

5. Finally, a new question is included to measure whether the training leads to a certification that can be used to make human capital acquisition in non-formal education visible, e.g. on the labour market (B2_Q18) (Pischke 2001).

In Cycle 1, respondents who were employed while participating in training were asked whether their employer paid (part of) the costs associated with training. However, there was no information on further funding sources. For Cycle 2 this information will be collected using a checkbox item, i.e. allowing the combination of several sources of funding. They are asked about all contributors to training costs (self-funding; employer, public employment agency; other public funding, e.g. trade unions or associations; other private sources, e.g. family members) (B2_Q20).

List of strict trend items in Module B

Cycle 1	Cycle 2	Indicator
B_Q01c1	B2_Q04b1	Age obtained highest qualification
B_Q01c2	B2_Q04b2	Year obtained highest qualification
B_Q02a	B2_Q05a	Current participation in formal education
B_Q03a	B2_Q06a	Started studying without completing qualification
B_Q03c1	B2_Q06c1	Age when stopped studying for qualification that was not completed
B_Q03c2	B2_Q06c2	Year when stopped studying for qualification that was not completed

List of soft trend items in Module B

Cycle 1	Cycle 2	Indicator	Rationale
B_Q01a	B2_Q01	Educational attainment	PIAAC Cycle 1 made use of the old version of ISCED (ISCED 1997) as the new one was not yet implemented at the time the national versions of the BQ were developed. For PIAAC Cycle 2 we use a coding scheme based on ISCED 2011, distinguishing a maximum of 29 different categories: this allows a good
B_Q02b	B2_Q05b	Qualification currently studying for	
B_Q03b	B2_Q06b	Education started but not completed	

			differentiation between different levels and types of qualifications
B_Q01b	B2_Q04a	Main area of study for highest qualification	We have used a new classification based on ISCED-F 2013.
B_Q02c	B2_Q05c	Main area of study for currently pursued qualification	
B_Q14a	B2_Q11	Training mainly job-related	The term “activity” was changed into “training activity” for consistency reasons. Furthermore, the content of the interviewer instruction was included in the item itself (after some rewording) following suggestions resulting from the pretest.
B_Q14b	B2_Q12	Main reason for participating in training	Some response categories were changed compared to Cycle 1, partly because they overlapped. One category was added to get information about important aspects not covered in Cycle 1 (“To better deal with new or changing work tasks”). The first response category, "To do my job better and/or improve career prospects" was split up for Cycle 2 and three categories which were not mentioned frequently in Cycle 1 or that overlapped with other response options were deleted ("To be less likely to lose my job"; "To increase my possibilities of getting a job, or changing a job or profession"; “To start my own business”). In the category "To obtain a certificate", the aspect of renewing a certificate was included

			following the pretest. The wording of the question was changed slightly by dropping "more precisely" which was regarded as redundant.
B_Q15a	B2_Q15	Employment status when participating in training	In Cycle 1, this item only asked whether the respondent was employed (full- or part-time). This was broadened to include other statuses.
B_Q15b	B2_Q16b	Participating in training during working hours	The interviewer instructions were simplified, and the broken stem style changed to a complete question.
B_Q15c	B2_Q17	Usefulness of training for job	Wording of question was simplified.
B_Q17-20a	B2_Q21	Total time spent on training	The measurement of total time spent on training was changed asking only for the number of hours spent on the last training activity. This was done after the pretest results indicated that this measure resulted in mostly the same kind of answers as in the more complex set of questions.
B_Q26a	B2_Q22	Barriers to training	The wording of this item was adjusted to exclude formal education.
B_Q26b	B2_Q23	Barriers to training - reasons	The response categories were slightly changed compared to Cycle 1 and include new categories in order to cover more different areas which might deter respondents from participation education and training.

List of new items in Module B

Cycle 2	Indicator
B2_Q02a	Obtained other qualifications
B2_Q02b	Which other qualifications obtained
B2_Q03a	Highest education obtained in country
B2_Q03b	Country of highest education
B2_S03b	Other country of highest foreign education
B2_Q04c	Month obtained highest qualification
B2_Q08a	Participation in training
B2_Q08b	Number of training activities in the last 12 months
B2_Q09	Participation in training beyond 12 months
B2_Q10	Main focus of training
B2_Q13a;	Mode of administration of training
B2_Q13d	Scheduling of training
B2_Q16a	Training took place in normal work environment
B2_Q16c	Training for improving work performance by digitalization
B2_Q18	Certificate for participation in training
B2_Q20	Who paid for costs of training

Module C – Current status and work history

The PIAAC Cycle 1 BQ contained a long list of questions based on the EU Labour Force Survey to derive the labour force status according to EUROSTAT definitions. Although this worked quite well, there was a feeling that this comprised a lot of questions for people currently not working (10-12 questions) on detailed job search behaviour that were ultimately only used to determine whether someone is unemployed or not, but that were hardly used for other purposes, if at all. Unlike the EU-LFS (and comparable surveys that are held in almost all non-European countries) PIAAC is not designed to measure employment status for statistical purposes. There is a strong need for a measure of labour force status in PIAAC that is conceptually and empirically strongly related to that used in LFS, but it is not necessary that it is strictly identical. For this reason the detailed set of questions on specific search behaviours has been dropped, and the word “ACTIVELY” (plus a few examples of active search behaviours) has been added to the question on whether the respondent has been looking for work in the last 4 weeks. In addition, the question on whether respondents waiting to start a new job expected to do so within the next three months has also been dropped. This was not used to derive labour force status in Cycle 1 and appears to serve no clear analytical purpose.

