880232609.pdf>

Title:

Lundetræ, K., & Gabrielsen, E. (2016). Relationship between literacy skills and self-reported health in the Nordic countries. *Scandinavian Journal Of Public Health*, 44(8), 758-764. doi:10.1177/1403494816668082

Abstract:

Aims: This study investigated the association between literacy skills and self-reported health among Danish ($n = 7284$), Finnish ($n = 5454$), Norwegian ($n = 4942$) and Swedish ($n = 4555$) participants aged 16–65 years.

Methods: Logistic regression models were used to assess the association between literacy skills and self-reported health after adjusting for sex, age and educational level.

Results: Nordic participants aged 16–65 years with literacy skills at the lowest level reported sub-optimal health more often (28–37%) than those with literacy skills at the highest level (7–9%). After adjusting for sex, age and educational level, the likelihood of reporting sub-optimal health was 1.99–3.24 times as high for those with literacy skills at the lowest level as for those with literacy skills at the highest level.

Conclusions: These results suggest that poor literacy skills increase the likelihood of experiencing poor health in the Nordic countries, even after controlling for educational level.

Published: 2016

Available at: <http://journals.sagepub.com/doi/10.1177/1403494816668082>

Title:

Marcolin, L., Miroudot, S., & Squicciarini, M. (2016). *The routine content of occupations: new cross-country measures based on PIAAC*. OECD Trade Policy Papers No. 188, OECD Publishing, Paris.

Abstract:

This work proposes a novel measure of the routine content of occupations, called the Routine Intensity Indicator (RII), built on data from the OECD Programme for the International Assessment of Adult Competencies (PIAAC) survey. The RII uses information about the extent to which workers can modify the sequence of their tasks and decide the type of tasks to be performed on the job. Based on median RII values of individuals in 3-digit occupations across 20 OECD countries, jobs are grouped into quartiles of routine-intensity. On average, in 2012, 46% of employed persons worked in non-routine (18%) or low (28%) routine intensive occupations, with the distribution differing significantly across countries. The relationship between the routine content of occupations and the skills of the workforce is also investigated. While a negative correlation does emerge between skill content and routine intensity – i.e. more routine-intensive occupations tend to be associated with lower skills – this relationship is not necessarily very strong.

Published: April 21, 2016

Available at: http://www.oecd-ilibrary.org/trade/the-routine-content-of-occupations_5jm0mq86fljg-en

Title:

O'Keeffe, C. (2016). Producing data through E-Assessment: A trace ethnographic investigation into E-Assessment events. *European Educational Research Journal*, 15(1), 99-116. doi:10.1177/1474904115612486

Abstract:

In this paper, I examine the role of human and digital actants in various material and spatial configurations during the Programme for the International Assessment of Adult Competencies (PIAAC) e-assessment events. It reports on an investigation into how data are produced and subsequently fed into statistical models that in turn produce analyses of skills in "centres of calculation". These data are then used to produce reports, scientific papers, marketing documents and visualizations that profoundly affect how we understand concepts such as literacy or skill. Drawing upon the theoretical resources of Actor Network Theory, this investigation employs a new and innovative methodology, trace ethnography, to follow the distributed agency of hypermobile digital actants. I examine the detail of e-assessment events and interactions between coded technologies and people and how these are translated into statements about what it means to be literate. This, in turn, highlights the role of non-governmental organizations in influencing educational and economic policy-making through the intensification of data production.

Published: January 2016

Available at: <http://journals.sagepub.com/doi/10.1177/1474904115612486>

Title:

Organisation for Economic Co-operation and Development (OECD). (2016). *Skills matter: Further results from the Survey of Adult Skills*. Paris: OECD Publishing. Retrieved October 20, 2017, from http://www.oecd-ilibrary.org/education/skills-matter_9789264258051-en

Abstract:

In the wake of the technological revolution that began in the last decades of the 20th century, labour market demand for information-processing and other high-level cognitive and interpersonal skills is growing substantially. The Survey of Adult Skills, a product of the OECD Programme for the International Assessment of Adult Competencies (PIAAC), was designed to provide insights into the availability of some of these key skills in society and how they are used at work and at home. The first survey of its kind, it directly measures proficiency in several information-processing skills – namely literacy, numeracy and problem solving in technology-rich environments.

This volume reports results from the 24 countries and regions that participated in the first round of the survey in 2011-12 (first published in *OECD Skills Outlook 2013: First Results from the Survey of Adult Skills*) and from the nine additional countries that participated in the second round in 2014-15 (Chile, Greece, Indonesia [Jakarta], Israel, Lithuania, New Zealand, Singapore, Slovenia and Turkey). It describes adults' proficiency in the three information-processing skills assessed, and examines how skills proficiency is related to labour market and social outcomes. Another related report, *The Survey of Adult Skills: Reader's Companion, Second Edition*, describes the design and methodology of the survey and its relationship to other international assessments of young students and adults.

Published: June 28, 2016

Available at (open access): http://www.oecd-ilibrary.org/education/skills-matter_9789264258051-en

Title:

Organisation for Economic Co-operation and Development (OECD). (2016). *The Survey of Adult Skills – Reader's companion, Second Edition*. Paris: OECD Publishing. Retrieved October 20, 2017, from http://www.oecd-ilibrary.org/education/the-survey-of-adult-skills_9789264258075-en

Abstract:

In the wake of the technological revolution that began in the last decades of the 20th century, labour market demand for information-processing and other high-level cognitive and interpersonal skills is growing substantially. The Survey of Adult Skills, a product of the OECD Programme for the International Assessment of Adult Competencies (PIAAC), was designed to provide insights into the availability of some of these key skills in society and how they are used at work and at home. The first survey of its kind, it directly measures proficiency in several information-processing skills – namely literacy, numeracy and problem solving in technology-rich environments.

The Survey of Adult Skills: Reader's Companion, Second Edition describes the design and methodology of the survey and its relationship to other international assessments of young students and adults. It is a companion volume to *Skills Matter: Further Results from the Survey of Adult Skills*. *Skills Matter* reports results from the 24 countries and regions that participated in the first round of the survey in 2011-12 (first published in *OECD Skills Outlook 2013: First Results from the Survey of Adult Skills*) and from the nine additional countries that participated in the second round in 2014-15 (Chile, Greece, Indonesia [Jakarta], Israel, Lithuania, New Zealand, Singapore, Slovenia and Turkey).

Published: June 28, 2016

Available at (open access): http://www.oecd-ilibrary.org/education/the-survey-of-adult-skills_9789264258075-en

Title:

Organisation for Economic Co-operation and Development (OECD). (2016). *Analysing Adult Skills: Proceeding of the 2nd International PIAAC Conference*. Paris: OECD. Retrieved October 27, 2017, from <https://www.oecd.org/skills/piaac/PDF%20for%20web%20Analysing%20Adults%27%20Skills.pdf>

Abstract:

This volume collects a selection of papers from the 2nd PIAAC International conference, jointly organised by the OECD and the Dutch Government in November 2015 in Haarlem, the Netherlands. The three papers collected in this volume represent the work of scholars who were invited to present their work in the plenary session of the conference. The authors are all renowned scholars in their respective fields. Each of the papers represents an important contribution to the better understanding of issues of labor market and education policy that are at the centre of the policy concerns of many governments.

Published: 2016

Available at (open access): <https://www.oecd.org/skills/piaac/PDF%20for%20web%20Analysing%20Adults%27%20Skills.pdf>

Title:

Paccagnella, M. (2016). *Age, ageing and skills: Results from the Survey of Adult Skills*. OECD Education Working Papers No. 132. Paris: OECD Publishing. Retrieved October 20, 2017, from http://www.oecd-ilibrary.org/education/age-ageing-and-skills_5jm0q1n38lvc-en

Abstract:

This paper presents a comprehensive analysis of the link between age and proficiency in information-processing skills, based on information drawn from the Survey of Adult Skills (PIAAC). The data reveal significant age-related differences in proficiencies, strongly suggesting that proficiency tends to "naturally" decline with age. Age differences in proficiency are, at first sight, substantial. On average across the OECD countries participating in PIAAC, adults aged 55 to 65 score some 30 points less than adults aged 25 to 34 on the PIAAC literacy scale, which is only slightly smaller than the score point difference between tertiary educated and less-than-upper-secondary educated individuals. However, despite their lower levels of proficiency, older individuals do not seem to suffer in terms of labour market outcomes. In particular, they generally earn higher wages, and much of the available empirical evidence suggests that they are not less productive than younger workers. Older and more experienced individuals seem therefore able to compensate the decline in information processing skills with the development of other skills, generally much more difficult to measure. On the other hand, proficiency in information-processing skills remain a strong determinant of important outcomes at all ages: this makes it important to better understand which factors are the most effective in preventing such age-related decline in proficiency, which does not occur to the same extent in all countries and for all individuals. Two broad interventions seem to be particularly promising in this respect. First, it is important to ensure that there is adequate and effective investment in skills development early in the life-cycle: as skills beget skills, starting off with a higher stock of human capital seems also to ensure smaller rates of proficiency decline. Second, it is equally important that policies are in place that provide incentives to individuals (and firms) to invest in skills across the entire working life. In this respect, changes in retirement policies can not only have the short-term effect of providing some reliefs to public finance, but have the potential to radically reshape incentives to stay active, to practice their skills and to invest more in training, thus helping to maintain high levels of proficiency.

Published: April 22, 2016

Available at (open access): http://www.oecd-ilibrary.org/education/age-ageing-and-skills_5jm0q1n38lvc-en

Title:

Paccagnella, M. (2016). *Literacy and Numeracy Proficiency in IALS, ALL and PIAAC*. OECD Education Working Papers No. 142. Paris: OECD Publishing. Retrieved October 20, 2017, from http://www.oecd-ilibrary.org/education/literacy-and-numeracy-proficiency-in-ials-all-and-piaac_5jlpq7qglx5g-en

Abstract:

This paper analyses proficiency in literacy and numeracy in the countries that have participated in the International Adult Literacy Survey (IALS, administered between 1994 and 1998), the Adult Literacy and Life Skills Survey (ALL, administered between 2003 and 2007) and the Survey of Adult Skills (PIAAC, administered in 2012). While many countries experienced small to modest changes in literacy proficiency between IALS and PIAAC, others saw sizeable variations, mostly on the negative side. In the shorter span that separated ALL and PIAAC, numeracy proficiency clearly declined (except in Italy), while literacy moved less on average (except for the large increase registered in Italy and the large decline experienced by Norway). Changes in the composition of the population have had little impact

on observed changes in scores. Larger variations took place within different socio-demographic groups, but these tended to cancel each other out on aggregate. In particular, large variations are observed by age and levels of education. Older adults in PIAAC are generally more proficient than their IALS counterparts, probably due to the increase in educational attainments that took place over recent decades. On the contrary, tertiary-educated individuals appear to be on average less proficient than in the past, which may signal that the expansion of tertiary education has been accompanied by a decline in the average quality of university graduates (or of university instruction). There is also no evidence that the change in delivery mode, with a switch to a computer-based assessment in PIAAC, had any significant effect on performance. However, the OECD is unable to ascertain how differences in implementation and technical standards affect the comparability of the data, so that a certain degree of caution should always be exercised in interpreting these results. Amongst the countries that experienced larger changes in literacy proficiency between surveys, a close inspection of IALS data (in particular through an investigation of response patterns at the item level) highlights some anomalies in Italy and Poland (and, to a lesser extent, in England and Northern Ireland), suggesting that particular caution should be exercised in interpreting the evolution of proficiency in these countries.

Published: October 11, 2016

Available at (open access): http://www.oecd-ilibrary.org/education/literacy-and-numeracy-proficiency-in-ials-all-and-piaac_5jlpq7qglx5g-en

Title:

Palczyńska, M. & Świst, K. (2016). *Measurement properties of non-cognitive scales in the polish follow-up study on PIAAC (POSTPIAAC)*. OECD Education Working Papers No. 149. Paris: OECD Publishing. Retrieved October 20, 2017, from http://www.oecd-ilibrary.org/education/measurement-properties-of-non-cognitive-scales-in-the-polish-follow-up-study-on-piaac-postpiaac_c533e448-en

Abstract:

There is a growing literature providing evidence that not only cognitive skills but also non-cognitive skills are important for economic and social outcomes. This paper assesses the measurement properties of the Big Five and Grit scales in a large representative sample of adults in Poland. The data from the Polish Follow-up Study on the Programme for International Assessment of Adult Competencies (post-PIAAC) include longitudinal information on PIAAC respondents in Poland and additional background information not available in the international study. The results presented in this paper show that not all the criteria concerning the reliability, validity and comparability of these scales have been satisfied, though the personality measures significantly contribute to explaining the variability in policy-relevant outcomes. Most of the questions discriminate well between people possessing a high and a low level of a given trait, though reverse-worded items perform weaker. The Big Five theoretical five-factor structure was not replicated; however, a six-factor model with an additional factor loading reverse-worded items fits the data. In case of Grit, a bi-factor model, which has an equivalent interpretation to the second-order theoretical structure, holds. The scales are not fully measurement invariant. The results confirm earlier findings from the literature that differences in personality traits are clearly associated with differences in life outcomes. For most of the outcomes, the Big Five traits outperform cognitive skills in predictive power. Only educational attainment is more strongly related to cognitive skills, while for wages, the predictive power of personality and cognitive skills is similar. The paper provides recommendations for incorporating measures of personality traits into competence surveys.

Published: December 08, 2016

Available at (open access): http://www.oecd-ilibrary.org/education/measurement-properties-of-non-cognitive-scales-in-the-polish-follow-up-study-on-piaac-postpiaac_c533e448-en

Title:

Patterson, M. B., & Paulson, U. G. (2016). Adult transitions to learning in the USA: What do PIAAC survey results tell us? *Journal of Research and Practice for Adult Literacy, Secondary, and Basic Education*, 5(1), 5-27.

The Programme for the International Assessment of Adult Competencies (PIAAC) assessed literacy, numeracy, and technology-related skills of adults and found skill levels of US adults are well below the international average. In a world where advanced skills are requisite to workplace competitiveness, low skills are a danger sign. An initial PIAAC finding was that half of US adults do not complete a postsecondary degree. A question remains: do adults continue to learn purposefully--that is, either formally or non-formally--after leaving secondary settings, and how does learning relate to their education levels? A related purpose of the paper is to describe learning types that adults pursue. The paper also investigates barriers to and motivators for learning. Implications for adult educators are discussed.

Published: 2016

Available at (full text):

<https://static1.squarespace.com/static/55a158b4e4b0796a90f7c371/t/57995d789f7456dc5697a96a/1469668780681/COABE+Journal+Spring+2016.pdf>

Title:

Pena, A. A. (2016). PIAAC skills and economic inequality. *Journal of Research and Practice for Adult Literacy, Secondary, and Basic Education*, 5(2), 17-34.

Abstract:

Mixed findings characterize the literature on skills and economic distributions within and across countries. The Programme for the International Assessment of Adult Competencies (PIAAC) offers new, internationally comparable data on literacy, numeracy, and digital problem-solving skills that can be combined with wage information. This paper presents statistical analyses, aimed at quantifying the contributions of observable and unobservable contributors to earnings inequality. Substantial inequality is documented across countries and skill measures, thus reinforcing previous findings that skill, even by the broader definition used here, is only a partial explanation for differences in economic inequality across countries. The paper concludes with future research possibilities that can further understandings of inequality dynamics within and across nations. [The original version of this paper was commissioned by American Institutes for Research (AIR), funded through a contract with the National Center for Education Statistics (NCES).]

Published: 2016

Available at (open access, full text):

<https://static1.squarespace.com/static/55a158b4e4b0796a90f7c371/t/594380d2b8a79bebc4ac22e6/1497596136586/Journal+for+Web+Volume+5%2C+No+2%2C+Summer+2016.pdf>

Title:

Pokropek, A. (2016). Grade of membership response time model for detecting guessing behaviors. *Journal Of Educational And Behavioral Statistics*, 41(3), 300-325. doi:10.3102/1076998616636618

Abstract:

A response model that is able to detect guessing behaviors and produce unbiased estimates in low-stake conditions using timing information is proposed. The model is a special case of the grade of membership model in which responses are modeled as partial members of a class that is affected by motivation and a class that responds only according to the level of ability. Monte Carlo simulations were conducted to compare the proposed model with an approach that ignored guessing and an approach based on item filtering. In each simulated condition, the proposed model outperformed the other approaches by showing the lowest level of bias and the highest precision of item and persons estimates. Finally, the model was estimated using real life data from Programme for the International Assessment of Adult Competencies research (PIAAC). The results showed slight but expected corrections for the levels of proficiency in all countries.

Published: June 2016

Available at: <http://journals.sagepub.com/doi/10.3102/1076998616636618>

Title:

Prokic-Breuer, T., & McManus, P. A. (2016). Immigrant educational mismatch in Western Europe, apparent or real? *European Sociological Review*, 32(3), 411-438. doi:10.1093/esr/jcw005

Abstract:

Are immigrant workers in developed nations relegated to labour market positions that are beneath their qualification and skill level? This article uses newly available data from the Programme for the International Assessment of Adult Competencies to examine immigrant economic incorporation in 13 European nations. Our analyses show that immigrants in Europe are significantly more likely than natives to hold educational qualifications above those necessary for their job, and yet, immigrants are significantly less likely to be in jobs that underutilize their cognitive skills. Among workers in the highest cognitive proficiency levels, however, we find no differences between immigrants and natives in predicted overeducation. Therefore, the observed discrepancy between qualifications held and qualifications required for the job are more likely to indicate 'apparent' qualification mismatch rather than 'real' qualification mismatch among immigrants as compared with the native population. Based on our findings, we conclude that differences in educational quality, language proficiency, and the imperfect transferability of skills contribute to high rates of overeducation among immigrants.

Published: March 10, 2016

Available at (open access): <https://academic.oup.com/esr/article/32/3/411/2453397/Immigrant-Educational-Mismatch-in-Western-Europe>

Title:

Post, D. (2016). Adult literacy benefits? New opportunities for research into sustainable development. *International Review of Education*, 62(6), 751-770. doi:10.1007/s11159-016-9602-5

Abstract:

Understandings of "literacy" broadened after the United Nations Development Decade of the 1960s. The corresponding research into the benefits of literacy also widened its focus beyond economic growth. The effects of adult literacy and its correlates appeared diffuse with the rise of New Literacy Studies, and the scholarship on consequences seemed less essential to advocates following the rise of a human rights perspective on education. In 2016 the agenda for literacy research has returned--but at a higher level--to concern over its benefits. The United Nations Sustainable Development Goals (SDGs) have reintegrated literacy research within an agenda to understand the channels through which literacy skills might effect change. This article briefly reviews progress in adult literacy, touches on existing perspectives on literacy, and then illustrates four recent sources of information useful in the revitalised agenda offered by the SDGs. Data from the Programme for the International Assessment of Adult Competencies (PIAAC) study conducted by the Organisation for Economic Co-operation and Development (OECD), the World Values Survey (WVS), and the World Bank's Skills Toward Employment and Productivity (STEP) study are now available to researchers wishing to link educational change with attitudinal and behavioural change. Another important resource are the emerging data on mobile learning. By integrating literacy into the SDGs, literacy researchers can reveal the channels through which literacy can contribute to social welfare and transformation.

Published: 2016

Available at: <https://link.springer.com/article/10.1007/s11159-016-9602-5>

Title:

Rammstedt, B., Danner, D., & Martin, S. (2016). The association between personality and cognitive ability: Going beyond simple effects. *Journal of Research in Personality*, 62, 39-44. doi:10.1016/j.jrp.2016.03.005

Abstract:

To examine the relationship between the Big Five and cognitive ability, we investigated whether we could replicate in a heterogeneous population sample the positive association between cognitive ability and Openness and Emotional Stability and its negative association with Conscientiousness. Besides analyzing the pure associations, we shed further light on sources of these associations by investigating potential moderating effects of education and labor force participation. Our results clearly replicate the previously found positive association between cognitive ability and Emotional Stability and Openness and the negative relationship between Conscientiousness and cognitive ability. The correlation between cognitive ability and Openness was found to be moderated by educational attainment, the negative association between Conscientiousness and cognitive ability was moderated by labor force participation.

Published: 2016

Available at (open access): <http://www.sciencedirect.com/science/article/pii/S0092656616300162>

Title:

Rammstedt, B., & Maehler, D. B. (2016). Ausgewählte Ergebnisse zu PIAAC 2012: Lesekompetenz im Zusammenhang mit der Weiterbildungsbeteiligung, der Gesundheit und der politischen Selbstwirksamkeit. In B. f. B. u. Forschung (Ed.), *Bildungsforschung 2020: Zwischen wissenschaftlicher Exzellenz und gesellschaftlicher Verantwortung* (Vol. 42, pp. 347-362). Berlin: BMBF.

Abstract:

This contribution compares 22 PIAAC countries and presents findings regarding the relationship between literacy and participation in further education, health awareness, and social engagement.

Published: 2016

Available at (open access, full text): <https://www.bmbf.de/publikationen/?P=2020>

Title:

Rammstedt, B., Maehler, D. B., & Perry, A. (2016). Indikatoren geringer Lesekompetenz in Deutschland [Indicators of low literacy skills in Germany]. In A. Dietzen, R. Nickolaus, B. Rammstedt, & R. Weiß (Eds.), *Kompetenzorientierung. Berufliche Kompetenzen entwickeln, messen und anerkennen* [Skills orientation. Developing, measuring, and recognizing vocational skills] (pp. 29-46). Bielefeld: W. Bertelsmann Verlag.

Abstract:

Active and successful participation in society calls for key skills such as literacy. On the basis of the data of the Programme for the International Assessment of Adult Competencies (PIAAC), this contribution specifically examines the proportion of the German population who have only low literacy skills. The analyses on the basis of the PIAAC survey data, which are representative of the resident population in Germany, reveal that the probability that individuals belong to the group with the lowest level of literacy proficiency is greater if they have a low level of educational attainment – in particular, a lower secondary leaving certificate (Hauptschulabschluss) or no leaving certificate at all. A migration background and a low level of participation in further education and training also proved to be risk factors. [Translated on behalf of editors]

Published: 2016

Available at (full text): https://www.wbv.de/shop/themenbereiche/bildungs-und-sozialforschung/shop/detail/name/_/0/1/111-082/facet/111-082////////nb/0/category/214.html

Title:

Rampey, B.D., Finnegan, R., Goodman, M., Mohadjer, L., Krenzke, T., Hogan, J., & Provasnik, S. (2016). *Skills of U.S. unemployed, young, and older adults in sharper focus: Results from the Program for the International Assessment of Adult Competencies (PIAAC) 2012/2014: First look (NCES 2016-039rev)*. U.S. Department of Education. Washington, DC: National Center for Education Statistics. Retrieved October 27, 2017, from <https://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2016039rev>

Abstract:

The purpose of this report is to present updated and additional results from the U.S. PIAAC household data collection, based on data collected in 2012 and 2014. PIAAC is an international large-scale study of adult skills and life experience focusing on education and employment that was developed and organized by the Organization for Economic Cooperation and Development (OECD). PIAAC was first conducted in 2011–2012 in the United States and 23 other countries. In the United States, PIAAC was administered to a nationally representative sample of 5,000 adults between the ages of 16 and 65. Similar nationally representative samples of adults were surveyed in each of the 23 other participating countries. In 2013–14, NCES conducted a second round of data collection in the United States to enhance the U.S. PIAAC dataset. Specifically, the second round of data collection added (a) 3,600 adults

from three key subgroups of policy interest and (b) 1,200 incarcerated adults in federal and state prisons. The three key subgroups of adults "living in households" that were oversampled were: unemployed adults, young adults (ages 16–34), and older adults (ages 66–74). The expanded national household sample (8,600 adults, combining the first and second rounds) supports more accurate and reliable national estimates of unemployed and young adults and makes possible analyses of older adults.

Published: 2016

Available at (open access): <https://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2016039rev>

Title:

Rampey, B.D., Keiper, S., Mohadjer, L., Krenzke, T., Li, J., Thornton, N., & Hogan, J. (2016). *Highlights from the U.S. PIAAC survey of incarcerated adults: Their skills, work experience, education, and training: Program for the International Assessment of Adult Competencies: 2014 (NCES 2016-040)*. U.S. Department of Education. Washington, DC: National Center for Education Statistics. Retrieved October 27, 2017, from <https://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2016040>

Abstract:

The U.S. PIAAC Survey of Incarcerated Adults was designed to provide policymakers, administrators, educators, and researchers with information to improve educational and training opportunities for incarcerated adults and foster skills they need in order to return to, and work successfully in, society upon release from prison. This report highlights data from the survey's extensive background questionnaire and direct assessments of cognitive skills. It examines the skills of incarcerated adults in relationship to their work experiences and to their education and training in prison. Results for incarcerated adults on the literacy and numeracy domains are presented in two ways: (1) as scale scores (estimated on a 0–500 scale), and (2) as percentages of adults reaching the proficiency levels established for each of these domains. The report includes results for groups of incarcerated adults by various characteristics, including employment prior to incarceration, experiences with prison jobs, skills certifications, educational attainment in prison, and participation in academic programs and training classes.

Published: 2016

Available at (open access): <https://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2016040>

Title:

Siddiq, F., Hatlevik, O. E., Olsen, R. V., Thronsdén, I., & Scherer, R. (2016). Taking a future perspective by learning from the past – A systematic review of assessment instruments that aim to measure primary and secondary school students' ICT literacy. *Educational Research Review*, 19, 58–84.

Abstract:

This study systematically reviews literature on assessment instruments of primary and secondary school students' ICT literacy. It has three objectives: (1) Describe the development and characteristics of the assessments; (2) Present a synthesis of the facets of ICT literacy measured; and (3) Investigate to what extent information about reliability and validity is provided. A total of 38 tests reported in 66 studies were included. The results indicate that most of the tests target lower secondary students, comprise multiple-choice item designs, and are evaluated by quantitative methodology. The majority of the tests measure facets such as searching, retrieving, and evaluating digital information, and technical skills. In particular, the access to tests measuring digital communication, collaboration, safety,

and problem solving is limited. This review demonstrates that an adequate norm for documenting and reporting test quality is lacking. Our findings point to potential future directions in developing and reporting assessments of ICT literacy.

Published: November 2016

Available at: <https://www.sciencedirect.com/science/article/pii/S1747938X16300252>

Title:

Smith, T. J., Smith, M. C., Rose, A. D., & Ross-Gordon, J. M. (2016). An assessment of the factor structure and factorial invariance of scores from the readiness to learn scale. *Learning And Individual Differences*, 49, 230-236. doi:10.1016/j.lindif.2016.06.015

Abstract:

The present study examines data from the Readiness to Learn scale obtained from the Background Questionnaire of the PIAAC Survey of Adult Skills and carries out a series of psychometric assessments. Data from the U.S. sample were used, consisting of responses from N =5010 respondents between the ages of 16 and 65 years. Variables of interest included the six indicators of "readiness to learn". Additionally, for the factorial invariance analyses that were carried out, gender (male/female), highest attained educational level, and adult work status were used as grouping variables. [Source: From the method part of the publication]

Published: July 2016

Available at: <http://www.sciencedirect.com/science/article/pii/S104160801630098X?via%3Dihub>

Title:

Støren, L. A. (2016). Factors that promote innovativeness and being an innovative learner at work - results from PIAAC. *European Journal of Education*, 51(2), 176-192. doi:10.1111/ejed.12173

In this article, innovative activity is considered in the light of broader conceptualisations of innovativeness and what it means to be innovative. Central to the definition of innovativeness used in the analysis is that the worker actively seeks new knowledge and uses it for work-related tasks. This is based on previous research emphasising learning-by-doing, taking new knowledge into use and learning organisations. Innovativeness is analysed for Denmark, Finland, The Netherlands and Norway. Data from the PIAAC survey of adult skills are examined to identify key factors involved in promoting innovative behaviours at work. Significant country differences are found. Findings suggest that the work profiles of the workers, the work environment and the intensity of training and learning are very important for the innovative capabilities of the workforce.

Published: 2016

Available at (open access):

<http://onlinelibrary.wiley.com/doi/10.1111/ejed.12173/abstract;jsessionid=4244A7E5B9C55AA1EBAD059A8F14D972.f03t02>

Title:

Tan, T.K., Ramos, C., Sheng, Y.Z., & Sung, J. (2016). The determinants of training participation, a multi-level approach: Evidence from PIAAC. In L. van der Ark, D. Bolt, W.C. Wang, J. Douglas, & M. Wiberg (Eds.), *Quantitative Psychology Research* (pp. 363-375). Cham: Springer International Publishing.

Abstract:

This chapter uses the first round of the Programme for the International Assessment of Adult Competencies (PIAAC) survey data to find out the determinants of training participation of workers for the 24 countries that participated in the survey. Two measures are used in quantifying training participation: (1) whether workers participated in any training during the last 12 months and (2) the number of training modes of participation (number of types of trainings workers attended during the last 12 months). Logistic and Poisson multilevel models were used to model the two measures respectively. Both models show similar findings for the fixed effects. The results of the random slopes models show that heterogeneity exists across the 24 countries, indicating that the effects of covariates on workers' training participation and the number of training modes vary across countries. The magnitude of correlations of these random slopes differs between the logistic and Poisson models, indicating that the associations of these random effects are not totally in agreement between training participation and the number of training modes.

Published: 2016

Available at: https://link.springer.com/chapter/10.1007/978-3-319-38759-8_27

Title:

Tikkanen, T., & Nissinen, K. (2016). Participation in job-related lifelong learning among well-educated employees in the nordic countries. *International Journal of Lifelong Education*, 35(3), 216-234. doi:10.1080/02601370.2016.1165749

Abstract:

The purpose of this study was to explore participation in job-related lifelong learning (LLL) among well-educated mature workers and compare it across four Nordic countries. Although this group generally is very active in LLL, the centrality of knowledge work in society, rapid pace of skills-renewal and rising learning demands for all qualifications levels, necessitates a better understanding of the patterns and factors affecting their skill development. The paper builds on theories of learning motivation, human capital and workplace learning. Data from the Survey of Adult Skills (PIAAC) by the OECD were used. In addition to high participation rates, systematic level differences in participation were found across the countries. Results of logit regression analyses revealed clear differences between countries in the models that explained participation, which gave limited support to a single "Nordic model" of LLL. Furthermore, the predictors of participation commonly found among adult populations, low-educated individuals and/or younger adults, appeared less valid for well-educated individuals.

Published: 2016

Available at:

<http://www.tandfonline.com/doi/full/10.1080/02601370.2016.1165749?scroll=top&needAccess=true>

Title:

Tong, T., Li, H., & Greiff, S. (2016). *Human capital and leadership: The impact of cognitive and noncognitive abilities*. Retrieved December 20, 2017, from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2922265

Abstract:

We conduct an economic analysis about the impact of human capital on an individual's potential of becoming a leader. The data come from the recent Programme for the International Assessment of Adult Competencies survey (PIAAC). Our human capital indicators include not only traditional measures such as education and experience, but also various measures of cognitive and noncognitive ability. We specifically investigate the effect of imperfect ability measurement and possible reverse causality on the estimation results. We find that, among various cognitive and noncognitive ability measures, problem-solving ability and perseverance are the most important in affecting an individual's leadership.

Published: 2016

Available at (open access): https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2922265

Title:

Vera-Toscano, E., & Meroni, E. C. (2016). *A descriptive analysis of the evolution of occupational mismatch in Europe*. Luxembourg: Publications Office of the European Union. doi:10.2791/495552

Abstract:

Using the two surveys on adult skills- IALS and PIAAC- we investigate the evolution of occupational mismatch in Europe. We focus on both overeducation and overskilling and study how the incidence of the two phenomena in the years covered by the surveys: mid 90s and 2011. Our main findings are that in both time periods a substantial share of the working population is in a mismatched job, with great heterogeneities by countries and that overeducation and overskill seem to capture two distinct phenomena as the share of individuals who is mismatch in both categories is low relative to the ones who are mismatch in either one of the two. In addition we exploit heterogeneities by countries and by age groups and find that: (a) a group of countries (PL, SE and UK) have decreased their share of only overeducated workers, compensating it with an increase in share of overskilled workers; (b) overeducation and overskilling seem to decrease as individuals get older (c) greater overeducation is observed for the younger cohorts, especially in BE, DK, IE, FI, NL and SE.

Published: 2016

Available at (open access): <https://publications.europa.eu/en/publication-detail/-/publication/67874f81-b864-11e6-9e3c-01aa75ed71a1/language-en>

Title:

Vörös, Z., & Rouet, J. (2016). Laypersons' digital problem solving: Relationships between strategy and performance in a large-scale international survey. *Computers In Human Behavior*, 64, 108-116. doi:10.1016/j.chb.2016.06.018

Abstract:

This study examines the role of online data as indicators of the cognitive processes involved in problem solving in a technology-rich environment. More specifically, we analyze the relationship between response time, logged action count and task outcomes in a sample of over 23,000 adults from 16 countries who participated in the Problem solving in technology-rich environments (PS-TRE) assessment as part of the Program for the International Assessment of Adult Competencies (PIAAC) survey. Based on a selection of tasks used in the PS-TRE assessment, the results show that while time on task may have a heterogeneous effect on a population level depending on task difficulty, action count is positively linked to task accuracy. The data also reveals a surprisingly varied and task-specific relationship between those variables.

Published: November 2016

Available at: <http://www.sciencedirect.com/science/article/pii/S0747563216304460?via%3Dihub>

Title:

Weeks, J. P., von Davier, M., & Yamamoto, K. (2016). Using response time data to inform the coding of omitted responses. *Psychological Test And Assessment Modeling*, 58(4), 671-701.

Abstract:

Examinees may omit responses on a test for a variety of reasons, such as low ability, low motivation, lack of attention, or running out of time. Some decision must be made about how to treat these missing responses for the purpose of scoring and/or scaling the test, particularly if there is an indication that missingness is not skill related. The most common approaches are to treat the responses as either not reached/administered or incorrect. Depending on the total number of missing values, coding all omitted responses as incorrect is likely to introduce negative bias into estimates of item difficulty and examinee ability. On the other hand, if omitted responses are coded as not reached and excluded from the likelihood function, the precision of estimates of item and person parameters will be reduced. This study examines the use of response time information collected in many computer-based assessments to inform the coding of omitted responses. Empirical data from the Programme for the International Assessment of Adult Competencies (PIAAC) literacy and numeracy cognitive tests are used to identify item-specific timing thresholds via several logistic regression models that predict the propensity of responding rather than produce a missing data point. These thresholds can be used to inform the decision about whether an omitted response should be treated as not administered or as incorrect. The results suggest that for many items the timing thresholds (20 to 30 seconds on average) at a high expected probability level of observing a response are notably higher than thresholds used in the evaluation of rapid guessing of responses (e.g., 5 seconds).

Published: 2016

Available at (open access): http://www.psychologie-aktuell.com/fileadmin/download/ptam/4-2016_20161219/06_Weeks.pdf

2.10 Publications in 2017

Title:

Belzer, A. (2017). Reflections on the PIAAC literacy and numeracy frameworks. *Adult Learning*, 28(3), 118-120. doi:10.1177/1045159516655150

The Program for International Assessment of Adult Competencies (PIAAC) results, released in 2013, have spurred researchers to engage in rich analyses. In addition to making it possible to compare skill levels among the 23 participating nations, the PIAAC data have enabled researchers to analyze relationships among cognitive literacy, numeracy, and problem solving in technology-rich environments skills; age, gender, race/ethnicity, educational level; and a host of personal and social outcomes including health, economic well-being, and civic engagement. In 2014 and 2015, invited researchers reported their findings at PIAAC research conferences organized by the American Institutes for Research (AIR). The comments offered in this article comprise a revised version of discussant remarks the author made in response to AIR-commissioned papers by Donna Curry and Amy Trawick presented at the 2015 conference.

Published: 2017

Available at: <http://journals.sagepub.com/doi/abs/10.1177/1045159516655150>

Title:

Billington, M. G., Nissinen, K., & Gabrielsen, E. (2017). When investment in basic skills gives negative returns. *Adult Education Quarterly*, 67(2), 136-154. doi:10.1177/0741713617692413

Abstract:

In recent years, the Norwegian government has invested heavily in improving basic skills in the adult population. Initiatives have included legislation, the introduction of work-based adult education programs, and reforms in schooling. In light of this investment, we explore trends in adult literacy and numeracy, by comparing data from two international surveys of adult skills, conducted in 2003 and 2012. Paradoxically, the proportion of low-performing adults appears to have increased, most significantly in the 16- to 24-year age group and in the foreign-born population. The profile of the lowest performing group has changed in the intervening years. These findings suggest that adult education programs and the education system more generally may not be in concord with the goal of including all in the communities of the literate. We discuss policy implications, in the context of the Scandinavian model, but argue that the discussion is applicable beyond national boundaries.

Published: 2017

Available at (open access): <https://jyx.jyu.fi/dspace/handle/123456789/54483>

Title:

Blossfeld, P. N., Blossfeld, G. J., & Blossfeld, H.-P. (2017). The speed of educational expansion and changes in inequality of educational opportunity. In T. Eckert & B. Gniewosz (Eds.), *Bildungsgerechtigkeit* (pp. 77-92). Wiesbaden: Springer Fachmedien Wiesbaden.

Abstract:

Using PIAAC data, this paper studies the relationship between the speed of the process of educational expansion and the change in inequality of educational opportunity in 22 industrialized countries. Our empirical results suggest that rapid educational expansion can help to achieve more educational equality. If the pie is getting larger quickly, there is less conflict over the relative size of the slices.

Published: 2017

Available at: https://link.springer.com/chapter/10.1007%2F978-3-658-15003-7_6

Title:

Borgonovi, F., Pokropek, A., Keslair, F., Gauly, B., & Paccagnella, M. (2017). *Youth in transition*. OECD Education Working Papers No. 155. Paris: OECD Publishing.

Abstract:

This paper uses data from PISA and the OECD Survey of Adult Skills (PIAAC) to examine the evolution of socio-economic and gender disparities in literacy and numeracy proficiency between the ages of 15 and 27 in the sample of countries that took part in both studies. Socio-economic disparities are exacerbated between the age of 15 and 27 and the socio-economic gap in proficiency widens, particularly among low-achievers. Gender disparities in literacy at age 15 are marked across the performance spectrum but are particularly wide among low-performers. However, by age 24 there is no difference in the literacy proficiency of males and females. The gender gap in numeracy at age 15 is quantitatively small when compared with the gap in literacy, although it is more pronounced among high achievers. The paper canvasses possible explanations for the trends observed and discusses implications for policy and practice, including the extent to which the lack of an established link between PISA and PIAAC limits the analytical value of the two studies.