List of strict trend items in Module C

Cycle 1	Cycle 2	Indicator
C_Q01a	C2_Q01a	PAID work in the last week
C_Q01b	C2_Q01b	Temporarily away from a job or business in the last week
C_Q01c	C2_Q01c	UNPAID work in own or family business in the last week
C_Q02b	C2_Q02b	Waiting to start a job
C_Q03	C2_Q03	Reasons for not looking for work
C_S03	C2_Q04	Job search duration
C_Q05	C2_Q05	Available to start work within 2 weeks
C_Q06	C2_Q06	Number of jobs
C_Q08a	C2_Q09a	Ever had paid work
C_Q08b	C2_Q09b	Paid work in last 12 months
C_Q08c1	C2_Q09c1	Age stopped working
C_Q08c2	C2_Q09c2	Year stopped working
C_Q09	C2_Q10	Total years in paid work
C_Q10a	C2_Q12	Number of firms or organizations in last 5 years

List of soft trend items in Module C

Cycle 1	Cycle 2	Indicator	Rationale
C_Q02a	C2_Q02a	ACTIVELY looking for paid work	The word “ACTIVELY” plus examples have been added to this question.
C_Q07	C2_Q07	Self-reported current situation	Changed the category "apprentice, internship" into "apprentice, intern" for consistency reasons. The other categories remained unchanged.

List of new items in Module C

Cycle 2	Indicator
C2_Q08a C2_Q08b	Total time out of work in last 5 years
C2_Q11	Unemployment benefits, disability benefits, sickness benefits or retirement benefits

Two items have been added to this module to measure the total time spent out of work in the last five years. An item was also added indicating whether the respondent received any benefit payments in connection with unemployment, disability or retirement. All three added items were taken and modified from the Cycle 1 Field Test BQ.

Module D – Current work

This module gives key descriptive indicators of the jobs held by those currently in employment. Most of module D is retained with the exception of a few minor changes. Some items are revised in order to bring them in line with other international surveys or to keep track of the ongoing changing world. A new item measuring the changes in the job role was added.

List of strict trend items in Module D

Cycle 1	Cycle 2	Indicator
D_Q01a	D2_Q01a	Job title
D_Q01b	D2_Q01b	Most important responsibilities in job
D_Q02a	D2_Q02a	Kind of business, industry or service
D_Q02b	D2_Q02b	Firm or organisation
D_Q03	D2_Q03	Sector
D_Q04	D2_Q04	Employee or self-employed
D_Q05a1	D2_Q05a1	Age start working current employer
D_Q05a2	D2_Q05a2	Year start working current employer
D_Q05a3	D2_Q05a3	Month start working current employer
D_Q05b1	D2_Q05b1	Age start working in current business
D_Q05b2	D2_Q05b2	Year start working in current business
D_Q05b3	D2_Q05b3	Month start working in current business
D_Q06b	D2_Q07b	Change in organisation size
D_Q06c	D2_Q07c	Part of larger organisation
D_Q07a	D2_Q08a	Employees working for you
D_Q08a	D2_Q09a	Supervisory status
D_Q08b	D2_Q09b	Number of subordinates
D_S09	D2_S10	Specify type of contract
D_Q10	D2_Q11	Working hours
D_Q12c	D2_Q12d	Required work experience
D_Q14	D2_Q13	Job satisfaction
D_Q16a	D2_Q14a	Earnings basis
D_S16a	D2_S14a	

D_Q16b	D2_Q14b	Usual gross pay
D_Q16c	D2_Q14c	
D_Q16d1	D2_Q14d1	Specification plausible hourly wage
D_Q16d2	D2_Q14d2	
D_Q16d3	D2_Q14d3	
D_Q16d4	D2_Q14d4	
D_Q16d5	D2_Q14d5	
D_Q16d6	D2_Q14d6	
D_Q17a	D2_Q15a	Additional earnings?
D_Q17b	D2_Q15b	How much additional earnings?
D_Q17c	D2_Q15c	Prepared to answer in broad categories
D_Q17d	D2_Q15d	Broad ranges for additional payments
D_Q18a	D2_Q16a	Earnings from business
D_Q18b	D2_Q16b	
D_Q18c1	D2_Q16c1	Broad earnings ranges for self-employed
D_Q18c2	D2_Q16c2	

List of soft trend items in Module D

Cycle 1	Cycle 2	Indicator	Rationale
D_Q06a	D2_Q07a	Firm size	The answer categories for firm size are changed to bring them in line with the international definition. This was recommended by the working group on 'Skills use and mismatch'. See document 'Improving the measurement of skills use and mismatch in the second cycle of PIAAC' (pp. 17). Former categories in Cycle 1: Categories in Cycle 2: 1 1 to 10 people 1. 1 to 10 people 2 11 to 50 people 2. 11 to 49 people 3 51 to 250 people 3. 50 to 249 people 4 251 to 1000 people 4. 245 to 499 people 5 more than 1000 people 5. 500 to 999 people 6. 1000 or more people
D_Q07b	D2_Q08b	Number of employees	

D_Q09	D2_Q10	Type of contract	<p>The answer categories for the contract type are updated to bring them in line with the ongoing change on the labour market. Two contract types are added: a zero hour contract and a freelance, contractor and/or consultant contract. Also, seasonal contracts are now explicitly mentioned with the fixed term contracts category. This was recommended by the working group on 'Skills use and mismatch'. See document 'Improving the measurement of skills use and mismatch in the second cycle of PIAAC' (pp. 17).</p> <p>Former categories in Cycle 1:</p> <ul style="list-style-type: none"> 1 An indefinite contract 2 A fixed term contract 3 A temporary employment agency contract 4 An apprenticeship or other training scheme 5 No contract 6 Other <p>New categories in Cycle 2:</p> <ul style="list-style-type: none"> 1 An indefinite contract 2 A fixed term contract, including seasonal contract 3 A temporary employment agency contract 4 A zero hour contract 5 A freelance, contractor and/or consultant contract 6 An apprenticeship or other training scheme 7 No contract 8 Other
D_Q12a	D2_Q12a	Required education for getting current job	PIAAC Cycle 1 made use of the old version of ISCED (ISCED 1997) as the new one was not yet implemented at the time the national versions of the BQ were developed. For PIAAC Cycle 2 we use a

			coding scheme based on ISCED 2011, distinguishing a maximum of 28 different categories: this allows a good differentiation between different levels and types of qualifications
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List of new items in Module D

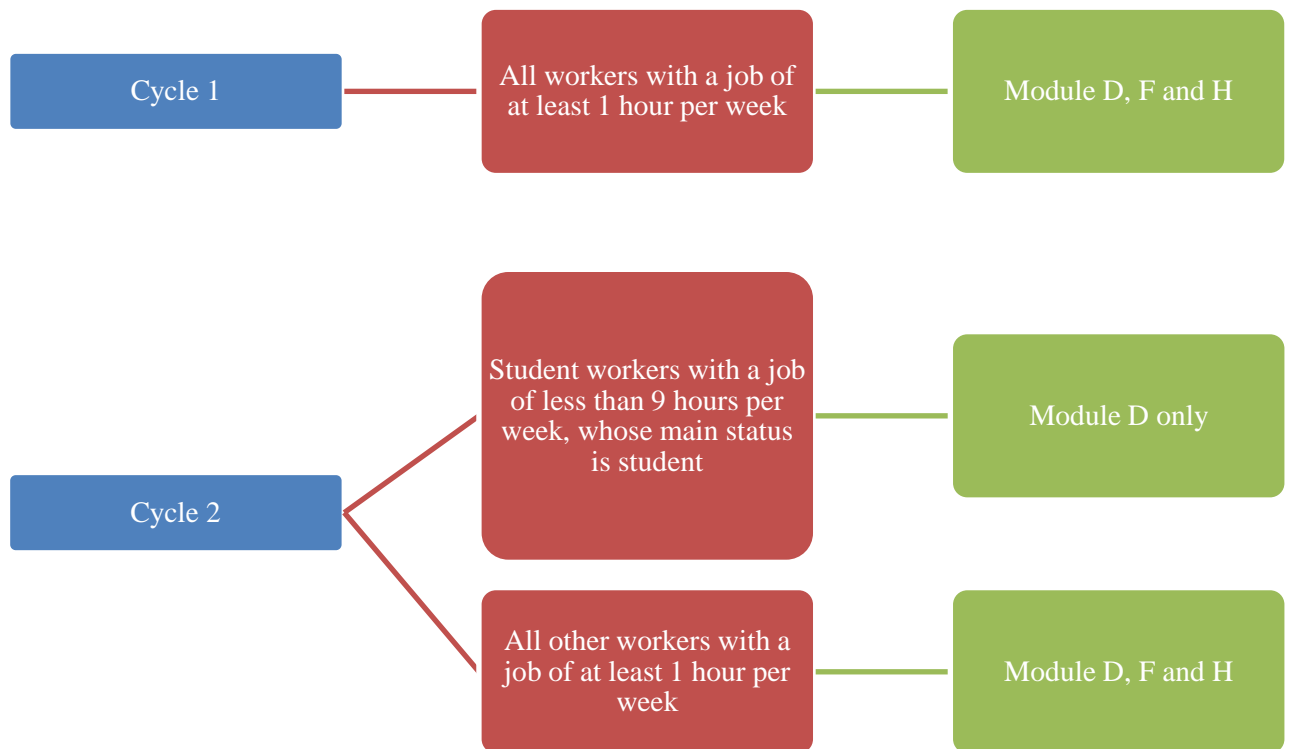
New items	Indicator
D2_Q06a	Changes in job level
D2_Q06b	Changes in tasks and responsibilities
D2_Q06c	Changes in department or unit
D2_Q12b	Qualification to get the job is also qualification to do the job
D2_Q12c	Required education for doing current job

Three new items (D2_Q06) on changes in the job role were added to reflect on recent trends towards increased flexibility in labour markets across participating countries. These questions were derived and modified from the ‘Cedefop Skills and Jobs Survey (CJSJ)’, and were recommended by the working group on ‘Skills use and mismatch’. See document ‘Improving the measurement of skills use and mismatch in the second cycle of PIAAC’ (pp. 16).

In addition to questions about the qualification required to get the job, we added a question on whether this is also the qualification required to do the job satisfactorily. This allows us to distinguish the role of underqualification in getting jobs and in performing on the job.

Finally, this module contains the routing to the modules F and H for people who are currently working. In PIAAC Cycle 1, we followed the EUROSTAT definition for labour force status and routed everyone who worked for at least 1 hour per week in the last week to the modules on skills used in current work (former modules F and G). This implies for example that all students that have a side-job of at least 1 hour per week will get these modules as well. However, in most of the analyses, this group is explicitly dropped from the analyses, so that the actual need to ask these questions is very low. We now make a distinction in the routing. Workers who are currently in education and identify their own current status as ‘student’ and work less than 9 hours per week will be routed to Module G, all others will go to Module F. Note that workers who identify themselves as ‘apprentice or intern’ are also routed to Module F as these people have a double status as student and worker.

Figure 1. Explaining difference in routing between Cycle 1 and 2



Module E – Last job

This module gives key descriptive indicators of the jobs held by those who are not currently working but had paid work in the past 5 years. Most items in this module were kept as trend items.

List of strict trend items in Module E

Cycle 1	Cycle 2	Indicator
E_Q01a	E2_Q01a	Job title of last job
E_Q01b	E2_Q01b	Most important responsibilities in last job
E_Q02a	E2_Q02a	Kind of business, industry or service
E_Q02b	E2_Q02b	Firm or organisation
E_Q03	E2_Q03	Sector
E_Q04	E2_Q04	Employee or self-employed
E_Q05a1	E2_Q05a1	Age start working former employer
E_Q05a2	E2_Q05a2	Year start working former employer
E_Q05b1	E2_Q05b1	Age start working in former business
E_Q05b2	E2_Q05b2	Year start working in former business
E_Q07a	E2_Q07a	Employees working for you
E_S08	E2_S08	Specify former contract type
E_Q09	E2_Q09	Working hours in last job

List of soft trend items in Module E

Cycle 1	Cycle 2	Indicator	Rationale
E_Q06	E2_Q06	Firm size	The answer categories for firm size are changed to bring them in line with the international definition. This was recommended by the working group on 'Skills use and mismatch'. See document 'Improving the measurement of skills use and mismatch in the second cycle of PIAAC' (pp. 17). Former categories in Cycle 1: 1 1 to 10 people Categories in Cycle 2 1. 1 to 9 people
E_Q07b	E2_Q07b	Number of employees	