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Available at (open access): http://www.oecd-ilibrary.org/education/youth-in-transition_51479ec2-en

Title:

Broecke, S., Quintini, G., & Vandeweyer, M. (2017). Explaining international differences in wage inequality: Skills matter. *Economics of Education Review*, 60, 112-124.

Abstract:

Several studies employing decomposition methods have argued that skills only play a minor role in explaining cross-country differences in wage inequality. In this paper, we build upon the work of Leuven, Oosterbeek and van Ophem (2004) and extend the decomposition analysis to take account of the relative demand for, and supply of, skills. Doing this confirms that skills do matter and are likely to be at least as important as labour market institutions in explaining international differences in wage inequality.

Published: October 2017

Available at: <https://www.sciencedirect.com/science/article/pii/S0272775717301784>

Title:

Bussi, M., & Pareliussen, J. (2017) Back to basics – Literacy proficiency, immigration and labour market outcomes in Sweden. *Social Policy & Administration*, 51(4), 676–696. doi: [10.1111/spol.12319](https://doi.org/10.1111/spol.12319)

Abstract:

We explore how education, literacy skills and migrant origin affect employment and over-qualification mismatch, using a simple model of human capital, standard regression methods and data from the OECD Survey of Adult Skills (PIAAC). Sweden is an interesting case, as a compressed wage distribution makes thresholds to enter the labour market high for those with low education and low skills. Skill and education levels are high among the native-born. At the same time, the high influx of humanitarian and family reunion migrants, who are on average less educated and less skilled than natives, increases the supply of low-skilled labour. We find that substantial employment penalties all but disappear when controlling for migrants' lower literacy proficiency. In contrast, the high incidence of over-qualification mismatch among immigrants is little sensitive to literacy proficiency and demographic profiles. However, having participated in education and training activities in Sweden improves matching considerably, in particular if such activities are manifested in formal qualifications.

Published: 2017

Available at: <http://onlinelibrary.wiley.com/doi/10.1111/spol.12319/full>

Title:

Calero, J., & Choi, Á. (2017). The distribution of skills among the European adult population and unemployment: A comparative approach. *European Journal of Education*, 52(3), 348–364. doi:10.1111/ejed.12222

Abstract:

The most painful effect of the Great Recession in European countries has been the surge in unemployment rates during a period that has been characterised by an increase in income inequality and the heterogeneous pattern of this inequality by educational level. Thus, workers with low levels of educational attainment were among the first to lose their jobs. This article addresses two main research questions: first, it estimates the importance of the level of skills and education on the probability of being unemployed, disentangling the extent of the effects of human capital and signalling theories of education; and, second, it provides evidence of the impact of inequalities in the previous socio-economic and cultural background of individuals on the probability of being unemployed. These two objectives are assessed using data for 24 jurisdictions that participated in the first round of the OECD's "Programme for the International Assessment of Adult Competencies" (PIAAC). Skill levels play a central role in explaining unemployment in Europe and act as an indirect channel via which a family's sociocultural background has an impact on its labour market status. Combining the results of alternative models, we identify those European labour markets that are most sensitive to human capital.

Published: September 2017

Available at: <http://onlinelibrary.wiley.com/doi/10.1111/ejed.12222/abstract>

Title:

Christl, M., & Köppl-Turyna, M. (2017). *Gender wage gap and the role of skills: evidence from PIAAC dataset*. GLO Discussion Paper No. 63. Maastricht: Global Labor Organization (GLO). Retrieved December 27, 2017, from <https://ideas.repec.org/p/zbw/glodps/63.html>

Abstract:

Our paper makes a first attempt to address the impact of skills and skill use in the analysis of the gender wage gap using the PIAAC dataset. Using the case of Austria, we show that skill use as well as the skill match play an important role with regard to wage regressions of men as well as women. When we take skills into account in the gender wage gap analysis, the unexplained part of the gender wage gap is reduced by almost 4 percentage points along the whole wage distribution. Our results suggest that skill use and match play a crucial role in explaining the gender wage gap. Additionally, we show, that the self-selection problem biases the results, in particular in the lower and middle parts of the wage distribution and that we should control for it, although the effect is small. When we additionally consider discretionary bonus payments, we find that the unexplained part in the gender wage gap increases, especially in the upper part of the wage distribution.

Published: 2017

Available at (open access): <https://ideas.repec.org/p/zbw/glodps/63.html>

Title:

de la Rica, S., & Gortazar, L. (2017). *Digitalization at work, job tasks and wages: Cross-country evidence from PIAAC1*. GLO Discussion Paper No. 22. Maastricht: Global Labor Organization (GLO). Retrieved December 27, 2017, from <https://ideas.repec.org/p/zbw/glodps/22.html>

Abstract:

The aim of the paper is threefold. First, we compute differences on job tasks (Abstract, Routine and Manual) across a harmonized and hence comparable sample of Anglo-saxon, many European and even Asian advanced countries. We do so by using very precise information on job contents at the worker level, which allows for job task heterogeneity within occupations. Second we assess the extent to which computer adoption leads to the observed differences of job contents across countries. Third, we test the impact of tasks at work on average wages and wage inequality. Our results show remarkable differences in the degree of polarization of job contents across countries, being computer adoption at work a key significant driver of such differences. In particular, ICT use at work explains 10.0% (7.7%) of the cross-country conditional differences in Abstract (Routine) tasks at work. Finally, our results indicate that although differences in tasks explain an important and significant part of wage differentials (similar to what is found in Autor and Handel, 2013), we cannot find a clear pattern in the explanation of wage inequality gaps by looking at differences in task endowments and task returns.

Published: 2017

Available at (open access): <https://ideas.repec.org/p/zbw/glodps/22.html>

Title:

Duchhardt, C., Jordan, A.-K., & Ehmke, T. (2017). Adults' use of mathematics and its influence on mathematical competence. *International Journal of Science and Mathematics Education*, 15(1), 155-174. doi:10.1007/s10763-015-9670-1

Abstract:

The Programme for the International Assessment of Adult Competencies (PIAAC) has recently drawn additional attention to "mathematical literacy" as an important influential factor for individuals' life chances. High levels of mathematical literacy have thereby been linked to using mathematics in daily and working life frequently. In this paper, based on the data from Germany, we focus on the construct "use of mathematics" in two ways: First, we analyze in depth how it can be utilized to describe different groups of adults. Second, we investigate its role as predictor of mathematical competence and mediator of other relevant background variables. Results show that three groups of adults can be distinguished that use mathematics differently in daily and working life. However, the construct can sensibly be described as unidimensional. In a path model, "use of mathematics" turns out to be the strongest predictor of mathematical competence. In addition, it mediates effects of the mathematical requirements of the job, duration of education, and gender.

Published: 2017

Available at: <https://link.springer.com/article/10.1007/s10763-015-9670-1>

Title:

Flisi, S., Goglio, V., Meroni, E. C., Rodrigues, M., & Vera-Toscano, E. (2017). Measuring occupational mismatch: Overeducation and overskill in Europe—Evidence from PIAAC. *Social Indicators Research*, 131(3), 1211-1249. doi:10.1007/s11205-016-1292-7

Abstract:

Occupational mismatch has been a hot topic in the economics literature in recent decades; however, no consensus has been reached on how to conceptualise and measure this phenomenon. We explore the unique opportunity offered by the PIAAC survey to measure occupational mismatch at the individual level based on both education- (overeducation) and skill-based (overskilling) variables by using both objective and subjective measures. For this purpose, we use data on 17 European countries and compute up to 20 different indicators of occupational mismatch. We find that the conceptualisation and measurement of occupational mismatch are indeed important and that education and skill mismatch do not measure the same phenomenon. In fact, only a small percentage of mismatched individuals are mismatched with respect to both education and skill, whereas the majority are mismatched with respect to either education or skill only. At the country level, we find a negative correlation between the incidence of education and skill mismatch, which has important implications for policies aiming to address this labour market inefficiency.

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Available at (open access): <https://link.springer.com/article/10.1007/s11205-016-1292-7>

Title:

Goldhammer, F., Martens, T. & Lüdke, O. (2017). Conditioning factors of test-taking engagement in PIAAC: an exploratory IRT modelling approach considering person and item characteristics. In *Large-scale Assessments in Education*, 5 (18). doi:10.1186/s40536-017-0051-9

Abstract:

Background: A potential problem of low-stakes large-scale assessments such as the Programme for the International Assessment of Adult Competencies (PIAAC) is low test-taking engagement. The present

study pursued two goals in order to better understand conditioning factors of test-taking disengagement: First, a model-based approach was used to investigate whether item indicators of disengagement constitute a continuous latent person variable by domain. Second, the effects of person and item characteristics were jointly tested using explanatory item response models.

Methods: Analyses were based on the Canadian sample of Round 1 of the PIAAC, with $N = 26,683$ participants completing test items in the domains of literacy, numeracy, and problem solving. Binary item disengagement indicators were created by means of item response time thresholds.

Results: The results showed that disengagement indicators define a latent dimension by domain. Disengagement increased with lower educational attainment, lower cognitive skills, and when the test language was not the participant's native language. Gender did not exert any effect on disengagement, while age had a positive effect for problem solving only. An item's location in the second of two assessment modules was positively related to disengagement, as was item difficulty. The latter effect was negatively moderated by cognitive skill, suggesting that poor test-takers are especially likely to disengage with more difficult items.

Conclusions: The negative effect of cognitive skill, the positive effect of item difficulty, and their negative interaction effect support the assumption that disengagement is the outcome of individual expectations about success (informed disengagement).

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Available at (open access):

<https://largescaleassessmentsineducation.springeropen.com/articles/10.1186/s40536-017-0051-9>

Title:

Goldhammer, F., Naumann, J., Rölke, H., Stelter, A., & Tóth, K. (2017). Relating product data to process data from computer-based competency assessment. In D. Leutner, J. Fleischer, J. Grünkorn, & E. Klieme (Eds.), *Competence assessment in education: Research, models and instruments* (pp. 407–425). Cham: Springer International Publishing.

Abstract:

Competency measurement typically focuses on task outcomes. Taking process data into account (i.e., processing time and steps) can provide new insights into construct-related solution behavior, or confirm assumptions that govern task design. This chapter summarizes four studies to illustrate the potential of behavioral process data for explaining task success. It also shows that generic process measures such as time on task may have different relations to task success, depending on the features of the task and the test-taker. The first study addresses differential effects of time on task on success across tasks used in the OECD Programme for the International Assessment of Adult Competencies (PIAAC). The second study, also based on PIAAC data, investigates at a fine-grained level, how the time spent on automatable subtasks in problem-solving tasks relates to task success. The third study addresses how the number of steps taken during problem solving predicts success in PIAAC problem-solving tasks. In a fourth study, we explore whether successful test-takers can be clustered on the basis of various behavioral process indicators that reflect information problem solving. Finally, we address how to handle unstructured and large sets of process data, and briefly present a process data extraction tool.

Published: 2017

Available at: https://link.springer.com/chapter/10.1007/978-3-319-50030-0_24

Title:

Gorges, J., Koch, T., Maehler, D. & Offerhaus, J. (2017). Same but different? Measurement invariance of the PIAAC motivation-to-learn scale across key socio-demographic groups. In *Large-scale Assessments in Education*, 5 (13). doi:10.1186/s40536-017-0047-5

Abstract:

Background: Data from the Programme for the International Assessment of Adult Competencies (PIAAC) revealed that countries systematically differ in their respondents' literacy, numeracy, and problem solving in technology-rich environments skills; skill levels also vary by gender, age, level of education or migration background. Similarly, systematic differences have been documented with respect to adults' participation in education, which can be considered as a means to develop and maintain skills. From a psychological perspective, motivation to learn is considered a key factor associated with both skill development and participation in (further) education. In order to account for motivation when analyzing PIAAC data, four items from the PIAAC background questionnaire were recently compiled into a motivation-to-learn scale. This scale has been found to be invariant (i.e., showing full weak and partial strong measurement invariance) across 21 countries.

Methods: This paper presents further analyses using multiple-group graded response models to scrutinize the validity of the motivation-to-learn scale for group comparisons.

Results: Results indicate at least partial strong measurement invariance across gender, age groups, level of education, and migration background in most countries under study (all CFI > .95, all RMSEA < .08). Thus, the scale is suitable for comparing both means and associations across these groups.

Conclusions: Results are discussed in light of country characteristics, challenges of measurement invariance testing, and potential future research using PIAAC data.

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Available at (open access):

<https://largescaleassessmentsineducation.springeropen.com/articles/10.1186/s40536-017-0047-5>

Title:

Greiff, S., Scheiter, K., Scherer, R., Borgonovi, F., Britt, A., Graesser, A., Kitajima, M. & Rouet, J.-F. (2017). *Adaptive problem solving*. OECD Education Working Papers No. 156. Paris: OECD Publishing. Retrieved December 27, 2017, from http://www.oecd-ilibrary.org/education/adaptive-problem-solving_90fde2f4-en

Abstract:

The set of skills that is required to be a successful citizen in the 21st century is rapidly evolving. New technologies and social systems grow increasingly complex and require individuals to quickly and flexibly adapt to new and changing circumstances. This paper outlines the key features of the domain of adaptive problem solving that is proposed to be assessed in the 2nd cycle of the OECD Survey of Adult Skills (PIAAC) in addition to the domains of numeracy and literacy. Adaptive problem solving is considered to be a crucial 21st century skill that combines cognitive and meta-cognitive processes. The paper develops a definition of adaptive problem solving building on relevant work in cognitive psychology and cognitive science, introduces its covariates and preconditions, discusses relevant assessment principles, and provides insights on the relevance of adaptive problem solving for labour markets and social integration.

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Available at (open access): http://www.oecd-ilibrary.org/education/adaptive-problem-solving_90fde2f4-en

Title:

Hampf, F., Wiederhold, S., & Woessmann, L. (2017). Skills, earnings, and employment: Exploring causality in the estimation of returns to skills. *Large-scale Assessments in Education*, 5(12). doi:10.1186/s40536-017-0045-7

Abstract:

Ample evidence indicates that a person's human capital is important for success on the labor market in terms of both wages and employment prospects. However, unlike the efforts to identify the impact of school attainment on labor-market outcomes, the literature on returns to cognitive skills has not yet provided convincing evidence that the estimated returns can be causally interpreted. Using the PIAAC Survey of Adult Skills, this paper explores several approaches that aim to address potential threats to causal identification of returns to skills, in terms of both higher wages and better employment chances. We address measurement error by exploiting the fact that PIAAC measures skills in several domains. Furthermore, we estimate instrumental-variable models that use skill variation stemming from school attainment and parental education to circumvent reverse causation. Results show a strikingly similar pattern across the diverse set of countries in our sample. In fact, the instrumental-variable estimates are consistently larger than those found in standard least-squares estimations. The same is true in two "natural experiments," one of which exploits variation in skills from changes in compulsory-schooling laws across U.S. states. The other one identifies technologically induced variation in broadband Internet availability that gives rise to variation in ICT skills across German municipalities. Together, the results suggest that least-squares estimates may provide a lower bound of the true returns to skills in the labor market.

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Available at (open access):

<https://largescaleassessmentsineducation.springeropen.com/articles/10.1186/s40536-017-0045-7>

Title:

Hanushek, E. A., Schwerdt, G., Wiederhold, S., & Woessmann, L. (2017). Coping with change: International differences in the returns to skills. *Economics Letters*, 153, 15-19. doi:10.1016/j.econlet.2017.01.007

Abstract:

International data from the PIAAC survey allow estimation of comparable labor-market returns to skills for 32 countries. Returns to skills are larger in faster growing economies, consistent with the hypothesis that skills are particularly important for adaptation to economic change.

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Available at: <http://www.sciencedirect.com/science/article/pii/S0165176517300174>

Title:

Hämäläinen, R., De Wever, B., Nissinen, K., & Cincinato, S. (2017). Understanding adults' strong problem-solving skills based on PIAAC. *Journal of Workplace Learning*, 29(7/8), 537-553.

Abstract:

Research has shown that the problem-solving skills of adults with a vocational education and training (VET) background in technology-rich environments (TREs) are often inadequate. However, some adults with a VET background do have sound problem-solving skills. The present study provides insight into the socio-demographic, work-related, and everyday life factors that are associated with a strong problem-solving performance. The study builds on large-scale data of the Programme for the International Assessment of Adult Competencies (PIAAC) and gives insight into VET adults (N=12,929) with strong problem-solving skills in eleven European countries. Findings This study introduces new knowledge with respect to the socio-demographic, work-related, and everyday life background factors that contribute to successful VET adults' problem-solving skills. Our findings illustrate that a continuous process of development including non-formal and informal activity as well as learning taking place at work is associated with strong performance in problem-solving skills in TRE. An important implication of this study is that this article explored new knowledge about good problem-solvers in TREs with a VET background and can be used to support the development of VET adults' problem-solving skills in TREs.

Published: 2017

Available at:

<https://jyx.jyu.fi/dspace/bitstream/handle/123456789/56039/jwl0520160032.pdf?sequence=1>

Title:

Kankaraš, M. (2017). *Personality matters*. OECD Education Working Papers No. 157. Paris: OECD Publishing. Retrieved December 27, 2017, from http://www.oecd-ilibrary.org/education/personality-matters_8a294376-en

Abstract:

Personality characteristics shape human behaviour and influence a wide range of life events and outcomes. They do so not only through their direct effects on life outcomes, but also through their indirect effects on other important personal factors and intermediate life events, such as the development of cognitive capacities, the attainment of educational qualifications and the formation of a family. As such, personality characteristics have a demonstrable relevance for a wide range of policy issues and represent an important, although often neglected, subject of policy interest.

This paper reviews the scientific literature covering a wide range of personality characteristics, discussing their conceptualisations and main features, their relevance for important outcomes in life and work, and the chief ways they are measured. It aims to provide a comprehensive overview of various attributes of personality from the perspective of their potential importance for the Survey of Adult Skills (PIAAC), taking into account their analytical potential and policy relevance. The paper also outlines and evaluates the most important measurement instruments for each personality characteristic, with a focus on short self-report scales as the most appropriate form for inclusion in large-scale international surveys. Finally, it presents some considerations related to the evaluation and promotion of personality characteristics and introduces the substantive and measurement criteria that could be used to select the personality attributes, and related measurement scales, to include in large-scale surveys.

Published: July 31, 2017

Available at (open access): http://www.oecd-ilibrary.org/education/personality-matters_8a294376-en

Title:

Kirsch, I., & Lennon, M. L. (2017). PIAAC: a new design for a new era. *Large-scale Assessments in Education*, 5(11). doi:10.1186/s40536-017-0046-6

Abstract:

As the largest and most innovative international assessment of adults, PIAAC marks an inflection point in the evolution of large-scale comparative assessments. PIAAC grew from the foundation laid by surveys that preceded it, and introduced innovations that have shifted the way we conceive and implement large-scale assessments. As the first fully computer-delivered survey of adults, those innovations included: a comprehensive assessment design involving multistage adaptive testing; development of an open-source platform capable of delivering both cognitive measures and nationally-specific background questionnaires; automated scoring of open-ended items across more than 50 languages; enhanced cognitive measures that included electronic texts and interactive stimuli; the inclusion of new item types and response modes; and the use of log file and process data to interpret results. This paper discusses each of these innovations along with the development of data products and dissemination activities that have extended the utility of the survey, providing today's policy makers with information about the extent to which adults possess the critical skills required for both their own success and the health and vibrancy of societies around the world. As this paper suggests, the innovations introduced via PIAAC broadened the relevance and utility of the survey along with the accuracy and validity of the data, strengthening the foundation upon which future surveys can continue to build.