			<p>2 11 to 50 people 2. 10 to 49 people</p> <p>3 51 to 250 people 3. 50 to 249 people</p> <p>4 251 to 1000 people 4. 250 to 499 people</p> <p>5 more than 1000 people 5. 500 to 999 people</p> <p>6. More than 1000 people</p>
E_Q10	E2_Q08	Type of contract in last job	<p>The answer categories for the contract type are updated to bring them in line with the ongoing change on the labour market. Two contract types are added: a zero hour contract and a freelance, contractor and/or consultant contract. Also, seasonal contracts are now explicitly mentioned with the fixed term contracts category. This was recommended by the working group on 'Skills use and mismatch'. See document 'Improving the measurement of skills use and mismatch in the second cycle of PIAAC' (pp. 17).</p> <p>Former categories in Cycle 1:</p> <p>1 An indefinite contract</p> <p>2 A fixed term contract</p> <p>3 A temporary employment agency contract</p> <p>4 An apprenticeship or other training scheme</p> <p>5 No contract</p> <p>6 Other</p> <p>New categories in Cycle 2:</p> <p>1 An indefinite contract</p> <p>2 A fixed term contract, including seasonal contract</p> <p>3 A temporary employment agency contract</p> <p>4 A zero hour contract</p> <p>5 A freelance, contractor and/or consultant contract</p> <p>6 An apprenticeship or other training scheme</p> <p>7 No contract</p> <p>8 Other</p>

List of new items in Module E

New items	Indicator
E2_Q10a	Required education for getting last job
E2_Q10b	Qualification to get the job is also qualification to do the job
E2_Q10c	Required education for doing last job
E2_Q10d	Required work experience
E2_Q11a	Stopped working in last job voluntarily or involuntarily
E2_Q11b	Main reason stopped working in last job

As for the current job in Module D, we added questions on underqualification for the last job. Again, in addition to questions about the qualification required to get the job, we added a question on whether this is also the qualification required to do the job satisfactorily. This allows us to distinguish the role of underqualification in getting jobs and in performing on the job.

Finally, as replacement for the measure on the main reason respondents stopped working in the last job used in Cycle 1, we have added a question on whether the respondent stopped working voluntarily or involuntarily. After that the main reason they stopped working is asked in a separate question. This first question is important as someone can stop working voluntarily because of the financial problems of their organisation, but also involuntarily. It also makes a couple of unclear/overlapping categories redundant.

Module F and G – Literacy, numeracy, and ICT practices at work and in everyday life

Conceptually most of the items in these sections closely match those in the corresponding modules in the Cycle 1 BQ (modules G and H in that case). There was a prolonged period of consultation and discussion as to the extent to which revisions were needed in the light of the experiences from the first Cycle and potential substantive changes in the manner in which literacy, numeracy and ICT are used in today's world. A specific point of discussion was whether it was appropriate to use items that are substantively identical when measuring skill use at work and in everyday life. A consensus emerged that, although different wordings should be avoided whenever the same wording would work equally well across both settings, it is not necessary for the lists to be strictly identical (as was the case in PIAAC Cycle 1), and that different wordings should be applied when it makes sense to do so, for example when a particular activity would be regarded as uncommon or unusual outside a work setting.

The list of items used to measure reading skill use was subject to only relatively minor changes. For reading skill use at work, two previously separate items – [How often do you] “read articles in professional journals or scholarly publications?” and “read books?” - were combined to form a single item: [How often do you] “read books, scholarly publications, or articles in professional journals?” For reading skill use in everyday life, the former item was dropped, as it was felt that such professional or scholarly reading would be highly uncommon in a non-work setting. The corresponding original item on reading books was retained: [How often do you] “read books, fiction or non-fiction?”. For both domains an additional item was added to the list: [How often do you] “read posts or commentaries on social media (e.g. blogs, Facebook, Twitter)?”. Although the use of social media in a work context may only be a set of highly specialized jobs, both the OECD and the Literacy Expert Group (LEG) have indicated that they would prefer to keep this for the Field Test. It should be noted that the references to Facebook and Twitter can and should be adapted to local contexts when this is appropriate.

For writing skill use at work, two existing items – [How often do you] “write articles for newspapers, magazines or newsletters?” and “write reports?” were combined to form a single item: [How often do you] “write reports or articles?”. It was felt that the distinction between reports and articles was quite obscure, and that the restriction of articles to newspapers, magazines and newsletters was unnecessarily narrow. As for reading, an item was added pertaining to social media: [How often do you] “write posts or commentaries on social media

(e.g. blogs, Facebook, Twitter)?”. The same set of items was used for writing skill use in everyday life.

For the numeracy domain the changes were more substantial. The total number of items used has been reduced and the items are generally somewhat broader and more generic, covering five broad domains. For numeracy skill use at work these domains can be broadly described in terms of calculation ([How often do you] “undertake calculations, such as calculating prices, costs or quantities?”), spatial orientation (“...use maps, plans or GPS for finding directions and locations?”), measurement (“...undertake measurements such as lengths, weights, temperatures, dosages, areas or volumes?”), quantitative representation (“...read and prepare charts, graphs or tables?”) and mathematics/statistics (“...use advanced mathematics or statistics?”). For everyday life the domains of calculation, measurement, quantitative representation and mathematics/statistics were also used, but in the case of measurement and mathematics/statistics a slightly different item formulation was applied (“...undertake measurements (e.g. when you cook, garden, make clothes or undertake repairs?” and “...use mathematics, such as formulas or mathematical rules?” respectively). Instead of the domain spatial orientation, for everyday life an item was included that can be described as representing the domain of financial decision making “...use information to make financial decisions (e.g. household budgets, insurance, loans)?”.

As is the case for numeracy, there was also considerable revision of the set of items on ICT skill use. In part this was needed to bring this domain up to date in terms of the kind of technologies used in today’s world. But as with numeracy skill use, the items chosen are broader and more generic. For ICT skill use at work, the chosen items can be broadly described in terms of the use of ICT for communication ([How often do you usually use a computer or digital device such as a tablet or smartphone for the following purposes?] "To communicate with others (e.g. via emails, social networking sites, or internet calls). Exclude normal phone calls using a mobile phone”), information search and retrieval (“To access information (e.g. use a search engine, find information, or read documents?”), document processing (“To create or edit electronic documents, spreadsheets or presentations (using software like Microsoft Word, Excel, PowerPoint, or similar software?”), specialized software use (“To use specialized software (e.g. for computer-aided design, the processing or analysis of data, sound and images, or quality control?”) and programming (“To use a programming language to program software (e.g. applications) websites”). For ICT use in everyday life, the domains of communication and

information search and retrieval are also found. The other domains applied in everyday life can be described in terms of entertainment ([How often do you usually use a computer or digital device such as a tablet or smartphone for the following purposes?] “For entertainment or leisure (e.g. play video games, listen to music, watch or edit videos or photos)”, online banking and e-commerce (“For online banking or e-commerce (e.g., buying or selling of goods or services)”) and personal life management (“To manage your personal life (e.g., track your health information, manage your household budget, or navigate via GPS)”).

List of strict trend items in Module F

Cycle 1	Cycle 2	Indicator
G_Q01a	F2_Q01a	Read directions and instruction
G_Q01b	F2_Q01b	Read letters, memos or e-mails
G_Q01c	F2_Q01c	Read articles in newspaper, magazines or newsletters
G_Q01f	F2_Q01e	Read manuals or reference materials
G_Q01g	F2_Q01f	Read bills, invoices, bank statements or other financial statements
G_Q02a	F2_Q02a	Write letters, memos or emails
G_Q02d	F2_Q02c	Fill in forms
G_Q04	F2_Q04	Use a computer

List of strict trend items in Module G

Cycle 1	Cycle 2	Indicator
H_Q01a	G2_Q01a	Read directions and instruction
H_Q01b	G2_Q01b	Read letters, memos or e-mails
H_Q01c	G2_Q01c	Read articles in newspaper, magazines or newsletters
H_Q01e	G2_Q01d	Read books, fiction or non-fiction
H_Q01f	G2_Q01e	Read manuals or reference materials
H_Q01g	G2_Q01f	Read bills, invoices, bank statements or other financial statements
H_Q02a	G2_Q02a	Write letters, memos or emails
H_Q02d	G2_Q02c	Fill in forms

List of soft trend items in Module F

Cycle 1	Cycle 2	Indicator	Rationale
G_Q03f	F2_Q03d	Read and prepare charts, graphs or tables	An important use of graphs and charts is the ability to read them, not to just prepare them. Therefore the wording changed in ‘read and prepare’ instead of ‘prepare’.
G_Q03h	F2_Q03e	Use advanced mathematics or statistics	These items are compared to Cycle 1 generally somewhat broader and generic.
G_Q05c	F2_Q05c	Use ICT to access information	
G_Q05g	F2_Q05f	Use ICT to use a programming language to program software	

List of soft trend items in Module G

Cycle 1	Cycle 2	Indicator	Rationale
H_Q03f	G2_Q03d	Read and prepare charts, graphs or tables	An important use of graphs and charts is the ability to read them, not to just prepare them. Therefore the wording changed in ‘read and prepare’ instead of ‘prepare’.
H_Q05c	G2_Q06b	Use ICT to access information	The item is generally somewhat broader and generic.

List of new items in Module F

New items	Indicator
F2_Q01d	Read books, scholarly publications, or articles in professional journals
F2_Q01g	Read posts or commentaries on social media
F2_Q02b	Write reports or articles
F2_Q02d	Write posts or commentaries on social media
F2_Q03a	Undertake calculations
F2_Q03b	Use maps, plans or GPS for finding directions and locations
F2_Q03c	Undertake measurements

F2_Q05a	Use ICT to communicate with others
F2_Q05d	Use ICT to create or edit electronic documents, spreadsheets or presentations
F2_Q05e	Use ICT to use specialized software

List of new items in Module G

New items	Indicator
G2_Q01g	Read posts or commentaries on social media
G2_Q02b	Write reports or articles
G2_Q02d	Write posts or commentaries on social media
G2_Q03a	Undertake calculations
G2_Q03b	Use information to make financial decisions
G2_Q03c	Undertake measurements
G2_Q03e	Use mathematics
G2_Q04	Ever used smartphone, tablet, laptop or desktop computer
G2_Q05a	How often use smartphone
G2_Q05b	How often use tablet
G2_Q05c	How often use desktop computer
G2_Q06a	Use ICT to communicate with others
G2_Q06c	Use ICT for entertainment or leisure
G2_Q06d	Use ICT for online banking or e-commerce
G2_Q06e	Use ICT to manage your personal life

Module H – Working environment

This module gives key descriptive indicators of the working environment of those currently in employment. The 1st cycle of PIAAC contributed in the area of labour market policy and research as it contained questions on the skills use at work (Module F: JRA). Even though Cycle 2 has to maintain continuity with Cycle 1, the analytical power in understanding skill use and mismatch could be improved. This module is therefore an adaptation and extension of the JRA module (former Module F) in Cycle 1. The efforts of the working group on ‘Skills use and mismatch’ to replace the JRA from Cycle 1 by a more holistic approach towards the working environment created space for a stronger and more elaborate module on the working environment.

List of strict trend items in Module H

Cycle 1	Cycle 2	Indicator
F_Q02a	H2_Q03a	Job involve sharing work-related information with co-workers
F_Q02b	H2_Q03b	Job involve instructing, training or teaching people
F_Q02c	H2_Q03c	Job involve making speeches/presenting
F_Q03a	H2_Q04a	Job involve planning own activities
F_Q03c	H2_Q04b	Job involve organising own time
F_Q04a	H2_Q05a	Job involve persuading/influencing people
F_Q04b	H2_Q05b	Job involve negotiating with people
F_Q05a	H2_Q06a	Problem solving tasks in job: relatively simple problems
F_Q05b	H2_Q06b	Problem solving tasks in job: complex problems
F_Q06b	H2_Q07a	Work physically
D_Q11a	H2_Q08a	Work autonomy: choose/change sequence tasks
D_Q11b	H2_Q08b	Work autonomy: choose/change how to work
D_Q11c	H2_Q08c	Work autonomy: choose/change speed or rate
D_Q11d	H2_Q08d	Work autonomy: choose/change working hours
D_Q13b	H2_Q09b	Learning-by-doing
D_Q13c	H2_Q09c	Keep up to date with new products/services

Note that the questions on work autonomy and learning environment (D_Q11a-d and D_Q13b-c) were moved from section D (current work) to section H. These questions were moved to this module, since the concepts better fits in the section on the working environment.