Published: April 18, 2017

Available at (open access):

<https://largescaleassessmentsineducation.springeropen.com/articles/10.1186/s40536-017-0046-6>

Title:

Krupar, A., Horvatek, R., & Byun, S.-y. (2017). Does nonformal education matter? Nonformal education, immigration, and skills in Canada. *Adult Education Quarterly*, 67(3),186-208. doi:10.1177/0741713617697423

Abstract:

This article examined the relationship between participation in adult nonformal education (NFE), defined as on-the-job training, attending private lessons, attending seminars, or distance learning, and Canadian immigrant respondents' literacy and numeracy outcomes, using data from the Program for the International Assessment of Adult Competencies Survey. We found that although participation in some forms of NFE was significantly related to higher literacy and numeracy scores, such relationship tended to be greater for first-generation immigrants than for nonimmigrant adults, even after controlling for their linguistic and formal educational background. Our findings suggested that first-generation immigrants in Canada might benefit the most from increased participation in NFE programs and targeted policies.

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Available at: <http://journals.sagepub.com/doi/abs/10.1177/0741713617697423>

Title:

Lavrijsen, J., & Nicaise, I. (2017). Returns on vocational education over the life cycle: Between immediate labour market preparation and lifelong employability. *International Review of Education*, 63(2), 257-280. doi:10.1007/s11159-017-9630-9

Abstract:

An important issue in the design of secondary-level education is the balance between conveying general and occupation-specific (vocational) skills. On the one hand, vocationally oriented programmes, providing occupation-specific skills with immediate labour market relevance, have repeatedly been shown to secure safe pathways into employment. On the other hand, these programmes tend to put less emphasis on developing general knowledge, skills and competencies, including numeracy and literacy, which are foundational to lifelong learning. Hence, when the needs of the labour market change, employees who opted for a vocational track when they were at secondary school risk being less flexible in adapting to such changes later in their career. The authors of this article examine whether this results in a trade-off between short-term gains and long-term losses by considering differences in the labour market careers of vocationally and generally educated respondents in the 2012 Programme for the International Assessment of Adult Competencies (PIAAC). Their results suggest that early labour market benefits of vocational specialisation decrease over time; the authors relate this to its lower ability to equip secondary school students--future employees--with skills for lifelong learning.

Published: April 2017

Available at: <https://link.springer.com/article/10.1007/s11159-017-9630-9>

Title:

Lavrijsen, J., & Nicaise, I. (2017). Systemic obstacles to lifelong learning: The influence of the educational system design on learning attitudes. *Studies in Continuing Education*, 39(2), 176-196. doi:10.1080/0158037X.2016.1275540

Abstract:

Comparative research has often emphasized the importance of external barriers (e.g. enrolment costs) to explain inequalities in lifelong learning participation. However, individuals, in particular the low educated, are often not only prevented from participation by external barriers, but also by negative psychological dispositions about learning. In this article, we study how dispositions about learning as measured in PIAAC (2012) vary between countries. In particular, we assess how these cross-country differences are related to a number of design characteristics of the initial school system. We improve the cross-sectional research design by controlling attitudes among adults for attitudes collected among primary school students, making use of diff-in-diff and pseudo-panel-techniques. Overall, we find that strong external differentiation mechanisms, in particular tracking students at a young age and making extensively use of grade retention, are associated with less positive attitudes towards learning among adults. However, a number of methodological issues, related to small country samples and differences in data definition between surveys, calls for further investigation.

Published: January 2017

Available at: <http://www.tandfonline.com/doi/full/10.1080/0158037X.2016.1275540>

Title:

Lee, J.-W., & Wie, D. (2017). Returns to education and skills in the labor market: Evidence from Japan and Korea. *Asian Economic Policy Review*, 12(1), 139-160. doi:10.1111/aepr.12169

Abstract:

This study investigates the determinants of skill proficiency, and the impact of adult skills on earnings, in Japan and Korea. Using the Program for the International Assessment of Adult Competencies survey data, it shows that Japanese adults perform better than Korean respondents, on average, on skill proficiency tests. A decomposition analysis shows that the score gap in literacy, numeracy, and problem solving skills between the two countries is mostly due to different returns to individual characteristics such as upper-secondary and tertiary education. Adult skills have a positive and significant impact on individual earnings and employment probability, in both countries. In Japan, the returns to literacy, numeracy, and problem-solving skills increase significantly with experience, and tend to fall with formal education, suggesting employer learning or human capital accumulation through career progression. In contrast, in Korea, the returns to literacy and numeracy skills do not seem to increase with experience.

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Available at (open access): <http://onlinelibrary.wiley.com/doi/10.1111/aepr.12169/full>

Title:

Lee, Y. (2017). Does context matter? Literacy disparities in self-rated health using evidence from 17 developed countries. *American Journal of Health Behavior*, 41(3), 287-300. doi:10.5993/AJHB.41.3.8

Abstract:

Objectives: The study examines whether adult literacy skills predict self-rated health status beyond educational credentials in 17 developed countries using a cross-national survey, the Programme for the International Assessment of Adult Competencies (PIAAC).

Methods: The study uses linear regression models with country-level fixed effects to predict self-rated health to account the unobserved country-level heterogeneity. A total of 73,806 respondents aged 25 to 65 were included in the analysis.

Results: Although adult literacy is positively associated with better self-rated health in general, the strength of the relationship varies across nations. The literacy-related health inequalities are less severe in countries with the higher public share of health expenditures that may better address the needs of individuals with limited cognitive abilities. Curriculum standardization also contributes to reducing the literacy gradients in health by decreasing variations in skills obtained in school across individuals with different social origins.

Conclusions: Overall, this study reveals that promoting equity in adult literacy skills is an important way to improve a population's health. Country-level differences in the strength of the relationship between literacy and self-rated health are systematically related to between-country differences in health financing and educational systems.

Published: 2017

Available at: <http://www.ingentaconnect.com/content/png/ajhb/2017/00000041/00000003/art00008>

Title:

Levels, M., Dronkers, J., & Jencks, C. (2017). Contextual explanations for numeracy and literacy skill disparities between native and foreign-born adults in western countries. *Plos ONE*, 12(3). doi:10.1371/journal.pone.0172087

Abstract:

Using new direct measures of numeracy and literacy skills among 85,875 adults in 17 Western countries, we find that foreign-born adults have lower mean skills than native-born adults of the same age (16 to 64) in all of the examined countries. The gaps are small, and vary substantially between countries. Multilevel models reveal that immigrant populations' demographic and socioeconomic characteristics, employment, and language proficiency explain about half of the cross-national variance of numeracy and literacy skills gaps. Differences in origin countries' average education level also account for variation in the size of the immigrant-native skills gap. The more protective labor markets in immigrant-receiving countries are, the less well immigrants are skilled in numeracy and literacy compared to natives. For those who migrate before their teens (the 1.5 generation), access to an education system that accommodates migrants' special needs is crucial. The 1 and 1.5 generation have smaller numeracy and literacy skills gaps in more ethnically diverse societies.

Published: March 2017

Available at (open access): <http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0172087>

Title:

Maddox, B. & Zumbo, B. D. (2017). Observing testing situations: Validation as jazz. In B. D. Zumbo, A. M. Hubley, B. D. Zumbo, A. M. Hubley (Eds.), *Understanding and investigating response processes in validation research* (pp. 179-192). Cham, Switzerland: Springer International Publishing. doi:10.1007/978-3-319-56129-5_10

Abstract:

In this chapter, we describe how observations of real-life testing situations can provide insights into test validation by focusing on response processes and test performance that are not easily captured by large-scale quantitative data or by conventional 'think aloud' protocols. The chapter is structured in the following way. *Theory and Method* describes the key approaches to the study of face-to-face testing situations. Informed by Goffman's micro-analysis of social situations, we describe an approach to the study of testing situations that draws on research traditions in linguistic anthropology and conversation analysis. *Assessment Observed* illustrates the method with short transcripts from sequences of interaction in the Slovenian PIAAC assessment. The transcripts illustrate temporal, interactive, and affective characteristics of the testing situation. They illustrate the potential for studies of the testing situation to provide new insights into response processes. In the final part of the chapter. *Integrating Data*, we consider how micro-analytic insights from testing situations can inform, and be integrated into, validation practice.

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Available at: https://link.springer.com/chapter/10.1007%2F978-3-319-56129-5_10

Title:

Maehler, D.B. (2017). Sozioökonomische Faktoren in Deutschland besonders wichtig für Kompetenzdisparitäten zwischen Bevölkerung mit und ohne Zuwanderungshintergrund: Ländervergleich auf Basis der PIAAC-Studie. *Informationsdienst Soziale Indikatoren*, 58, 1-5.

Abstract:

Germany is today one of the most prominent immigration countries. The increase in migration worldwide poses challenges at different levels to both target and host countries. With regard to the immigrant adult population, integration into the labor market is the focus of discussions in the OECD and especially in Germany (OECD, 2016). In order to succeed it is first necessary to obtain a reliable picture of the existing skills of immigrants. Initial surveys of recently immigrated refugees already give a first indication of the situation. On average, a low level of formal education is assumed (Brücker, Rother & Schupp, 2016). For example, Wößmann (2015) calls for alternative training models (including partial qualification), which take into account different courses of life in different cultural and social settings in order to prepare low-skilled immigrants for the German labor market. As part of such considerations, various projects have been launched to first assess the existing skills of immigrants (see also OECD, 2016). In Germany, for example, Maehler, Shajek and Brinkmann (in press) are putting together a handbook of diagnostic procedures for the migrant population. Among other things, the identification and recognition of professional qualifications and professional qualifications acquired abroad are discussed (Atanassov & Erbe, in press). In contrast, the "Integration through Qualification" funding program has compiled competence assessment procedures for practitioners (e.g., Employment Agencies, Job Centers and Labor Market Actors) (IQ Fachstelle, 2015). It is based on the premise that a comprehensive picture of the competencies of an individual can not be achieved by only recording the professional skills. Comprehensive standards of competence assessment processes are expected, covering professional competencies, key competencies and individual resources (IQ Fachstelle, 2015). For example, literacy is fundamental to other subject-related competences and has a strong link with other areas of competence (see, for example, Maehler et al., 2013; OECD, 2013). This article assesses how well immigrants are qualified compared to the native populations across countries and what factors are relevant for their key competencies.

Published: 2017

Available at (open access): <http://www.ssoar.info/ssoar/handle/document/52983>

Title:

Maehler, D. B., Martin, S., & Rammstedt, B. (2017). Coverage of the migrant population in large-scale assessment surveys. Experiences from PIAAC in Germany. *Large-scale Assessments in Education*, 5(9). doi:10.1186/s40536-017-0044-8

Abstract:

Background: European countries, and especially Germany, are currently very much affected by human migration flows, with the result that the task of integration has become a challenge. Only very little empirical evidence on topics such as labor market participation and processes of social integration of migrant subpopulations is available to date from large-scale population surveys. The present paper provides an overview of the representation of the migrant population in the German Programme for the International Assessment of Adult Competencies (PIAAC) sample and evaluates reasons for the under-coverage of this population.

Methods: We examine outcome rates and reasons for nonresponse among the migrant population based on sampling frame data, and we also examine para data from the interviewers' contact protocols to evaluate time patterns for the successful contacting of migrants.

Results and Conclusions: This is the first time that results of this kind have been presented for a large-scale assessment in educational research. These results are also discussed in the context of future PIAAC cycles. Overall, they confirm the expectations in the literature that factors such as language problems result in lower contact and response rates among migrants.

Published: March 01, 2017

Available at (open access):

<https://largescaleassessmentsineducation.springeropen.com/articles/10.1186/s40536-017-0044-8>

Title:

Mamedova, S., Sparks, D., & Hoyer, K. M. (2017). *Adult education attainment and assessment scores: A cross-national comparison*. Stats in Brief (NCES 2018-007). U.S. Department of Education. Washington, DC: National Center for Education Statistics. Retrieved November 10, 2017, from <https://nces.ed.gov/pubs2018/2018007.pdf>

Abstract:

The Organization for Economic Cooperation and Development (OECD) conducted the Program for the International Assessment of Adult Competencies (PIAAC), a multi-domain adult skills assessment with an extensive background questionnaire, in 2012. PIAAC is a global effort to understand how individuals' education, workplace experiences, and other background factors relate to cognitive skills in the domains of literacy, numeracy, and problem solving in technology-rich environments. This Statistics in Brief builds upon the findings in the earlier National Center for Education Statistics (NCES) report (Goodman et al. 2013) to provide additional cross-national comparisons of adult literacy and numeracy proficiencies by education attainment. Specifically, the brief highlights differences between several countries in the average literacy and numeracy scores for adults at different levels of education attainment. The brief further compares gaps in literacy and numeracy scores between adults of higher and lower education attainment across participating countries. The results from the earlier NCES reports indicated that adults in the United States performed lower than or not measurably different from the PIAAC international average in literacy and in numeracy (Goodman et al. 2013, Rampey et al. 2016). Specifically, in literacy, average scores ranged from 250 in Italy to 296 in Japan. The U.S. average score was 270, while the PIAAC international average was 273. Compared with the U.S. average score, average scores were higher in 12 countries, lower in 5 countries, and not measurably different in 5 countries. In numeracy, average scores ranged from 246 in Spain to 288 in Japan. The U.S. average score was 253, while the PIAAC international average was 269. Compared with the U.S. average score in numeracy, average scores were higher in 18 countries, lower in 2 countries, and not measurably different in 2 countries (Goodman et al. 2013).

Published: 2017

Available at (open access): <https://nces.ed.gov/pubs2018/2018007.pdf>

Title:

Massing, N., & Schneider, S. L. (2017). Degrees of competency: The relationship between educational qualifications and adult skills across countries. *Large-scale Assessments in Education*, 5(6). doi:10.1186/s40536-017-0041-y

Abstract:

Background: Educational qualifications and literacy skills are highly related. This is not surprising as it is one aim of educational systems to equip individuals with competencies necessary to take part in society. Because of this relationship educational qualifications are often used as a proxy for "human capital". However, from a theoretical perspective, there are many reasons why this relationship is not perfect, and to some degree this is due to third variables. Thus, we want to explore the net relationship between educational attainment (harmonized according to the International Standard Classification of Education, ISCED) and literacy skills, and how much skills vary within education levels across countries.

Methods: We use data from 21 countries from the Programme for the International Assessment of Adult Competencies 2012. This paper compares the literacy skills of adults who achieved different levels of educational attainment across countries. Given the high degree of educational differentiation in most countries, we do this using a more differentiated educational attainment variable than what is commonly used. In our analyses we firstly adjust for factors that are likely to affect access to education and the acquisition of educational qualifications and literacy skills, such as parental education and language and migration background. In a second step, we also take into account factors affecting skill development after initial formal education, such as occupation and skill use at home.

Results: We firstly find a high degree of heterogeneity of skills across countries for equivalent education categories. Secondly, we find skill similarities for equivalent education categories classified at different broad education levels, sometimes even breaking the hierarchical order of 'higher education entails higher competencies'.

Conclusion: We conclude that ISCED levels cannot be taken as a cross-nationally comparable proxy for human capital in terms of literacy skills, and that education has to be harmonized in a substantively more meaningful way in future adult literacy surveys.

Published: February 07, 2017

Available at (open access):

<https://largescaleassessmentsineducation.springeropen.com/articles/10.1186/s40536-017-0041-y>

Title:

Massing, N., & Gauly, B. (2017). Training participation and gender: Analyzing individual barriers across different welfare state regimes. *Adult Education Quarterly*, 67(4), 266-285. doi: [10.1177/0741713617715706](https://doi.org/10.1177/0741713617715706)

Abstract:

Lifelong learning is becoming increasingly important in today's societies. Individuals need to develop their skills through training in order to be successfully integrated in the labor market. We use data from the Programme for the International Assessment of Adult Competencies to investigate gender differences in training across 12 countries. We analyze participation and perceived barriers to training for women in comparison with men and control for family structure and employment. As institutional framework, we use four different welfare state regimes to show how policies can affect the decision to participate. Our results show that different welfare regimes have an impact on the extent adults take part in training and on their perceived barriers. In all countries except Belgium and the Nordic states,

men are more likely to participate in training. However, this inequality disappears once controlling for further individual characteristics. Our research provides insights why adults are deterred from engaging in training.

Published: November 2017

Available at: <http://journals.sagepub.com/doi/pdf/10.1177/0741713617715706>

Title:

Mateos-Romero, L. & Salinas-Jiménez, M. M. (2017). Skills heterogeneity among graduate workers: Real and apparent overeducation in the Spanish labor market. *Social Indicators Research*, 132(3), 1247-1264. doi:10.1007/s11205-016-1338-x

Abstract:

This paper takes account of skills heterogeneity among workers with a higher education degree and proposes a new measure to differentiate between real and apparent overeducation based on the level of cognitive skills actually achieved by the individuals. This proposal is applied to the study of the wage effects of overeducation in the Spanish labor market using data from PIAAC. The results suggest that between a quarter and a half of the graduate workers who appear to be overeducated in the Spanish labor market could be considered as being only apparently overeducated since they show a lower level of skills than that corresponding to their educational level or, alternatively, a level of cognitive skills which is commensurate with their job. Different returns are found for each group of overeducated individuals both when compared with adequately educated peers within a similar level of education (with greater wage penalties for apparently overeducated workers) and when the comparison is done with well-matched co-workers doing a similar job (with a wage premium for real overeducation but no significant returns for apparently overeducated workers). These different returns by skill levels beyond what overeducation measures implies that the market distinguishes between education and skills and that educational attainment per se does not perfectly align with acquired skills, meaning that traditional measures of overeducation would overstate the actual level of skills mismatch in the labor market.

Published: July 2017

Available at: <https://link.springer.com/article/10.1007%2Fs11205-016-1338-x>

Title:

Nieto, S., & Ramos, R. (2017). Overeducation, skills and wage penalty: Evidence for Spain using PIAAC data. *Social Indicators Research*, 134(1), 219-236. doi:10.1007/s11205-016-1423-1

Abstract:

The literature on educational mismatches finds that overeducated workers suffer a wage penalty compared with properly educated workers with the same level of education. Recent literature also suggests that individuals' skill heterogeneity could explain wage differences between overeducated and properly matched workers. The hypothesis is that overeducated workers earn less due to their lower competences and skills in relative terms. However, that hypothesis has been rarely tested due to data limitations on individuals' skills. The aim of this paper is to test the individuals' skill heterogeneity theory in Spain using microdata from PIAAC, because it is one of the developed countries supporting the highest overeducation rates and where its adult population holds the lowest level of skills among a set of developed countries. Our hypothesis is that the wage penalty of overeducation in Spain is explained by

the lower skill level of overeducated workers. The obtained evidence confirms this hypothesis but only to a certain extent as skills only explain partially the wage penalty of overeducation.

Published: October 2017

Available at: <https://link.springer.com/article/10.1007%2Fs11205-016-1423-1>

Title:

Pellizzari, M., & Fichen, A. (2017). A new measure of skills mismatch: Theory and evidence from PIAAC. *IZA Journal of Labor Economics*, 6(1). doi:10.1186/s40172-016-0051-y

Abstract:

This paper proposes a new measure of skill mismatch to be applied to the recent OECD Survey of Adult Skills (PIAAC). The measure is derived from a formal theory and combines information about skill proficiency, self-reported mismatch and skill use. The theoretical foundations underling this measure allow identifying minimum and maximum skill requirements for each occupation and to classify workers into three groups: the well-matched, the under-skilled and the over-skilled. The availability of skill use data further permits the computation of the degree of under- and over-usage of skills in the economy. The empirical analysis is carried out using the first round of the PIAAC data, allowing comparisons across skill domains, labour market statuses and countries.