List of soft trend items in Module H

Cycle 1	Cycle 2	Indicator	Rationale
F_Q01b	H2_Q01	Cooperating or collaborating with co-workers	In Cycle 1 this question was asked with a broken stem (In your ^JobLastjob what proportion of your time ^DoDid you usually spend...). This is however not necessary as only 1 question is asked in this section. Therefore in Cycle 2 it changed into a complete question with dynamic text: 'In your current job (last job) what proportion of your time do (did) you usually spend cooperating or collaborating with co-workers?'
F_Q06c	H2_Q07b	Work using skill with hand	The wording was changed to avoid that respondents consider e.g. typing when answering to this question.

List of new items in Module H

New items	Indicator
H2_Q02a	Permanent/temporary team
H2_Q02b	Team leader
H2_Q02c	Influence selection team leader
H2_Q02d	Influence work targets for group
H2_Q02e	Influence others on tasks
H2_Q03d	Job involve dealing with people who are not employees at the workplace
H2_Q09a	Learning new things
H2_Q10	Helping co-workers learn new things
H2_Q11	Determining nature or content of work
H2_Q12	Working to tight deadlines/high speed
H2_Q13a	Need for assistance
H2_Q13b	Receive assistance from supervisor/manager
H2_Q13c	Receive assistance from co-workers
H2_Q14a	Involved in improving work organisation
H2_Q14b	Apply own ideas in work
H2_Q15a	Performance appraisal/evaluation interview

H2_Q16	Consequences performance appraisal
H2_Q17	Short repetitive tasks
H2_Q18a	Changes in workplace
H2_Q18b	Changes supported by training activities
H2_Q19a	Skills in relation to what is required
H2_Q19b	Specific skills in relation to what is required
H2_Q20	Skills in relation to what is required when started job

The question on the extent to which respondents are involved in selling a product or selling a service (former F_Q02d) is replaced by a question measuring the extent that respondents are involved, as part of their work, in dealing with people who are not employees at their workplace, such as customers, passengers, pupils or patients (H2_Q03d). This replacement makes it possible to fully measure the use of social skills and not only the ability to sell items. Giving the increasing importance of social skills in work and the confirmation of its importance in the pilot study conducted by the working group on ‘Skills use and mismatch’, the item was replaced.

The question on learning new work-related things from co-workers or supervisors (former D_Q13a), is changed into a more general question on learning new things (H2_Q09a). Learning new things is thus no longer restricted to learning from co-workers or supervisors.

With regard to the other new questions, these are related to the so-called ‘High Performance Work Practices (HPWPs)’. The working group on 'Skills use and mismatch' argues that these practices can increase firms’ internal flexibility to adapt job tasks to the skills of new hires, while also promoting a better allocation of the workforce to the required tasks, suggesting one potential channel related to skills use and skills mismatch. It was also suggested that some HPWPs may encourage the deployment of skills at work by increasing motivation among workers. To strengthen these initial findings, better information is needed on the characteristics of the work environment which would help shed light on the potential mechanisms and on the practices that are particularly effective. This existing evidence and remaining knowledge gaps prompted the working group on “Skill use and mismatch” to suggest the inclusion of several questions on working environment in Cycle 2. In Figure 1 these new items are related to the HPWPs. All new questions are derived from existing international surveys.

Aside from collecting additional information on HPWPs, three questions were added to measure two aspects of employment increasingly important from a policy point of view: how automatable jobs are and how mega trends, such as technological progress, have affected the workplace. For that purpose, new items H2_Q17, H2_Q18a and H2_Q18b are included in module H.

Figure 1. Dimensions of HPWPs with the new items from Module H

Organisation type	<ul style="list-style-type: none"> • How often does your job involve working to tight deadlines or at very high speed? (H2_Q12) • Are any of the following important in determining the nature or content of your work? (H2_Q11)
Teamwork	<ul style="list-style-type: none"> • In performing your tasks, do you ever work together in a permanent or temporary team? (H2_Q02a) • Does your team have a team leader (H2_Q02b)? • Can the team members influence the selection of the team leader (H2_Q02c)? • Can the team members influence the work targets for the group (H2_Q02d)? • Excluding the team leader, can the other in the team influence what tasks you do yourself (H2_Q02e)?
Social support & knowledge sharing	<ul style="list-style-type: none"> • Sometimes people want to get assistance with a work overload or difficult situation. do you ever feel the need for assistance? (H2_Q13a) • In these situations, how often do you receive assistance from your supervisor or manager? (H2_Q13b) • In these situations, how often do you receive assistance from your co-workers? (H2_Q13c) • How often does your current job usually involve helping your co-workers to learn new things? (H2_Q10)
Participation	<ul style="list-style-type: none"> • Are you involved in improving the work organisation or work processes of your department? (H2_Q14a) • Are you able to apply your own ideas at work? (H2_Q14b)
Well-defined objectives, continuous feedback, reward to good performance	<ul style="list-style-type: none"> • Over the past 12 months, or since you started your current job, have you participated in a performance appraisal or evaluation interview? (H2_Q15) • Did the results of your performance appraisal directly affect... Your level of pay? Your promotion prospects, your training opportunities? (H2_Q16)

Module I – Non-economic outcomes

This module contains several indicators of non-economic outcomes and personal preferences. For this module, there was a need to cover a broader range of non-economic outcomes (without extending the total interview time). Items on voluntary work and self-reported health were taken directly from Module I in the Cycle 1 BQ. Two new items were added, one on patience and the other on general life satisfaction, both taken from existing international surveys (respectively: Global Preference Survey and European Social Survey). For political trust and social trust, two new items were used (both taken from the European Social Survey) rather than using the items from Cycle 1 to bring these scales more in line with other cross-national surveys, and with the other scales used in this module.

List of strict trend items in Module I

Cycle 1	Cycle 2	Indicator
I_Q05f	I2_Q02	Voluntary work
I_Q08	I2_Q03	General subjective health

List of new items in Module I

Cycle 2	Indicator
I2_Q01a	Political trust
I2_Q01b	Social trust
I2_Q04	Patience
I2_Q05	Life satisfaction

Module J – Background

Although many of the items in Module J were retained, there was also a need to broaden the scope a bit. More specifically, there was a need to extend the background information collected, in particular with respect to the situation in the respondent's childhood home. The rationale behind this was the large body of research literature pointing to the importance of the childhood home as a formative influence on people's cognitive and social and emotional development, that has been shown to be comparable or in some cases perhaps even more important than more institutionalized forms of learning via education and training.

List of strict trend items in Module J

Cycle 1	Cycle 2	Indicator
J_Q01	J2_Q01	Household composition
J_Q02a	J2_Q02a	Cohabitation status
J_Q03a	J2_Q03a	Children
J_Q03b	J2_Q03b	Number of children
J_Q03c	J2_Q03c	Age of only child
J_Q03d1	J2_Q03d1	Age of youngest child
J_Q03d2	J2_Q03d2	Age of oldest child

List of soft trend items in Module J

Cycle 1	Cycle 2	Indicator	Rationale
J_Q02c	J2_Q02b	Current situation spouse or partner	Changed the category "apprentice, internship" into "apprentice, intern" for consistency reasons. The other categories have remained unchanged.
J_Q06b	J2_Q04b	Highest education mother	ISCED categories changed
J_Q07b	J2_Q05b	Highest education father	ISCED categories changed
J_Q08	J2_Q06	Number of books in childhood household	Reference age changed to age 14 to bring in line with other international surveys that use age 14 as a reference age.

The question on the number of books was modified slightly to refer to the household as it was when the respondent was aged 14, rather than at age 16. This change was made to bring this question in line with other questions on the situation in the respondent's childhood household. Since the importance of the childhood situation lies in its potential formative influence on the respondent's cognitive and social and emotional development, it was felt that the reference age should be as young as reasonably possible, given the limitations on memory. Age 14 was a compromise: young enough to be indicative of the situation in the respondent's "formative years", but not so young as to be beyond most respondents' powers of recall.

List of new items in Module J

Cycle 2	Indicator
J2_Q04a	Mother/female guardian present during childhood
J2_Q04d	Mother's employment
J2_Q04e	Mother's job title
J2_Q04f	Mother's occupation
J2_Q05a	Father/female guardian present during childhood
J2_Q05d	Father's employment
J2_Q05e	Father's job title
J2_Q05f	Father's occupation
J2_Q07	Level of urbanization of residence at age 14
J2_Q08	Household composition at age 14
J2_Q09a	Number of siblings
J2_Q09b	Birth order
J2_Q09c	

Items were added on the parents' occupation at age 14, which has been shown to have an effect on people's development and life chances that is independent of, and no less important than, parental education. With the exception of the change of reference age, these questions were directly taken from the Cycle 1 Field Test BQ, which means that they have been fully tested, translated and verified. Additional questions were added on the degree of urbanization of the childhood home environment, the "relevant others" present in the childhood household, number of siblings and the respondent's birth order. These items were taken, sometimes in slightly modified form, from existing international surveys.

Module K – Social and emotional skills

This module gives key descriptive indicators of social and emotional skills, which is a new concept to be measured in PIAAC Cycle 2. The inclusion of a dedicated module aimed at measuring social and emotional skills was one of the key priorities for change in the design of Cycle 2 of PIAAC (OECD 2017; Martin 2018). This decision was based on a growing evidence base showing that social and emotional skills can be highly important in fostering cognitive development; and that social and emotional skills have often substantial effects on important life outcomes (e.g., income, health, social participation) in their own right – above and beyond cognitive ability. Against that background, the addition of this module is expected to add considerable depth and richness to analyses on the potential causes and consequences of cognitive skill development; as well as on the social and economic returns to social and emotional skills, including cross-national variation therein.

With that in mind, the OECD commissioned a working group to develop a proposal for how such a module could be implemented. This working group conducted a thorough review of the relevant literature in the field of personality psychology to identify basic dimensions or factors that could be used to describe a wide range of personality attributes. The most widely used and best-validated model of personality traits is the so called ‘Big Five’ model, in which a range of detailed traits (called “facets”) is subsumed under five higher order dimensions: Openness to Experience, Conscientiousness, Extraversion, Agreeableness, and Emotional Stability (or its inverse, Neuroticism). For the current BQ, the working group on social and emotional skills suggested implementing an established and internationally validated 30-item short version of Big Five Inventory (BFI-2-S; Soto & John 2017) to measure social and emotional skills. The inclusion of social and emotional skills in PIAAC Cycle 2 represents a key innovation over existing surveys and enables the examination of the interplay between cognitive and social and emotional skills.

New items	Indicator (Dimension - Facet)
K2_Q01a	Extraversion - Sociability
K2_Q01b	Agreeableness - Compassion
K2_Q01c	Conscientiousness - Organization
K2_Q01d	Emotional Stability - Anxiety

K2_Q01e	Open-Mindedness - Aesthetic Sensitivity
K2_Q02a	Extraversion - Assertiveness
K2_Q02b	Agreeableness - Respectfulness
K2_Q02c	Conscientiousness - Productiveness
K2_Q02d	Emotional Stability - Depression
K2_Q02e	Open-Mindedness - Intellectual Curiosity
K2_Q03a	Extraversion - Energy level
K2_Q03b	Agreeableness - Trust
K2_Q03c	Conscientiousness - Responsibility
K2_Q03d	Emotional Stability - Emotional Volatility
K2_Q03e	Open-Mindedness - Creative imagination
K2_Q04a	Extraversion - Sociability
K2_Q04b	Agreeableness - Compassion
K2_Q04c	Conscientiousness - Organization
K2_Q04d	Emotional Stability - Anxiety
K2_Q04e	Open-Mindedness - Aesthetic Sensitivity
K2_Q05a	Extraversion - Assertiveness
K2_Q05b	Agreeableness - Respectfulness
K2_Q05c	Conscientiousness - Productiveness
K2_Q05d	Emotional Stability - Depression
K2_Q05e	Open-Mindedness - Intellectual Curiosity
K2_Q06a	Extraversion - Energy level
K2_Q06b	Agreeableness - Trust
K2_Q06c	Conscientiousness - Responsibility
K2_Q06d	Emotional Stability - Emotional Volatility
K2_Q06e	Open-Mindedness - Creative Imagination

Annex – List with dropped items from Cycle 1**Module A - General information - Cycle 1**

No items dropped.