Published: January 13, 2017

Available at (open access): <https://link.springer.com/article/10.1186/s40172-016-0051-y>

Title:

Perry, A. (2017). *Are over-qualified immigrants mismatched according to their actual skills? An international comparison of labor market placement in OECD countries*. GESIS Papers No. 2017|19. Cologne: GESIS - Leibniz-Institute for the Social Sciences. Retrieved December 12, 2017, from <http://www.ssoar.info/ssoar/handle/document/52592>

Abstract:

Previous research finds that immigrants are more often over-qualified than natives. Reasons can be imperfect transferability and signaling of skills. However, over-qualification does not necessarily imply that someone is over-skilled when it comes to actual skills and vice versa. The Programme for the International Assessment of Adult Competencies (PIAAC 2012) provides most recent data on basic skills of the working-age population. With this data I examine numeracy mismatch of first generation immigrants and natives in 13 OECD countries. My results suggest that especially non-native speaking immigrant workers have difficulties finding employment that aligns with their skill level. This results in genuine mismatch of immigrants, meaning that they are more often over-qualified than native workers and at the same time (comparing individuals at the same skill level) more often over-skilled. Hence, their skills are not put into effective use. These findings differ across occupations.

Published: 2017

Available at (open access): <http://www.ssoar.info/ssoar/handle/document/52592>

Title:

Rammstedt, B., Danner, D., & Lechner, C. (2017). Personality, competencies, and life outcomes: Results from the German PIAAC longitudinal study. *Large-scale Assessments in Education*, 5(2). doi:10.1186/s40536-017-0035-9

Abstract:

The present paper investigates the power of personality to predict important life outcomes in the context of the Programme for the International Assessment of Adult Competencies (PIAAC). On the most global level, personality can be described by the Big Five dimensions, Extraversion, Agreeableness, Conscientiousness, Emotional Stability, and Openness to Experience. These five dimensions were assessed in the German PIAAC longitudinal study (N = 4,122) and can thus be directly related to the central competence and outcome indicators measured in PIAAC. In a first step, we report the relationships between the Big Five dimensions and the basic competencies literacy and numeracy. In a second step, we investigate the extent to which the five personality dimensions can contribute to explaining six important life outcomes, above and beyond competencies and sociodemographic characteristics. Our results indicate that personality is substantially related to all six life outcomes. The portion of variance explained by personality was similar to, and sometimes larger than, that explained by competencies. After adjusting for competencies, personality was incrementally predictive of life satisfaction and health, in particular, and, to a lesser extent, of educational attainment, employment status, and income. The only outcome of which personality was not incrementally predictive over and above competencies was participation in continuing education. Overall, these findings highlight the merit of including measures for the Big Five personality domains in upcoming cycles of PIAAC.

Published: 2017

Available at (open access): <https://link.springer.com/article/10.1186/s40536-017-0035-9>

Title:

Rammstedt, B. & Maehler, D.B. (2017). *The International Conference on PIAAC and PIAAC-Longitudinal*. Proceeding. Mannheim: GESIS - Leibniz-Institute for the Social Sciences. Retrieved October 27, 2017, from https://www.gesis.org/fileadmin/upload/PIAAC_Konferenz/PIAAC_Conference_Booklet_2017.pdf

Abstract:

The conference focuses on scientific work based on the international data of the first cycle of PIAAC and especially on analyses of the German PIAAC longitudinal follow-up, PIAACL. The conference program reflects the broad and interdisciplinary focus of PIAAC. Particularly the contributions based on the PIAAC-L data offer first insights into the longitudinal effects of and on the PIAAC skills. The conference not only provides the opportunity to learn about adult skills, but, beyond that, it also enables networking and thus provides the ground for future joint research and practice. Eventually, we aim to inspire additional work based on the extensive PIAAC and PIAAC-L data and to provide insights into design and measurement alternatives for the upcoming second cycle of PIAAC.

Published: 2017

Available at (open access): https://www.gesis.org/fileadmin/upload/PIAAC_Konferenz/PIAAC_Conference_Booklet_2017.pdf

Title:

Rammstedt, B., Martin, S., Zabal, A., Carstensen, C., & Schupp, J. (2017). The PIAAC longitudinal study in Germany: Rationale and design. *Large-scale Assessments in Education*, 5(4). doi:10.1186/s40536-017-0040-z

Abstract:

In Germany, the respondents who had participated in the 2012 survey of the Programme for the International Assessment of Adult Competencies (PIAAC) were re-approached for the panel study PIAAC-L. PIAAC-L aims at investigating the longitudinal effects of skill outcomes over the life course and the development of the key skills assessed in PIAAC. Moreover, additional and alternative background information was collected and analyzed within PIAAC-L. PIAAC-L consists of three follow-up waves to the initial PIAAC 2012 survey. The present paper describes the rationale for PIAAC-L and the benefits of conducting a longitudinal PIAAC follow-up study in Germany. In addition, we outline the general design of PIAAC-L and the specific design of the three waves of data collection. Finally, we address the analytic potential of PIAAC-L data set and its availability to the scientific community.

Published: January 31, 2017

Available at (open access):

<https://largescaleassessmentsineducation.springeropen.com/articles/10.1186/s40536-017-0040-z>

Title:

Romero, L. M., Murillo Huertas, I. P., & Salinas Jiménez M. (2017). Wage effects of cognitive skills and educational mismatch in Europe. *Journal of Policy Modeling*, 39(5), 909-927. doi:10.1016/j.jpolmod.2017.08.001

Abstract:

This paper analyzes the returns to education and educational mismatch in thirteen European countries taking account not only of years of education but also of cognitive skills actually acquired by workers. Using the PIAAC database, our results suggest that both years of education and skills contribute to determine wages, with higher returns to years of education as the level of skills increases. Educational and skills mismatches appear to be two different phenomena, with educational mismatch lying behind wages. It is also found that the higher the level of skills achieved by an individual, the higher the returns to years of required education or to years of overeducation. Policy implications are derived as regards educational mismatch, which reflects inefficiencies in the allocation of the educational resources, and as regards the relevance of cognitive skills, leaving room for improving the quality of education to fully take advantage of educational investments.

Published: 2017

Available at: <http://www.sciencedirect.com/science/article/pii/S0161893817300868>

Title:

Scandurra, R., & Calero, J. (2017). Modelling adult skills in OECD countries. *British Educational Research Journal*, 43(4), 781-804. doi:10.1002/berj.3290

Abstract:

Research in the social sciences has focused extensively on the relationship between family background, educational attainment and social destination, on the one hand, and on the processes of skills creation and skills use, on the other. This paper brings these two branches of the literature together by examining the correlation between a range of social factors. The methodology we adopt provides a comprehensive approach to the study of the channels through which literacy skills are acquired, taking into account the interrelation of family background, educational attainment, and the use of skills at work and at home. We use the Programme of International Assessment of Adult Competences (PIAAC) dataset and apply a structural equation model (SEM). Our results show that family background and education play an important role in the configuration of adult skills and skill practices. Unequal family access to resources has a strong impact at later stages in life and strongly affects educational attainment and skills outcomes. Additionally, skills use has a positive and direct impact on adult skills.

Published: May 15, 2017

Available at: <http://onlinelibrary.wiley.com/doi/10.1002/berj.3290/abstract>

Title:

Schnepf, S. V. (2017). How do tertiary dropouts fare in the labour market? A comparison between EU countries. *Higher Education Quarterly*, 71(1), 75-96. doi:10.1111/hequ.12112

Abstract:

Dropping out of university is regularly discussed as a negative indicator. However, research on actual career trajectories of dropouts is virtually non-existent. This study estimates the association between tertiary dropouts and career chances in 15 European countries. Using data from the 2011 Programme for the International Assessment of Adult Competencies (PIAAC), estimates are derived from the application of propensity score matching taking a variety of individual background characteristics including cognitive skills into account. Results indicate that individuals are likely to fare better in the labour market if they enrol in university and drop out than if they do not enrol at all. Policy makers need to revise the notion that dropping out is purely negative.

Published: January 02, 2017

Available at: <http://onlinelibrary.wiley.com/doi/10.1111/hequ.2017.71.issue-1/issuetoc>

Title:

Tverdostup, M., & Paas, T. (2017). Gender-specific human capital: identification and quantifying its wage effects. *International Journal of Manpower*, 38(6), 854-874. doi:10.1108/IJM-05-2016-0111

Abstract:

Purpose: The purpose of this paper is to better understand the possible reasons behind gender pay disparities, focussing on the unique features of male and female human capital and their wage returns. Despite increasing convergence of male and female human capital attainments, substantial differences remain. Extraction of human capital components non-overlapping across genders provides more profound explanation of the unexplained wage gap of men and women.

Design/methodology/approach: Starting with the non-parametric matching-based decomposition technique, the authors extend the pay gap estimation framework and focus on males and females having no counterpart in a set of characteristics within the opposite gender. The authors identify gen-

der-unique human capital in terms of differences in distribution of individual characteristics across men and women and gender-specific combination of human capital characteristics. Wage returns to gender-specific profiles are evaluated applying wage regression on both full distribution of earnings and wage quantiles. The research relies on the Survey of Adult Skills (PIAAC) database for Estonia, which incorporates both formal education and cognitive skill records.

Findings: The study identifies sets of characteristics and competencies exclusive for both genders, proving that male and female profiles cannot be directly compared. The results suggest that men possess high individual and combined abilities in numeracy and problem solving in technology-rich environment, not always reached by females. This potentiates men's higher earnings in spite of their generally lower formal educational attainments. Wage gap analysis over the full distribution of earnings shows even larger "glass ceiling" effect for females, possessing woman-specific human capital.

Originality/value: The authors raise a research from a novel perspective towards a role of human capital in gender wage inequality. Instead of usual reference to observable gaps in male and female characteristics, the authors identify the gender-specific human capital profiles, to a large extent non-reached by the opposite gender. Analysed associations between gender-specific characteristics and earnings provide an insight to possible effects of gender-unique human capital on a male-female wage disparity.

Published: 2017

Available at: <http://www.emeraldinsight.com/doi/pdfplus/10.1108/IJM-05-2016-0111>

Title:

Vera-Toscano, E., Rodrigues, M., & Costa, P. (2017). Beyond educational attainment: The importance of skills and lifelong learning for social outcomes. Evidence for Europe from PIAAC. *European Journal of Education*, 52(2), 217-231. doi:10.1111/ejed.12211

Abstract:

Empirical evidence suggests that educational attainment nurtures people's social outcomes and promotes active participation in society and stability. However, it is unclear to what extent other types of human capital also correlate with social outcomes. Hence, we explored the opportunity offered by the PIAAC survey through its provision of information on educational attainment, observed individual key skills proficiency, and participation in adult education and training (adult lifelong learning). We therefore studied the association between these human capital variables and social outcomes, and more specifically interpersonal trust and participation in volunteering activities. Results revealed that these social outcomes were affected not only by the formal qualification obtained, determined by the education variable, but also throughout the life-cycle. Indeed, education and training when undertaken during adult life have a significant impact, especially on volunteering. The fact that the skill proficiency also plays a significant role is extremely relevant, as skills are more likely to change over the life-cycle, either in a positive or negative way. Whilst the formal education received is constant after exiting the educational system, skills reflect competences more accurately: first, because those with the same level of education may have different skill levels because of differences in the quality of education or ability; second, because skills can vary over time. For example, they may increase with work experience or informal education, or decrease as a result of depreciation and ageing. These findings suggest that social outcomes are prone to be affected by many factors other than formal education, suggesting that policy makers can implement recommendations even after formal education has been completed.

Published: April 11, 2017

Available at (open access): <http://onlinelibrary.wiley.com/doi/10.1111/ejed.12211/full>

Title:

Yasukawa, K., Hamilton, M., & Evans, J. (2017). A comparative analysis of national media responses to the OECD Survey of Adult Skills: Policy making from the global to the local? *Compare: A Journal of Comparative and International Education*, 47(2), 271-285. doi:10.1080/03057925.2016.1158644

Abstract:

The Organization for Economic Co-operation and Development's (OECD) Programme of International Assessment of Adult Competencies (PIAAC) is put forward as a landmark development in the lifelong monitoring and international comparison of education. The first round of PIAAC's Survey of Adult Skills compared performance in literacy, numeracy and problem solving in technology-rich environments across 24 countries. However, the translation of any OECD agenda into national policies is mediated by many actors, including the media. This paper examines and compares how the national media of Japan, England and France reported on the PIAAC results of their countries and the extent to which these reports mirror key messages from the OECD's *Country Notes*. It begins to trace how the OECD PIAAC agendas materialise into national policies. Although their role in this initial period was limited, we argue the roles of the media together with other policy actors must be monitored as they interact to shape possibilities for sustainable adult education policies.

Published: 2017

Available at:

<http://www.tandfonline.com/doi/full/10.1080/03057925.2016.1158644?scroll=top&needAccess=true>

3 Data files and technical reports on PIAAC

3.1 Technical reports in 2011

Title:

Organisation for Economic Co-operation and Development (OECD). (2011). *PIAAC conceptual framework of the background questionnaire main survey*. Paris: OECD. Retrieved October 27, 2017, from: [http://www.oecd.org/skills/piaac/PIAAC\(2011_11\)MS_BQ_ConceptualFramework_1%20Dec%202011.pdf](http://www.oecd.org/skills/piaac/PIAAC(2011_11)MS_BQ_ConceptualFramework_1%20Dec%202011.pdf)

Abstract:

PIAAC conceptual framework of the background questionnaire main survey 2011/2012.

Published: 2011

Available at (open access):

[http://www.oecd.org/skills/piaac/PIAAC\(2011_11\)MS_BQ_ConceptualFramework_1%20Dec%202011.pdf](http://www.oecd.org/skills/piaac/PIAAC(2011_11)MS_BQ_ConceptualFramework_1%20Dec%202011.pdf)

3.2 Technical reports in 2013

Title:

Hogan, J., Montalvan, P., Diaz-Hoffmann, L., Dohrmann, S., Krenzke, T., Lemay, M., Mohadjer, L., & Thornton, N. (2013). *Program for the International Assessment of Adult Competencies 2012: U.S. Main study technical report* (NCES2014-047). U.S. Department of Education. Washington, DC: National Center for Education Statistics. Retrieved October 27, 2017, from <https://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2014047>

Abstract:

Program for the International Assessment of Adult Competencies (PIAAC) 2012: U.S. Main Study Technical Report is a technical manual that describes how these data were collected and processed as well as how to use the data files to conduct statistical analyses. Information is presented on meeting PIAAC consortium requirements, sample design, listing of dwelling units, data collection, reducing the risk of data disclosure, the need for conducting a nonresponse bias analysis, weighting and variance estimation, and data preparation and processing. The appendices of the Technical Report include background questionnaire adaptations, data collection reports, interviewer training reports, outreach materials, interviewer debriefing report, basic analysis tables, extended analysis tables, weighted item response rates, technical notes, and data user guidance.

Published: 2013

Available at (open access): <https://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2014047>

Title:

Martin, S., Zabal, A., Helmschrott, S., Ackermann, D., Massing, N., Rammstedt, B., & Häder, S. (2013). Qualitätssicherung, Design und Datenqualität. In B. Rammstedt (Ed.), *Grundlegende Kompetenzen Erwachsener im internationalen Vergleich – Ergebnisse von PIAAC 2012* (pp. 167-183). Münster: Waxmann.

Abstract:

The Programme for the International Assessment of Adult Competencies, PIAAC, aims at producing high-quality data. This chapter summarizes the core features of the international and national design under which the study was conducted in order to reach this goal. The international PIAAC consortium elaborated a set of comprehensive standards and guidelines and by that provided a framework of best practices in survey methodology. Participating countries had to adhere to these standards and were supposed to implement them given their national circumstances. In the first sections of this chapter the survey instruments, the survey design as well as scaling and the estimation of plausible values at the international level are briefly described. Subsequently, information is provided on sampling and data collection in Germany. A total of 5 465 individuals participated in PIAAC Germany, which corresponds to a response rate of 55% that exceeds the international minimum response rate of 50%. Survey weighting was implemented to minimize the total survey error and the potential for bias. Nonresponse bias analyses were conducted to further ensure quality assurance

Published: 2013

Available at (open access, full text):

https://www.gesis.org/fileadmin/piaac/Downloadbereich/PIAAC_Ebook.pdf

Title:

Organisation for Economic Co-operation and Development (OECD). (2013). *Technical report of the Survey of Adult Skills (PIAAC) (2013)*. Paris: OECD. Retrieved October 20, 2017, from http://www.oecd.org/skills/piaac/_Technical%20Report_17OCT13.pdf

Abstract: Technical report of PIAAC. [Note from editors]

Published: 2013

Available at (open access): http://www.oecd.org/skills/piaac/_Technical%20Report_17OCT13.pdf

3.3 Data files and technical reports in 2014

Title:

Organisation for Economic Co-operation and Development (OECD). (2014). *PIAAC technical standards and guidelines*. Paris: OECD. Retrieved October 20, 2017, from [http://www.oecd.org/skills/piaac/PIAAC-NPM\(2014_06\)PIAAC_Technical_Standards_and_Guidelines.pdf](http://www.oecd.org/skills/piaac/PIAAC-NPM(2014_06)PIAAC_Technical_Standards_and_Guidelines.pdf)

Abstract: Reports the technical standards and guidelines of PIAAC. [Note from editors]

Published: 2014

Available at: [http://www.oecd.org/skills/piaac/PIAAC-NPM\(2014_06\)PIAAC_Technical_Standards_and_Guidelines.pdf](http://www.oecd.org/skills/piaac/PIAAC-NPM(2014_06)PIAAC_Technical_Standards_and_Guidelines.pdf)

Title:

Statistics Austria (2014). *Programme for the International Assessment of Adult Competencies (PIAAC), Scientific Use File PIAAC 2011/12 for Austria*. Vienna: Statistics Austria.

Abstract:

The Austrian PIAAC Public Use File excluded certain variables (for example some of the national adaptations) and did not release some variables in all the available detail. The majority of the variables were suppressed or coarsened to adhere with national privacy legislation. The Austrian PIAAC Scientific Use File includes many of the suppressed variables and also releases other variables in full detail (e.g. age or income).

Published: October 2014

Available at:

http://www.statistik.at/web_en/statistics/PeopleSociety/education_culture/survey_of_adult_skills/public_use_data_files_of_the_piaac_survey_2011_12/index.html

Title:

Zabal, A., Martin, S., Massing, N., Ackermann, D., Helmschrott, S., Barkow, I., & Rammstedt, B. (2014). *PIAAC Germany 2012: Technical report*. Münster: Waxmann.

Abstract:

The Programme for the International Assessment of Adult Competencies (PIAAC) is a large-scale initiative of the Organization for Economic Cooperation and Development (OECD) that aims at assessing key adult competencies considered important for individual and societal success. This technical report describes how the PIAAC survey was conducted in Germany.

It provides information on the PIAAC instruments: the background questionnaire and the cognitive assessment. Furthermore, it describes sampling, fieldwork, weighting, and nonresponse bias analyses. The report concludes with an overview of the data management processes and data products as well as a brief evaluation of the overall data quality.