Module B – Formal and non-formal education - Cycle 1

Note that many of the dropped items in Module B were replaced by similar types of questions, but given the substantial changes in the wording cannot be identified as soft trend.

Dropped	Indicator
B_S01a1	Specify name of foreign education
B_Q01a2	Country name foreign education
B_S01a2	Specify country name foreign education
B_Q01a3	National qualification corresponds with foreign education
B_Q01d	Month completed last qualification
B_D01d	Derived variable: Months elapsed since completing highest level of qualification
B_Q03d	Month stopped studying for uncompleted qualification
B_D03d	Derived variable: Months elapsed since leaving education without completing programme
B_Q04a	Formal qualification in last 12 months
B_Q04b	Number of formal qualifications in last 12 months
B_Q05a	Level of highest/last qualification
B_Q05b	Area of study highest/last qualification
B_Q05c	Reasons to study job related
B_Q10a	Employed in last 12 months while studying
B_Q10b	Study take place during working hours
B_Q10c	Study useful for job or business
B_Q11	Employer paid for studying the qualification
B_R12	Introduction to training questions
B_Q12a	Participate in open or distance education
B_Q12b	Frequency of participating in open or distance education

B_Q12c	Participate in organized sessions for on-the-job training or training by supervisors or co-workers
B_Q12d	Frequency of participating in organized sessions for on-the-job training or training by supervisors or co-workers
B_Q12e	Participate in seminars or workshops
B_Q12f	Frequency of participating in seminars or workshops
B_Q12g	Participate in courses or private lessons
B_Q12h	Frequency of participating in courses or private lessons
B_D12h	Derived variable: one or more learning activities reported
B_R13	Introduction to questions on most recent training
B_Q20b	Time job-related activities

Module C - Current status and Work history - Cycle 1

Dropped	Indicator
C_Q02c	Start job within three months or in more than three months
C_Q04a	Job search: get in contact public employment office
C_Q04b	Job search: get in contact private agency
C_Q04c	Job search: apply to employers directly
C_Q04d	Job search: Ask among social network
C_Q04e	Job search: place or answer job advertisements
C_Q04f	Job search: study job advertisements
C_Q04g	Job search: take a recruitment test/examination/undergo interview
C_Q04h	Job search: look for land, premises or equipment
C_Q04i	Job search: apply for permits/licenses or financial resources
C_Q04j	Job search: anything else
C_S04j	Job search: specify anything else

Module D – Current work - Cycle 1

Dropped	Indicator
D_Q13a	Learning new work-related things from co-workers or supervisors

Module E – Last job - Cycle 1

Dropped	Indicator
E_Q10	Main reason stopped working in the last job

Module F – Skills used at work - Cycle 1

Dropped	Indicator
F_Q02d	Selling a product or selling a service
F_Q02e	Advising people
F_Q03b	Planning the activities of others
F_Q07a	Skills to cope demanding duties that are required
F_Q07b	Further training to cope

Module G - Skill Use Literacy, Numeracy and ICT at work - Cycle 1

Note that many of the dropped items in Module G were replaced by similar types of questions, but given the substantial changes in the wording cannot be identified as soft trend.

Dropped	Indicator
G_Q01d*	Read articles in professional journals or scholarly publications
G_Q01e*	Read books
G_Q01h	Read diagrams, maps or schematics
G_Q02b*	Write articles for newspapers, magazines or newsletters
G_Q02c*	Write reports
G_Q03b	Calculate prices, costs or budgets
G_Q03c	Use or calculate fractions, decimals or percentages
G_Q03d	Use a calculator - either hand-held or computer based
G_Q03g	Use simple algebra or formulas
G_Q05a**	Use email
G_Q05d	Conduct transactions on the internet
G_Q05e	Use spreadsheet software
G_Q05f	Use a word processor
G_Q05g	Use a programming language to program or write computer code

G_Q05h**	Participate in real-time discussions on the internet
G_Q06	Level of computer use needed to perform job
G_D07a	Derived variable ^HaveHad
G_D07b	Derived variable ^NeedNeeded
G_Q07	Computer skills needed in job
G_Q08	Lack of computer skills

* These items were combined into one variable measuring both aspects

** Aggregated in F2_Q05a

Module H - Skill Use Literacy, Numeracy and ICT in everyday life - Cycle 1

Note that many of the dropped items in Module H were replaced by similar types of questions, but given the substantial changes in the wording cannot be identified as soft trend.

Dropped	Indicator
H_Q01d	Read articles in professional journals or scholarly publications
H_Q01h	Read diagrams, maps or schematics
H_Q02b*	Write articles for newspapers, magazines or newsletters
H_Q02c*	Write reports
H_Q03b	Calculate prices, costs or budgets
H_Q03c	Use or calculate fractions, decimals or percentages
H_Q03d	Use a calculator - either hand-held or computer based
H_Q03g	Use simple algebra or formulas
H_Q03h	Use more advanced math or statistics
H_Q05a**	Use email
H_Q05d	Conduct transactions on the internet
H_Q05e	Use spreadsheet software
H_Q05f	Use a word processor
H_Q05g	Use a programming language to program or write computer code
H_Q05h**	Participate in real-time discussions on the internet

* These items were combined into one variable measuring both aspects

** Aggregated in G2_Q05a

Module I: About Yourself – Cycle 1

Dropped	Indicator
I_R01	Introduction
I_Q04b	When I hear or read about new ideas, I try to relate them to real life situations to which they might apply
I_Q04d	I like learning new things
I_Q04h	When I come across something new, I try to relate it to what I already know
I_Q04j	I like to get to the bottom of difficult things
I_Q04l	I like to figure out how different ideas fit together
I_Q04m	If I don't understand something, I look for additional information to make it clearer
I_Q06b	Political efficacy
I_Q07b	Social trust

Module J – Background information – Cycle 1

No items dropped.