Published: 2014

Available at (open access): <http://www.ssoar.info/ssoar/handle/document/50410>

3.4 Data files and technical reports in 2015

Title:

Solga, H. & Heisig, J. P. (2015). *Programme for the International Assessment of Adult Competencies (PIAAC), Germany - Prime Age (2012)*. Data file version 1.1.0 [ZA5951]. Cologne: GESIS Data Archive. doi:10.4232/1.12386

Abstract:

This data set contains an additional national oversample of 26- to 55-year-old adults in former East Germany. 560 additional respondents were surveyed using the same procedures, instruments, and assessments that were used for the PIAAC Main Study in Germany. Finally the data was appended to the PIAAC main data (only 26- to 55-year-olds). [Note from editors]

Published: November 18, 2015

Available at: <https://dbk.gesis.org/DBKSearch/SDESC2.asp?no=5951&tdb=E>

Title:

Statistics Austria (2015). *Programme for the International Assessment of Adult Competencies (PIAAC), Public Use File Extended PIAAC 2011/12 for Austria*. Vienna: Statistics Austria.

Abstract:

For Austria, a Public-Use File Extended is provided with additional national education variables by Statistics Austria free of charge. When downloading these microdata the user accepts the pertaining Data Use Agreement.

Published: March 2015

Available at:

http://www.statistik.at/web_en/statistics/PeopleSociety/education_culture/survey_of_adult_skills/public_use_data_files_of_the_piaac_survey_2011_12/index.html

3.5 Data files and technical reports in 2016

Title:

Hogan, J., Thornton, N., Diaz-Hoffmann, L., Mohadjer, L., Krenzke, T., Li, J., Van De Kerckhove, W., Yamamoto, K., and Khorramdel, L. (2016). *U.S. Program for the International Assessment of Adult Competencies (PIAAC). 2012/2014: Main Study and National Supplement Technical Report* (NCES 2016-036). Washington, DC: National Center for Education Statistics. Retrieved December 12, 2017, from <https://nces.ed.gov/pubs2016/2016036.pdf>

Abstract:

This technical report replaces the Program for the International Assessment of Adult Competencies (PIAAC) 2012: U.S. Main Study Technical Report (NCES 2014-047) as it combines information from both, the U.S. PIAAC 2012 Main Study and U.S. PIAAC 2014 National Supplement data collection efforts. This report includes detailed information on the Main Study and National Supplement sample

design, survey instruments used for data collection, the data collection process and quality of the data, weighting, scaling, and data analysis.

Published: September, 2016

Available at (open access): <https://nces.ed.gov/pubs2016/2016036.pdf>

Available at (open access): <https://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2016036REV>

Title:

Hogan, J., Thornton, N., Diaz-Hoffmann, L., Mohadjer, L., Krenzke, T., Li, J., & Van De Kerckhove, W. (2016). *Program for the International Assessment of Adult Competencies (PIAAC) 2014: U.S. National Supplement Public Use Data Files-Prison*. Washington, DC: National Center for Education Statistics.

Abstract:

The 2014 PIAAC U.S. Prison Study Public Use File (PUF) contains individual unit record data including responses to both the background questionnaire and the cognitive assessment from the data collection completed in 2014. Statistical disclosure control treatments were applied due to confidentiality concerns. For more details on the Prison Study PUF, please refer to Appendix E of the U.S. PIAAC Technical Report 2012/2014 (NCES 2016-036).

Published: November 15, 2016

Available at (open access): <https://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2016337>

Title:

Hogan, J., Thornton, N., Diaz-Hoffmann, L., Mohadjer, L., Krenzke, T., Li, J., & Van De Kerckhove, W. (2016). *Program for the International Assessment of Adult Competencies (PIAAC) 2014: U.S. National Supplement Restricted Use Data Files-Prison*. Washington, DC: National Center for Education Statistics.

Abstract:

The 2014 PIAAC U.S. Prison Study Restricted Use File (RUF) contains individual unit record data including responses to both the background questionnaire and the cognitive assessment from the data collection completed in 2014. Statistical disclosure control treatments were applied due to confidentiality concerns. In addition to the variables in the Prison Study PUF (NCES 2016-337), the RUF contains detailed versions of variables and additional data collected through U.S. specific questionnaire routing. The RUF can be accessed through a restricted use license agreement with the National Center for Education Statistics. For more details on the RUF, please refer to Appendix E of the U.S. PIAAC Technical Report 2012/2014 (NCES 2016-036) with additional details on the prison variables found in the Addendum to the Technical Report (NCES 2016-036).

Published: November 15, 2016

Available at (open access): <https://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2016058>

Title:

Holtzman, S., Kandathil, M., Kapur, L., Kline, D., Barone, J., Li, L., Krenzke, T., Hogan, J., Mohadjer, L., Carstens, R., Koehler, H. & Daniel, T. (2016). *Program for the International Assessment of Adult Com-*

petencies (PIAAC) 2012/2014: U.S. National Supplement Public Use Data Files-Household. Washington, DC: National Center for Education Statistics.

Abstract:

The PIAAC 2012/14 U.S. PUF contains individual unit record data including both responses to the background questionnaire and the cognitive assessment from both the first and second U.S. PIAAC data collections, completed in 2012 and 2014, respectively. In September 2017, the PUF was reissued, with an [Errata Sheet](#) detailing the revisions. Statistical disclosure control treatments were applied due to confidentiality concerns. For more details on the PUF, please refer to Appendix E of the U.S. PIAAC Technical Report (NCES 2016-036REV).

Published: September 15, 2016

Available at (open access): <https://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2016667REV>

Title:

Holtzman, S., Kandathil, M., Kapur, L., Kline, D., Barone, J., Li, L., Krenzke, T., Hogan, J., Mohadjer, L., Carstens, R., Koehler, H. & Daniel, T. (2016). *Program for the International Assessment of Adult Competencies (PIAAC) 2012/2014: U.S. National Supplement Restricted Use Data Files-Household*. Washington, DC: National Center for Education Statistics.

Abstract:

The PIAAC 2012/14 U.S. RUF contains individual unit record data including both responses to the background questionnaire and the cognitive assessment from both the first and second U.S. PIAAC data collections, completed in 2012 and 2014, respectively. Statistical disclosure control treatments were applied due to confidentiality concerns. In addition to the variables in the PUF (NCES 2014-667REV), the RUF contains detailed versions of variables and additional data collected through U.S. specific questionnaire routing. The RUF can be accessed through a restricted use license agreement with the National Center for Education Statistics. For more details on the RUF, please refer to Appendix E of the U.S. PIAAC Technical Report (NCES 2016-036REV).

Published: September 15, 2016

Available at (open access): <https://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2016668REV>

Title:

Michaelidou-Evripidou, A., Modestou, M., Karagiorgi, Y., Polydorou, A., Nicolaidou, M., Afantiti-Lamprianou, T., Kendeou, P., Tsouris, C., Loukaides, C. (2016). *Programme for the International Assessment of Adult Competencies (PIAAC), Cyprus*. Data file version 1.1.0 [ZA5650]. Cologne: GESIS Data Archive. doi:10.4232/1.12632

Abstract:

The Cyprus Public Use File contains responses to the background questionnaire and the cognitive assessment (literacy, numeracy and problem solving in technology-rich environments). The data is available in SPSS and Stata format for free download.

Published: September 15, 2016 (updated version)

Available at (open access):

<https://dbk.gesis.org/DBKSearch/SDESC2.asp?no=5650&tdb=E>

Title:

Organisation for Economic Co-operation and Development (OECD) (2016). *Programme for the International Assessment of Adult Competencies (PIAAC), Austria Public Use File* (Version: 17343010, prgautp1.sav³). Paris: OECD Publishing.

Abstract:

Public Use Files containing individual unit record data in SAS, SPSS and Excel format are available for downloading for each of the countries participating in the Survey of Adult Skills. These contain both responses to the background questionnaire and the cognitive assessment (literacy, numeracy and problem solving in technology-rich environments).

Published: September 16, 2016 (updated version)

Available at (open access): <http://vs-web-fs-1.oecd.org/piaac/puf-data>

Title:

Organisation for Economic Co-operation and Development (OECD) (2016). *Programme for the International Assessment of Adult Competencies (PIAAC), Belgium Public Use File* (Version: 18224205, prgbelp1.sav⁴). Paris: OECD Publishing.

Abstract:

Public Use Files containing individual unit record data in SAS, SPSS and Excel format are available for downloading for each of the countries participating in the Survey of Adult Skills. These contain both responses to the background questionnaire and the cognitive assessment (literacy, numeracy and problem solving in technology-rich environments).

Published: September 16, 2016 (updated version)

Available at (open access): <http://vs-web-fs-1.oecd.org/piaac/puf-data>

Title:

Organisation for Economic Co-operation and Development (OECD) (2016). *Programme for the International Assessment of Adult Competencies (PIAAC), Canada Public Use File* (Version: 88830378, prgcanp1.sav⁵). Paris: OECD Publishing.

Abstract:

Public Use Files containing individual unit record data in SAS, SPSS and Excel format are available for downloading for each of the countries participating in the Survey of Adult Skills. These contain both responses to the background questionnaire and the cognitive assessment (literacy, numeracy and problem solving in technology-rich environments).

Published: September 16, 2016 (updated version)

³ Please note that this citation refers to the SPSS format. If other formats are used version and filename have to be adjusted accordingly.

⁴ Please note that this citation refers to the SPSS format. If other formats are used version and filename have to be adjusted accordingly.

⁵ Please note that this citation refers to the SPSS format. If other formats are used version and filename have to be adjusted accordingly.

Available at (open access): <http://vs-web-fs-1.oecd.org/piaac/puf-data>

Title:

Organisation for Economic Co-operation and Development (OECD) (2016). *Programme for the International Assessment of Adult Competencies (PIAAC), Chile Public Use File* (Version: 17135698, prgchlp1.sav⁶). Paris: OECD Publishing.

Abstract:

Public Use Files containing individual unit record data in SAS, SPSS and Excel format are available for downloading for each of the countries participating in the Survey of Adult Skills. These contain both responses to the background questionnaire and the cognitive assessment (literacy, numeracy and problem solving in technology-rich environments).

Published: September 16, 2016 (updated version)

Available at (open access): <http://vs-web-fs-1.oecd.org/piaac/puf-data>

Title:

Organisation for Economic Co-operation and Development (OECD) (2016). *Programme for the International Assessment of Adult Competencies (PIAAC), Germany Public Use File* (Version: 18834098, prgdeup1.sav⁷). Paris: OECD Publishing.

Abstract:

Public Use Files containing individual unit record data in SAS, SPSS and Excel format are available for downloading for each of the countries participating in the Survey of Adult Skills. These contain both responses to the background questionnaire and the cognitive assessment (literacy, numeracy and problem solving in technology-rich environments).

Published: September 16, 2016 (updated version)

Available at (open access): <http://vs-web-fs-1.oecd.org/piaac/puf-data>

Title:

Organisation for Economic Co-operation and Development (OECD) (2016). *Programme for the International Assessment of Adult Competencies (PIAAC), Czech Republic Public Use File* (Version: 20736629, prgczep1.sav⁸). Paris: OECD Publishing.

Abstract:

Public Use Files containing individual unit record data in SAS, SPSS and Excel format are available for downloading for each of the countries participating in the Survey of Adult Skills. These contain both

⁶ Please note that this citation refers to the SPSS format. If other formats are used version and filename have to be adjusted accordingly.

⁷ Please note that this citation refers to the SPSS format. If other formats are used version and filename have to be adjusted accordingly.

⁸ Please note that this citation refers to the SPSS format. If other formats are used version and filename have to be adjusted accordingly.

responses to the background questionnaire and the cognitive assessment (literacy, numeracy and problem solving in technology-rich environments).

Published: September 16, 2016 (updated version)

Available at (open access): <http://vs-web-fs-1.oecd.org/piaac/puf-data>

Title:

Organisation for Economic Co-operation and Development (OECD) (2016). *Programme for the International Assessment of Adult Competencies (PIAAC), Denmark Public Use File* (Version: 24972525, prgdnkp1.sav⁹). Paris: OECD Publishing.

Abstract:

Public Use Files containing individual unit record data in SAS, SPSS and Excel format are available for downloading for each of the countries participating in the Survey of Adult Skills. These contain both responses to the background questionnaire and the cognitive assessment (literacy, numeracy and problem solving in technology-rich environments).

Published: September 16, 2016 (updated version)

Available at (open access): <http://vs-web-fs-1.oecd.org/piaac/puf-data>

Title:

Organisation for Economic Co-operation and Development (OECD) (2016). *Programme for the International Assessment of Adult Competencies (PIAAC), Spain Public Use File* (Version: 20201797, prgespp1.sav¹⁰). Paris: OECD Publishing.

Abstract:

Public Use Files containing individual unit record data in SAS, SPSS and Excel format are available for downloading for each of the countries participating in the Survey of Adult Skills. These contain both responses to the background questionnaire and the cognitive assessment (literacy, numeracy and problem solving in technology-rich environments).

Published: September 16, 2016 (updated version)

Available at (open access): <http://vs-web-fs-1.oecd.org/piaac/puf-data>

Title:

Organisation for Economic Co-operation and Development (OECD) (2016). *Programme for the International Assessment of Adult Competencies (PIAAC), Estonia Public Use File* (Version: 25276973, prgestp1.sav¹¹). Paris: OECD Publishing.

⁹ Please note that this citation refers to the SPSS format. If other formats are used version and filename have to be adjusted accordingly.

¹⁰ Please note that this citation refers to the SPSS format. If other formats are used version and filename have to be adjusted accordingly.

Abstract:

Public Use Files containing individual unit record data in SAS, SPSS and Excel format are available for downloading for each of the countries participating in the Survey of Adult Skills. These contain both responses to the background questionnaire and the cognitive assessment (literacy, numeracy and problem solving in technology-rich environments).

Published: September 16, 2016 (updated version)

Available at (open access): <http://vs-web-fs-1.oecd.org/piaac/puf-data>

Title:

Organisation for Economic Co-operation and Development (OECD) (2016). *Programme for the International Assessment of Adult Competencies (PIAAC), Finland Public Use File* (Version: 18842845, prg-finp1.sav¹²). Paris: OECD Publishing.

Abstract:

Public Use Files containing individual unit record data in SAS, SPSS and Excel format are available for downloading for each of the countries participating in the Survey of Adult Skills. These contain both responses to the background questionnaire and the cognitive assessment (literacy, numeracy and problem solving in technology-rich environments).

Published: September 16, 2016 (updated version)

Available at (open access): <http://vs-web-fs-1.oecd.org/piaac/puf-data>

Title:

Organisation for Economic Co-operation and Development (OECD) (2016). *Programme for the International Assessment of Adult Competencies (PIAAC), France Public Use File* (Version: 23516989, prg-frap1.sav¹³). Paris: OECD Publishing.

Abstract:

Public Use Files containing individual unit record data in SAS, SPSS and Excel format are available for downloading for each of the countries participating in the Survey of Adult Skills. These contain both responses to the background questionnaire and the cognitive assessment (literacy, numeracy and problem solving in technology-rich environments).

Published: September 16, 2016 (updated version)

Available at (open access): <http://vs-web-fs-1.oecd.org/piaac/puf-data>

¹¹ Please note that this citation refers to the SPSS format. If other formats are used version and filename have to be adjusted accordingly.

¹² Please note that this citation refers to the SPSS format. If other formats are used version and filename have to be adjusted accordingly.

¹³ Please note that this citation refers to the SPSS format. If other formats are used version and filename have to be adjusted accordingly.

Title:

Organisation for Economic Co-operation and Development (OECD) (2016). *Programme for the International Assessment of Adult Competencies (PIAAC), United Kingdom Public Use File* (Version: 30110173, prggbrp1.sav¹⁴). Paris: OECD Publishing.

Abstract:

Public Use Files containing individual unit record data in SAS, SPSS and Excel format are available for downloading for each of the countries participating in the Survey of Adult Skills. These contain both responses to the background questionnaire and the cognitive assessment (literacy, numeracy and problem solving in technology-rich environments).

Published: September 16, 2016 (updated version)

Available at (open access): <http://vs-web-fs-1.oecd.org/piaac/puf-data>

Title:

Organisation for Economic Co-operation and Development (OECD) (2016). *Programme for the International Assessment of Adult Competencies (PIAAC), Greece Public Use File* (Version: 15965250, prg-grcp1.sav¹⁵). Paris: OECD Publishing.

Abstract:

Public Use Files containing individual unit record data in SAS, SPSS and Excel format are available for downloading for each of the countries participating in the Survey of Adult Skills. These contain both responses to the background questionnaire and the cognitive assessment (literacy, numeracy and problem solving in technology-rich environments).

Published: September 16, 2016 (updated version)

Available at (open access): <http://vs-web-fs-1.oecd.org/piaac/puf-data>

Title:

Organisation for Economic Co-operation and Development (OECD) (2016). *Programme for the International Assessment of Adult Competencies (PIAAC), Ireland Public Use File* (Version: 19982813, prgirlp1.sav¹⁶). Paris: OECD Publishing.

Abstract:

Public Use Files containing individual unit record data in SAS, SPSS and Excel format are available for downloading for each of the countries participating in the Survey of Adult Skills. These contain both responses to the background questionnaire and the cognitive assessment (literacy, numeracy and problem solving in technology-rich environments).

Published: September 16, 2016 (updated version)

¹⁴ Please note that this citation refers to the SPSS format. If other formats are used version and filename have to be adjusted accordingly.

¹⁵ Please note that this citation refers to the SPSS format. If other formats are used version and filename have to be adjusted accordingly.

¹⁶ Please note that this citation refers to the SPSS format. If other formats are used version and filename have to be adjusted accordingly.

Available at (open access): <http://vs-web-fs-1.oecd.org/piaac/puf-data>

Title:

Organisation for Economic Co-operation and Development (OECD) (2016). *Programme for the International Assessment of Adult Competencies (PIAAC), Israel Public Use File* (Version: 18069090, prgisrp1.sav¹⁷). Paris: OECD Publishing.

Abstract:

Public Use Files containing individual unit record data in SAS, SPSS and Excel format are available for downloading for each of the countries participating in the Survey of Adult Skills. These contain both responses to the background questionnaire and the cognitive assessment (literacy, numeracy and problem solving in technology-rich environments).

Published: September 16, 2016 (updated version)

Available at (open access): <http://vs-web-fs-1.oecd.org/piaac/puf-data>

Title:

Organisation for Economic Co-operation and Development (OECD) (2016). *Programme for the International Assessment of Adult Competencies (PIAAC), Italy Public Use File* (Version: 15433181, prgi-tap1.sav¹⁸). Paris: OECD Publishing.

Abstract:

Public Use Files containing individual unit record data in SAS, SPSS and Excel format are available for downloading for each of the countries participating in the Survey of Adult Skills. These contain both responses to the background questionnaire and the cognitive assessment (literacy, numeracy and problem solving in technology-rich environments).

Published: September 16, 2016 (updated version)

Available at (open access): <http://vs-web-fs-1.oecd.org/piaac/puf-data>

Title:

Organisation for Economic Co-operation and Development (OECD) (2016). *Programme for the International Assessment of Adult Competencies (PIAAC), Japan Public Use File* (Version: 17505957, prgjnp1.sav¹⁹). Paris: OECD Publishing.

Abstract:

Public Use Files containing individual unit record data in SAS, SPSS and Excel format are available for downloading for each of the countries participating in the Survey of Adult Skills. These contain both

¹⁷ Please note that this citation refers to the SPSS format. If other formats are used version and filename have to be adjusted accordingly.

¹⁸ Please note that this citation refers to the SPSS format. If other formats are used version and filename have to be adjusted accordingly.

¹⁹ Please note that this citation refers to the SPSS format. If other formats are used version and filename have to be adjusted accordingly.

responses to the background questionnaire and the cognitive assessment (literacy, numeracy and problem solving in technology-rich environments).

Published: September 16, 2016 (updated version)

Available at (open access): <http://vs-web-fs-1.oecd.org/piaac/puf-data>

Title:

Organisation for Economic Co-operation and Development (OECD) (2016). *Programme for the International Assessment of Adult Competencies (PIAAC), Korea Public Use File* (Version: 22217045, prgkorp1.sav²⁰). Paris: OECD Publishing.

Abstract:

Public Use Files containing individual unit record data in SAS, SPSS and Excel format are available for downloading for each of the countries participating in the Survey of Adult Skills. These contain both responses to the background questionnaire and the cognitive assessment (literacy, numeracy and problem solving in technology-rich environments).

Published: September 16, 2016 (updated version)

Available at (open access): <http://vs-web-fs-1.oecd.org/piaac/puf-data>

Title:

Organisation for Economic Co-operation and Development (OECD) (2016). *Programme for the International Assessment of Adult Competencies (PIAAC), Lithuania Public Use File* (Version: 17305986, prgltp1.sav²¹). Paris: OECD Publishing.

Abstract:

Public Use Files containing individual unit record data in SAS, SPSS and Excel format are available for downloading for each of the countries participating in the Survey of Adult Skills. These contain both responses to the background questionnaire and the cognitive assessment (literacy, numeracy and problem solving in technology-rich environments).

Published: September 16, 2016 (updated version)

Available at (open access): <http://vs-web-fs-1.oecd.org/piaac/puf-data>

Title:

Organisation for Economic Co-operation and Development (OECD) (2016). *Programme for the International Assessment of Adult Competencies (PIAAC), Netherlands Public Use File* (Version: 18028845, prgnldp1.sav²²). Paris: OECD Publishing.

²⁰ Please note that this citation refers to the SPSS format. If other formats are used version and filename have to be adjusted accordingly.

²¹ Please note that this citation refers to the SPSS format. If other formats are used version and filename have to be adjusted accordingly.

Abstract:

Public Use Files containing individual unit record data in SAS, SPSS and Excel format are available for downloading for each of the countries participating in the Survey of Adult Skills. These contain both responses to the background questionnaire and the cognitive assessment (literacy, numeracy and problem solving in technology-rich environments).

Published: September 16, 2016 (updated version)

Available at (open access): <http://vs-web-fs-1.oecd.org/piaac/puf-data>

Title:

Organisation for Economic Co-operation and Development (OECD) (2016). *Programme for the International Assessment of Adult Competencies (PIAAC), Norway Public Use File* (Version: 17723269, prgnorp1.sav²³). Paris: OECD Publishing.

Abstract:

Public Use Files containing individual unit record data in SAS, SPSS and Excel format are available for downloading for each of the countries participating in the Survey of Adult Skills. These contain both responses to the background questionnaire and the cognitive assessment (literacy, numeracy and problem solving in technology-rich environments).

Published: September 16, 2016 (updated version)

Available at (open access): <http://vs-web-fs-1.oecd.org/piaac/puf-data>

Title:

Organisation for Economic Co-operation and Development (OECD) (2016). *Programme for the International Assessment of Adult Competencies (PIAAC), New Zealand Public Use File* (Version: 21235362, prgnzlp1.sav²⁴). Paris: OECD Publishing.

Abstract:

Public Use Files containing individual unit record data in SAS, SPSS and Excel format are available for downloading for each of the countries participating in the Survey of Adult Skills. These contain both responses to the background questionnaire and the cognitive assessment (literacy, numeracy and problem solving in technology-rich environments).

Published: September 16, 2016 (updated version)

Available at (open access): <http://vs-web-fs-1.oecd.org/piaac/puf-data>

²² Please note that this citation refers to the SPSS format. If other formats are used version and filename have to be adjusted accordingly.

²³ Please note that this citation refers to the SPSS format. If other formats are used version and filename have to be adjusted accordingly.

²⁴ Please note that this citation refers to the SPSS format. If other formats are used version and filename have to be adjusted accordingly.

Title:

Organisation for Economic Co-operation and Development (OECD) (2016). *Programme for the International Assessment of Adult Competencies (PIAAC), Poland Public Use File* (Version: 30634733, prg-polp1.sav²⁵). Paris: OECD Publishing.

Abstract:

Public Use Files containing individual unit record data in SAS, SPSS and Excel format are available for downloading for each of the countries participating in the Survey of Adult Skills. These contain both responses to the background questionnaire and the cognitive assessment (literacy, numeracy and problem solving in technology-rich environments).

Published: September 16, 2016 (updated version)

Available at (open access): <http://vs-web-fs-1.oecd.org/piaac/puf-data>

Title:

Organisation for Economic Co-operation and Development (OECD) (2016). *Programme for the International Assessment of Adult Competencies (PIAAC), Russian Federation Public Use File* (Version: 13378965, prgrusp1.sav²⁶). Paris: OECD Publishing.

Abstract:

Public Use Files containing individual unit record data in SAS, SPSS and Excel format are available for downloading for each of the countries participating in the Survey of Adult Skills. These contain both responses to the background questionnaire and the cognitive assessment (literacy, numeracy and problem solving in technology-rich environments).

Published: September 16, 2016 (updated version)

Available at (open access): <http://vs-web-fs-1.oecd.org/piaac/puf-data>

Title:

Organisation for Economic Co-operation and Development (OECD) (2016). *Programme for the International Assessment of Adult Competencies (PIAAC), Singapore Public Use File* (Version: 18353722, prgsgpp1.sav²⁷). Paris: OECD Publishing.

Abstract:

Public Use Files containing individual unit record data in SAS, SPSS and Excel format are available for downloading for each of the countries participating in the Survey of Adult Skills. These contain both responses to the background questionnaire and the cognitive assessment (literacy, numeracy and problem solving in technology-rich environments).

Published: September 16, 2016 (updated version)

²⁵ Please note that this citation refers to the SPSS format. If other formats are used version and filename have to be adjusted accordingly.

²⁶ Please note that this citation refers to the SPSS format. If other formats are used version and filename have to be adjusted accordingly.

²⁷ Please note that this citation refers to the SPSS format. If other formats are used version and filename have to be adjusted accordingly.

Available at (open access): <http://vs-web-fs-1.oecd.org/piaac/puf-data>

Title:

Organisation for Economic Co-operation and Development (OECD) (2016). Programme for the International Assessment of Adult Competencies (PIAAC), *Slovak Republic Public Use File* (Version: 18921861, prgsvvp1.sav²⁸). Paris: OECD Publishing.

Abstract:

Public Use Files containing individual unit record data in SAS, SPSS and Excel format are available for downloading for each of the countries participating in the Survey of Adult Skills. These contain both responses to the background questionnaire and the cognitive assessment (literacy, numeracy and problem solving in technology-rich environments).

Published: September 16, 2016 (updated version)

Available at (open access): <http://vs-web-fs-1.oecd.org/piaac/puf-data>

Title:

Organisation for Economic Co-operation and Development (OECD) (2016). *Programme for the International Assessment of Adult Competencies (PIAAC), Slovenia Public Use File* (Version: 18125930, prgsvnp1.sav²⁹). Paris: OECD Publishing.

Abstract:

Public Use Files containing individual unit record data in SAS, SPSS and Excel format are available for downloading for each of the countries participating in the Survey of Adult Skills. These contain both responses to the background questionnaire and the cognitive assessment (literacy, numeracy and problem solving in technology-rich environments).

Published: September 16, 2016 (updated version)

Available at (open access): <http://vs-web-fs-1.oecd.org/piaac/puf-data>

Title:

Organisation for Economic Co-operation and Development (OECD) (2016). *Programme for the International Assessment of Adult Competencies (PIAAC), Sweden Public Use File* (Version: 15716978, prgswep1.sav³⁰). Paris: OECD Publishing.

Abstract:

Public Use Files containing individual unit record data in SAS, SPSS and Excel format are available for downloading for each of the countries participating in the Survey of Adult Skills. These contain both

²⁸ Please note that this citation refers to the SPSS format. If other formats are used version and filename have to be adjusted accordingly.

²⁹ Please note that this citation refers to the SPSS format. If other formats are used version and filename have to be adjusted accordingly.

³⁰ Please note that this citation refers to the SPSS format. If other formats are used version and filename have to be adjusted accordingly.

responses to the background questionnaire and the cognitive assessment (literacy, numeracy and problem solving in technology-rich environments).

Published: September 16, 2016 (updated version)

Available at (open access): <http://vs-web-fs-1.oecd.org/piaac/puf-data>

Title:

Organisation for Economic Co-operation and Development (OECD) (2016). *Programme for the International Assessment of Adult Competencies (PIAAC), Turkey Public Use File* (Version: 16765802, prgturp1.sav³¹). Paris: OECD Publishing.

Abstract:

Public Use Files containing individual unit record data in SAS, SPSS and Excel format are available for downloading for each of the countries participating in the Survey of Adult Skills. These contain both responses to the background questionnaire and the cognitive assessment (literacy, numeracy and problem solving in technology-rich environments).

Published: September 16, 2016 (updated version)

Available at (open access): <http://vs-web-fs-1.oecd.org/piaac/puf-data>

Title:

Organisation for Economic Co-operation and Development (OECD) (2016). *Programme for the International Assessment of Adult Competencies (PIAAC), United States Public Use File* (Version: 17016050, prgusap1.sav³²). Paris: OECD Publishing.

Abstract:

Public Use Files containing individual unit record data in SAS, SPSS and Excel format are available for downloading for each of the countries participating in the Survey of Adult Skills. These contain both responses to the background questionnaire and the cognitive assessment (literacy, numeracy and problem solving in technology-rich environments).

Published: September 16, 2016 (updated version)

Available at (open access): <http://vs-web-fs-1.oecd.org/piaac/puf-data>

Title:

Organisation for Economic Co-operation and Development (OECD). (2016). *Technical report of the Survey of Adult Skills (PIAAC) (2nd ed.)*. Paris: OECD. Retrieved October 20, 2017, from http://www.oecd.org/skills/piaac/PIAAC_Technical_Report_2nd_Edition_Full_Report.pdf

³¹ Please note that this citation refers to the SPSS format. If other formats are used version and filename have to be adjusted accordingly.

³² Please note that this citation refers to the SPSS format. If other formats are used version and filename have to be adjusted accordingly.

Abstract: Technical report of PIAAC. [Note from editors]

Published: 2016

Available at (open access):

http://www.oecd.org/skills/piaac/PIAAC_Technical_Report_2nd_Edition_Full_Report.pdf

Title:

Perry, A., & Rammstedt, B. (2016). The research data center PIAAC at GESIS. *Jahrbücher für Nationalökonomie und Statistik*, 236(5), 581-593. doi:10.1515/jbnst-2015-1024

Abstract:

With the Programme for the International Assessment of Adult Competencies (PIAAC) researchers can shed light on how competencies are acquired, how its use helps us maintain and further develop skills, and whether adults are prepared for the challenges of modern knowledge societies (OECD, 2013). The Organisation for Economic Co-operation and Development (OECD) initiated PIAAC in more than 30 countries to assess competencies of the adult population. Similar to the Programme for International Student Assessment (PISA), PIAAC is planned to be repeated in regular intervals. Therefore, the next cycle of PIAAC is planned for 2022. The OECD published the PIAAC international public use file of the first cycle of PIAAC (OECD, 2015) in 2013. Due to German confidentiality rules, GESIS published a scientific use file (Rammstedt et al., 2015) that includes information that could not be released in the public use file. Further national data and para data for PIAAC can shed light on further research questions as well as methodological aspects of PIAAC. This data is currently and will be made available in the Research Data Center PIAAC (RDC PIAAC) at GESIS. In addition to this, various add-on studies were and are currently being conducted in Germany, such as Competencies in Later Life (CiLL) and the longitudinal study PIAAC-L. However, the PIAAC data presents challenges due to imputed competency scores (plausible values) and country-specific complex sample techniques. The RDC PIAAC provides information on analytic methods and the available analysis tools. It also offers workshops to familiarize users with the data and to teach them how to analyze the PIAAC data. Given the brevity of the PIAAC data release, an impressive number of research papers were published that use PIAAC data. Research with PIAAC focuses, for example, on the returns to skills (e.g., Hanushek et al., 2015), skill and wage inequality (Paccagnella, 2015), skill mismatch (Allen et al., 2013; Perry et al., 2014), non-monetary outcomes, such as trust (Borgonovi & Burns, 2015), and also methodological aspects, such as incentives in large-scale assessments (Martin et al., 2014). This paper aims to present central aspects of PIAAC, analytical procedures for the competence measures and the complex sample design, as well as data, information and services provided through the RDC PIAAC at GESIS.

Published: 2017

Available at: <https://www.degruyter.com/view/j/jbnst.2016.236.issue-5/jbnst-2015-1024/jbnst-2015-1024.xml>

Title:

Perry, A. (2016). *Forschungsdatenzentrum PIAAC: Jahresbericht 2015; Berichtszeitraum 01.01.2015-31.12.2015*. GESIS Papers No. 2016/11. Cologne: GESIS - Leibniz-Institute for the Social Sciences. Retrieved December 12, 2017, from <http://www.ssoar.info/ssoar/handle/document/47751>

Abstract: Annual Report 2015 from Research Data Center PIAAC. Reporting period 01/01/2015 to 12/31/2015. [Note from editors]

Published: 2016

Available at (open access): <http://www.ssoar.info/ssoar/handle/document/47751>

Title:

Rammstedt, B., Martin, S., Zabal, A., Konradt, I., Maehler, D., Perry, A., . . . Helmschrott, S. (2016). *Programme for the International Assessment of Adult Competencies (PIAAC), Germany - Reduced version*. Data file version 2.2.0 [ZA5845]. Cologne: GESIS Data Archive. doi:10.4232/1.12660

Abstract:

The German PIAAC Public Use File excluded certain variables (for example some of the national adaptations) and did not release some variables in all the available detail. The majority of the variables were suppressed or coarsened to adhere with national privacy legislation. The German PIAAC Scientific Use File includes many of the suppressed variables and also releases other variables in full detail (e.g. age or income).

Published: October 25, 2016 (updated version)

Available at:

<https://dbk.gesis.org/DBKSearch/SDESC2.asp?no=5845&tdb=E>

Title:

Rammstedt, B., Martin, S., Zabal, A., Konradt, I., Maehler, D., Perry, A., . . . Helmschrott, S. (2016). *Programme for the International Assessment of Adult Competencies (PIAAC), Germany - Extended version - Regional data*. Data file version 1.0.0 [ZA5846]. Cologne: GESIS Data Archive. doi:10.4232/1.12560

Abstract:

This data set provides further detailed regional information, which were excluded from the regular PIAAC Scientific Use File (SUF) „PIAAC Germany - Reduced version" due to national data privacy legislation.

Published: June 10, 2016

Available at:

<https://dbk.gesis.org/DBKSearch/SDESC2.asp?no=5846&tdb=E>

Title:

Steinacker, G., Schmidt, S., Wolfert, S. & Schneekloth, U. (2016). *Durchführung der 1. Erhebungswelle von PIAAC-L (Kooperative längsschnittliche Weiterverfolgung der PIAAC-Studie in Deutschland): Feldbericht zur Erhebung 2014*. GESIS Papers No. 2016|05. Cologne: GESIS - Leibniz-Institute for the Social Sciences. Retrieved December 12, 2017, from <http://www.ssoar.info/ssoar/handle/document/47162>

Abstract: Field report of the PIAAC-L survey wave 1 (2015). [Note from editors]

Published: 2016

Available at (open access): <http://www.ssoar.info/ssoar/handle/document/47162>

Title:

Teltemann, J., & Schunck, R. (2016). Sozialwissenschaftliche Datensätze für Sekundäranalysen von Integrationsprozessen [Social science datasets for secondary analyses of integration processes]. In D. B. Maehler & H. U. Brinkmann (Eds.), *Methoden der Migrationsforschung* [Methods of migration research] (pp. 311-344). Wiesbaden: Springer VS.

Abstract:

This book contribution presents by way of example German and international (standardized) survey datasets in which the case numbers and information collected enable the identification and examination of the living situation – and thus the integration – of persons with a migration background in different areas of life. Both panel studies and cross-sectional – but often repeatedly conducted – surveys are presented. The aim of the contribution is to examine general possibilities for the secondary analysis of data on the integration of migrants and frequently occurring problems in this respect. The longitudinal studies NEPS and CILS4EU are presented in two separate contributions as they are complex and very important for the analysis of integration processes. In addition to details of the operationalization of migration background in the respective datasets and of the general design, the contribution provides information on data access and gives examples of research questions examined in relevant preliminary studies. The German Socio-Economic Panel (SOEP), the German Microcensus, and the international educational studies PISA and PIAAC are presented in greater detail. The datasets featured here are suitable for the analysis of a range of questions (especially integration-related questions). However, the generated findings can also be used as benchmarks for further primary surveys. Other sections of the contribution summarize general information on data types and sources at different levels of aggregation. [Translated on behalf of editors]

Published: 2016

Available at: https://link.springer.com/chapter/10.1007/978-3-658-10394-1_11

Title:

Zabal, A., Martin, S., & Rammstedt, B. (2016). *PIAAC-L data collection 2014: Technical report. Follow-up to PIAAC Germany 2012*. GESIS Papers No. 2016|17. Cologne: GESIS - Leibniz-Institute for the Social Sciences. Retrieved December 12, 2017, from <http://www.ssoar.info/ssoar/handle/document/49665>

Abstract: Technical report on the PIAAC-L survey wave 1 (2014). [Note from editors]

Published: 2016

Available at (open access): <http://www.ssoar.info/ssoar/handle/document/49665>

3.6 Data files and technical reports in 2017

Title:

Bartsch, S., Poschmann, K., & Burkhardt, L. (2017). *Weighting in PIAAC-L 2014*. GESIS Papers No. 2017|06. Cologne: GESIS - Leibniz-Institute for the Social Sciences. Retrieved December 12, 2017, from <http://www.ssoar.info/ssoar/handle/document/50569>

Abstract: Describes the weighting procedure in PIAAC-L wave 1. [Note from editors]

Published: 2017

Available at (open access): <http://www.ssoar.info/ssoar/handle/document/50569>

Title:

Friebe, J., Gebrande, J., Gnahn, D., Knauber, C., Schmidt-Hertha, B., Setzer, B., Tippelt, R., & Weiß, C. (2017). *Competencies in Later Life (CiLL) - Programme for the International Assessment of Adult Competencies (PIAAC), Germany*. Data file version 1.1.0 [ZA5969]. Cologne: GESIS Data Archive. doi:10.4232/1.12814

Abstract:

This data set builds upon the PIAAC Main Study in Germany and enhances the information available about the adult competencies and skills to the subgroup of the 66- to 80-year-olds. [Note from editors]

Published: June 20, 2017 (updated version)

Available at:

<https://dbk.gesis.org/DBKSearch/SDESC2.asp?no=5969&tdb=E>

Title:

GESIS – Leibniz Institute for the Social Sciences, German Socio-Economic Panel (SOEP) at DIW Berlin & LIfBi – Leibniz Institute for Educational Trajectories (2017). *PIAAC-Longitudinal (PIAAC-L), Germany*. Data file version 3.0.0 [ZA5989]. Cologne: GESIS Data Archive. doi:10.4232/1.12925

Abstract:

The German PIAAC-L study ("PIAAC-Longitudinal (PIAAC-L), Germany" [ZA5989]) is a collaborative effort undertaken by GESIS – Leibniz Institute for the Social Sciences (lead) together with the German Institute for Economic Research (DIW) and the Leibniz Institute for Educational Trajectories (LIfBi). It follows up the German PIAAC sample with three additional waves of data collection (in 2014, 2015, and 2016), each with a somewhat different focus. The PIAAC-L questionnaires are based on core instruments from the German Socio-Economic Panel (SOEP) and also include various additional questions and modules on the respondent's background. In addition, assessment instruments from PIAAC and the National Educational Panel Study (NEPS) measuring key competencies are implemented. The objective of the PIAAC-L project is to significantly expand the German PIAAC database by adding a longitudinal dimension and by enriching the depth and breadth of information available on the German PIAAC respondents.

Published: December 14, 2017 (updated version)

Available at:

<https://dbk.gesis.org/DBKSearch/SDESC2.asp?no=5989&tdb=E>

Title:

Maehler, D. B. & Konradt, I. (2017). *Forschungsdatenzentrum PIAAC: Jahresbericht 2016; Berichtszeitraum 01.01.2016–31.12.2016*. GESIS Papers No. 2017|14. Cologne: GESIS - Leibniz-Institute for the Social Sciences. Retrieved December 12, 2017, from <http://www.ssoar.info/ssoar/handle/document/52180>

Abstract:

Annual Report 2016 from Research Data Center PIAAC. Reporting period 01/01/2016 to 12/31/2016.

Published: 2017

Available at (open access): <http://www.ssoar.info/ssoar/handle/document/52180>

Title:

Organisation for Economic Co-operation and Development (OECD). (2017). *Programme for the International Assessment of Adult Competencies (PIAAC), log files*. Data file version 2.0.0 [ZA6712]. Cologne: GESIS Data Archive. doi:10.4232/1.12955

Abstract:

The PIAAC 2012 study was the first fully computer-based large scale assessment in education. During the assessment, user interactions were logged automatically. This means that most of the users' actions within the assessment tool were recorded and stored with time stamps in separate files called log files. The log files contain paradata for each participant in the domains literacy, numeracy, and problem solving in technology-rich environments. The availability of these log files offers new opportunities to researchers, for instance to reproduce test-taking behavior of individuals and to better understand test-taking behavior.

Published: December 22, 2017

Available at (open access): <https://dbk.gesis.org/DBKSearch/SDESC2.asp?no=6712&tdb=E>

Title:

Organisation for Economic Co-operation and Development (OECD). (2017). *Programme for the International Assessment of Adult Competencies (PIAAC), Austria log file*. Data file version 2.0.0 [ZA6712_AT.data.zip]. Cologne: GESIS Data Archive. doi:10.4232/1.12955

Abstract:

The PIAAC 2012 study was the first fully computer-based large scale assessment in education. During the assessment, user interactions were logged automatically. This means that most of the users' actions within the assessment tool were recorded and stored with time stamps in separate files called log files. The log files contain paradata for each participant in the domains literacy, numeracy, and problem solving in technology-rich environments. The availability of these log files offers new opportunities to researchers, for instance to reproduce test-taking behavior of individuals and to better understand test-taking behavior.

Published: December 22, 2017

Available at (open access): <https://dbk.gesis.org/DBKSearch/SDESC2.asp?no=6712&tab=3&db=E>

Title:

Organisation for Economic Co-operation and Development (OECD). (2017). *Programme for the International Assessment of Adult Competencies (PIAAC), Belgium log file*. Data file version 2.0.0 [ZA6712_BE.data.zip]. Cologne: GESIS Data Archive. doi:10.4232/1.12955

Abstract:

The PIAAC 2012 study was the first fully computer-based large scale assessment in education. During the assessment, user interactions were logged automatically. This means that most of the users' actions within the assessment tool were recorded and stored with time stamps in separate files called log files. The log files contain paradata for each participant in the domains literacy, numeracy, and problem solving in technology-rich environments. The availability of these log files offers new opportunities to researchers, for instance to reproduce test-taking behavior of individuals and to better understand test-taking behavior.

Published: December 22, 2017

Available at (open access): <https://dbk.gesis.org/DBKSearch/SDESC2.asp?no=6712&tab=3&db=E>

Title:

Organisation for Economic Co-operation and Development (OECD). (2017). *Programme for the International Assessment of Adult Competencies (PIAAC), Germany log file*. Data file version 2.0.0 [ZA6712_DE.data.zip]. Cologne: GESIS Data Archive. doi:10.4232/1.12955

Abstract:

The PIAAC 2012 study was the first fully computer-based large scale assessment in education. During the assessment, user interactions were logged automatically. This means that most of the users' actions within the assessment tool were recorded and stored with time stamps in separate files called log files. The log files contain paradata for each participant in the domains literacy, numeracy, and problem solving in technology-rich environments. The availability of these log files offers new opportunities to researchers, for instance to reproduce test-taking behavior of individuals and to better understand test-taking behavior.

Published: December 22, 2017

Available at (open access): <https://dbk.gesis.org/DBKSearch/SDESC2.asp?no=6712&tab=3&db=E>

Title:

Organisation for Economic Co-operation and Development (OECD). (2017). *Programme for the International Assessment of Adult Competencies (PIAAC), Denmark log file*. Data file version 2.0.0 [ZA6712_DK.data.zip]. Cologne: GESIS Data Archive. doi:10.4232/1.12955

Abstract:

The PIAAC 2012 study was the first fully computer-based large scale assessment in education. During the assessment, user interactions were logged automatically. This means that most of the users' actions within the assessment tool were recorded and stored with time stamps in separate files called log files. The log files contain paradata for each participant in the domains literacy, numeracy, and problem solving in technology-rich environments. The availability of these log files offers new opportunities to researchers, for instance to reproduce test-taking behavior of individuals and to better understand test-taking behavior.

Published: December 22, 2017

Available at (open access): <https://dbk.gesis.org/DBKSearch/SDESC2.asp?no=6712&tab=3&db=E>

Title:

Organisation for Economic Co-operation and Development (OECD). (2017). *Programme for the International Assessment of Adult Competencies (PIAAC), Estonia log file*. Data file version 2.0.0 [ZA6712_EE.data.zip]. Cologne: GESIS Data Archive. doi:10.4232/1.12955

Abstract:

The PIAAC 2012 study was the first fully computer-based large scale assessment in education. During the assessment, user interactions were logged automatically. This means that most of the users' actions within the assessment tool were recorded and stored with time stamps in separate files called log files. The log files contain paradata for each participant in the domains literacy, numeracy, and problem solving in technology-rich environments. The availability of these log files offers new opportunities to researchers, for instance to reproduce test-taking behavior of individuals and to better understand test-taking behavior.

Published: December 22, 2017

Available at (open access): <https://dbk.gesis.org/DBKSearch/SDESC2.asp?no=6712&tab=3&db=E>

Title:

Organisation for Economic Co-operation and Development (OECD). (2017). *Programme for the International Assessment of Adult Competencies (PIAAC), Spain log file*. Data file version 2.0.0 [ZA6712_ES.data.zip]. Cologne: GESIS Data Archive. doi:10.4232/1.12955

Abstract:

The PIAAC 2012 study was the first fully computer-based large scale assessment in education. During the assessment, user interactions were logged automatically. This means that most of the users' actions within the assessment tool were recorded and stored with time stamps in separate files called log files. The log files contain paradata for each participant in the domains literacy, numeracy, and problem solving in technology-rich environments. The availability of these log files offers new opportunities to researchers, for instance to reproduce test-taking behavior of individuals and to better understand test-taking behavior.

Published: December 22, 2017

Available at (open access): <https://dbk.gesis.org/DBKSearch/SDESC2.asp?no=6712&tab=3&db=E>

Title:

Organisation for Economic Co-operation and Development (OECD). (2017). *Programme for the International Assessment of Adult Competencies (PIAAC), Finland log file*. Data file version 2.0.0 [ZA6712_FI.data.zip]. Cologne: GESIS Data Archive. doi:10.4232/1.12955

Abstract:

The PIAAC 2012 study was the first fully computer-based large scale assessment in education. During the assessment, user interactions were logged automatically. This means that most of the users' actions within the assessment tool were recorded and stored with time stamps in separate files called log files. The log files contain paradata for each participant in the domains literacy, numeracy, and problem solving in technology-rich environments. The availability of these log files offers new opportunities to researchers, for instance to reproduce test-taking behavior of individuals and to better understand test-taking behavior.

Published: December 22, 2017

Available at (open access): <https://dbk.gesis.org/DBKSearch/SDESC2.asp?no=6712&tab=3&db=E>

Title:

Organisation for Economic Co-operation and Development (OECD). (2017). *Programme for the International Assessment of Adult Competencies (PIAAC), France log file*. Data file version 2.0.0 [ZA6712_FR.data.zip]. Cologne: GESIS Data Archive. doi:10.4232/1.12955

Abstract:

The PIAAC 2012 study was the first fully computer-based large scale assessment in education. During the assessment, user interactions were logged automatically. This means that most of the users' actions within the assessment tool were recorded and stored with time stamps in separate files called log files. The log files contain paradata for each participant in the domains literacy, numeracy, and problem solving in technology-rich environments. The availability of these log files offers new opportunities to researchers, for instance to reproduce test-taking behavior of individuals and to better understand test-taking behavior.

Published: December 22, 2017

Available at (open access): <https://dbk.gesis.org/DBKSearch/SDESC2.asp?no=6712&tab=3&db=E>

Title:

Organisation for Economic Co-operation and Development (OECD). (2017). *Programme for the International Assessment of Adult Competencies (PIAAC), United Kingdom log file*. Data file version 2.0.0 [ZA6712_GB.data.zip]. Cologne: GESIS Data Archive. doi:10.4232/1.12955

Abstract:

The PIAAC 2012 study was the first fully computer-based large scale assessment in education. During the assessment, user interactions were logged automatically. This means that most of the users' actions within the assessment tool were recorded and stored with time stamps in separate files called log files. The log files contain paradata for each participant in the domains literacy, numeracy, and problem solving in technology-rich environments. The availability of these log files offers new opportunities to

researchers, for instance to reproduce test-taking behavior of individuals and to better understand test-taking behavior.

Published: December 22, 2017

Available at (open access): <https://dbk.gesis.org/DBKSearch/SDESC2.asp?no=6712&tab=3&db=E>

Title:

Organisation for Economic Co-operation and Development (OECD). (2017). *Programme for the International Assessment of Adult Competencies (PIAAC), Ireland log file*. Data file version 2.0.0 [ZA6712_IE.data.zip]. Cologne: GESIS Data Archive. doi:10.4232/1.12955

Abstract:

The PIAAC 2012 study was the first fully computer-based large scale assessment in education. During the assessment, user interactions were logged automatically. This means that most of the users' actions within the assessment tool were recorded and stored with time stamps in separate files called log files. The log files contain paradata for each participant in the domains literacy, numeracy, and problem solving in technology-rich environments. The availability of these log files offers new opportunities to researchers, for instance to reproduce test-taking behavior of individuals and to better understand test-taking behavior.

Published: December 22, 2017

Available at (open access): <https://dbk.gesis.org/DBKSearch/SDESC2.asp?no=6712&tab=3&db=E>

Title:

Organisation for Economic Co-operation and Development (OECD). (2017). *Programme for the International Assessment of Adult Competencies (PIAAC), Italy log file*. Data file version 2.0.0 [ZA6712_IT.data.zip]. Cologne: GESIS Data Archive. doi:10.4232/1.12955

Abstract:

The PIAAC 2012 study was the first fully computer-based large scale assessment in education. During the assessment, user interactions were logged automatically. This means that most of the users' actions within the assessment tool were recorded and stored with time stamps in separate files called log files. The log files contain paradata for each participant in the domains literacy, numeracy, and problem solving in technology-rich environments. The availability of these log files offers new opportunities to researchers, for instance to reproduce test-taking behavior of individuals and to better understand test-taking behavior.

Published: December 22, 2017

Available at (open access): <https://dbk.gesis.org/DBKSearch/SDESC2.asp?no=6712&tab=3&db=E>

Title:

Organisation for Economic Co-operation and Development (OECD). (2017). *Programme for the International Assessment of Adult Competencies (PIAAC), South Korea log file*. Data file version 2.0.0 [ZA6712_KR.data.zip]. Cologne: GESIS Data Archive. doi:10.4232/1.12955

Abstract:

The PIAAC 2012 study was the first fully computer-based large scale assessment in education. During the assessment, user interactions were logged automatically. This means that most of the users' actions within the assessment tool were recorded and stored with time stamps in separate files called log files. The log files contain paradata for each participant in the domains literacy, numeracy, and problem solving in technology-rich environments. The availability of these log files offers new opportunities to researchers, for instance to reproduce test-taking behavior of individuals and to better understand test-taking behavior.

Published: December 22, 2017

Available at (open access): <https://dbk.gesis.org/DBKSearch/SDESC2.asp?no=6712&tab=3&db=E>

Title:

Organisation for Economic Co-operation and Development (OECD). (2017). *Programme for the International Assessment of Adult Competencies (PIAAC), Netherlands log file*. Data file version 2.0.0 [ZA6712_NL.data.zip]. Cologne: GESIS Data Archive. doi:10.4232/1.12955

Abstract:

The PIAAC 2012 study was the first fully computer-based large scale assessment in education. During the assessment, user interactions were logged automatically. This means that most of the users' actions within the assessment tool were recorded and stored with time stamps in separate files called log files. The log files contain paradata for each participant in the domains literacy, numeracy, and problem solving in technology-rich environments. The availability of these log files offers new opportunities to researchers, for instance to reproduce test-taking behavior of individuals and to better understand test-taking behavior.

Published: December 22, 2017

Available at (open access): <https://dbk.gesis.org/DBKSearch/SDESC2.asp?no=6712&tab=3&db=E>

Title:

Organisation for Economic Co-operation and Development (OECD). (2017). *Programme for the International Assessment of Adult Competencies (PIAAC), Norway log file*. Data file version 2.0.0 [ZA6712_NO.data.zip]. Cologne: GESIS Data Archive. doi:10.4232/1.12955

Abstract:

The PIAAC 2012 study was the first fully computer-based large scale assessment in education. During the assessment, user interactions were logged automatically. This means that most of the users' actions within the assessment tool were recorded and stored with time stamps in separate files called log files. The log files contain paradata for each participant in the domains literacy, numeracy, and problem solving in technology-rich environments. The availability of these log files offers new opportunities to researchers, for instance to reproduce test-taking behavior of individuals and to better understand test-taking behavior.

Published: December 22, 2017

Available at (open access): <https://dbk.gesis.org/DBKSearch/SDESC2.asp?no=6712&tab=3&db=E>

Title:

Organisation for Economic Co-operation and Development (OECD). (2017). *Programme for the International Assessment of Adult Competencies (PIAAC), Poland log file*. Data file version 2.0.0 [ZA6712_PL.data.zip]. Cologne: GESIS Data Archive. doi:10.4232/1.12955

Abstract:

The PIAAC 2012 study was the first fully computer-based large scale assessment in education. During the assessment, user interactions were logged automatically. This means that most of the users' actions within the assessment tool were recorded and stored with time stamps in separate files called log files. The log files contain paradata for each participant in the domains literacy, numeracy, and problem solving in technology-rich environments. The availability of these log files offers new opportunities to researchers, for instance to reproduce test-taking behavior of individuals and to better understand test-taking behavior.

Published: December 22, 2017

Available at (open access): <https://dbk.gesis.org/DBKSearch/SDESC2.asp?no=6712&tab=3&db=E>

Title:

Organisation for Economic Co-operation and Development (OECD). (2017). *Programme for the International Assessment of Adult Competencies (PIAAC), Slovakia log file*. Data file version 2.0.0 [ZA6712_SK.data.zip]. Cologne: GESIS Data Archive. doi:10.4232/1.12955

Abstract:

The PIAAC 2012 study was the first fully computer-based large scale assessment in education. During the assessment, user interactions were logged automatically. This means that most of the users' actions within the assessment tool were recorded and stored with time stamps in separate files called log files. The log files contain paradata for each participant in the domains literacy, numeracy, and problem solving in technology-rich environments. The availability of these log files offers new opportunities to researchers, for instance to reproduce test-taking behavior of individuals and to better understand test-taking behavior.

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Available at (open access): <https://dbk.gesis.org/DBKSearch/SDESC2.asp?no=6712&tab=3&db=E>

Title:

Organisation for Economic Co-operation and Development (OECD). (2017). *Programme for the International Assessment of Adult Competencies (PIAAC), United States log file*. Data file version 2.0.0 [ZA6712_US.data.zip]. Cologne: GESIS Data Archive. doi:10.4232/1.12955

Abstract:

The PIAAC 2012 study was the first fully computer-based large scale assessment in education. During the assessment, user interactions were logged automatically. This means that most of the users' actions within the assessment tool were recorded and stored with time stamps in separate files called log files. The log files contain paradata for each participant in the domains literacy, numeracy, and problem solving in technology-rich environments. The availability of these log files offers new opportunities to

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Title:

Perry, A., Helmschrott, S., Konradt, I. & Maehler, D. (2017). *User guide for the German PIAAC Scientific Use File*. GESIS Papers No. 2017|23. Cologne: GESIS – Leibniz-Institute for the Social Sciences. Retrieved December 12, 2017, from <http://www.ssoar.info/ssoar/handle/document/54438>

Abstract:

This User Guide gives a brief overview of the German PIAAC Scientific Use File [ZA5845] and information necessary for doing basic analyses using the PIAAC data.

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Available at (open access): <http://www.ssoar.info/ssoar/handle/document/54438>

Title:

Rammstedt, B., Martin, S., Zabal, A., Helmschrott, S., Konradt, I., & Maehler, D. (2017). *Programme for the International Assessment of Adult Competencies (PIAAC), Germany - Extended version – microm data*. Data file version 1.0.0 [ZA5963]. Cologne: GESIS Data Archive. doi:10.4232/1.12926

Abstract:

The data set contains contextual information that describes either the household or the neighbourhood of the respondents and which was not included in the regular PIAAC Scientific Use File (SUF) 'PIAAC, Germany - Reduced version' (ZA5845) due to national data privacy legislation. This spatial data comes from microm Micromarketing-Systeme und Consult GmbH in Neuss, Germany. The microm data available include more than 100 variables from the microm domains sociodemographics and -economics, consumer behavior, area- and site planning, and strategic segmentation models. Variables for instance contain information about: Type of residential area, number of private households and businesses, sociodemographic and -economic characteristics (e.g. unemployment, confessions, ethnic composition), Mobility (e.g. population fluctuation), affinity towards fundraising, communications and print media, Sinus Geo-Milieus® or purchasing power at the level of street sections. A more detailed description of geo and market data can be found on the microm homepage and in the data codebook.

Published: December 06, 2017

Available at: <https://dbk.gesis.org/DBKSearch/SDESC2.asp?no=5963&db=E>

Title:

Steinacker, G., & Wolfert, S. (2017). *Durchführung der 2. Erhebungswelle von PIAAC-L (Kooperative längsschnittliche Weiterverfolgung der PIAAC-Studie in Deutschland): Feldbericht zur Erhebung 2015*. GESIS Papers No. 2017|04. Cologne: GESIS – Leibniz-Institute for the Social Sciences. Retrieved December 12, 2017, from <http://www.ssoar.info/ssoar/handle/document/50488>

Abstract: Field report of the PIAAC-L survey wave 2 (2015). [Note from editors]

Published: 2017

Available at (open access): <http://www.ssoar.info/ssoar/handle/document/50488>