

## Multi-Item Scale for Project:

Pretesting of special module on ICT at work, working conditions & learning digital skills  
(English Version)

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### Question Text:

English version: How often have the following activities been part of your main paid job, in the last 12 months?

German version: Wie oft waren die folgenden Internet-Aktivitäten in den letzten 12 Monaten Teil Ihrer bezahlten Hauptbeschäftigung?

### Instruction:

English version: *Please tick all that apply*

German version: *Bitte kreuzen Sie alle zutreffenden Antwortmöglichkeiten an.*

### Alternative Answer Format Tested:

English version:

Daily

Less than daily

Never

German version:

Täglich

Nicht jeden Tag

Nie

### Findings for Multi-Item Scale:

Question 5 inquired how often a variety of activities have been part of the respondents' main paid job in the last 12 months. 26 respondents (14 English speaking respondents and 12 German speaking respondents) did not receive question 5 due to the filter in question 3. That is, only respondents that selected "yes" at the question whether they use computers, laptops, smartphones, or other computerised equipment at work, received question 5.

In total, this item battery asked for 11 different activities. For each question of this

item battery, the respondents had to choose between the answer categories "Daily," "Less than daily," and "Never." All categories were exclusive categories and, therefore, percentages add up to 100 percent. In order to avoid respondents' frustration due to too many probes in this web survey, the decision was made to only probe two items instead of probing all 11 items of this battery. One of the probes (Probe 6) asked the respondents whether they perform any further digital activities that were not mentioned in the previous question.

The intention of Probe 6 was to check whether respondents thought that certain tasks are not covered by the items a) to k) of question 5 and to assess whether additional items need to be added to this item battery. Probe 6 asked the respondents whether they perform any further digital activities that were not mentioned in the previous question. In order to avoid confusing the respondents and in order to keep the response burden as low as possible to prevent respondents' frustration, only respondents that chose the answer category "never" at item 5e), received Probe 6. Therefore, only participants that did not receive Probe 5 responded to Probe 6. In total, 18 British respondents and 17 German respondents provided an answer to Probe 6.

Most respondents from both countries indicated that they could not think of any further digital activities that were missing in the previous question (British respondents: 83.33 percent, German respondents: 58.82 percent). However, German respondents also mentioned the digital activity of creating lists and documents (1 respondent) and talking with customers online (1 respondent). In contrast, British respondents also referred to emailing tenants and suppliers (1 respondent), gaming (1 respondent), and using the internet as a source of music (1 respondent).

For a more detailed breakdown of the respondents' answers please refer to the tables in the attached PDF document.

## **Recommendations for Multi-Item Scale:**

Question: The question text in German differs from the English source question. In the German version, respondents are asked to report on "Internet-Aktivitäten" [internet activities]. In the English version, respondents are only asked for "activities." However, the items f)-k) are activities that do not necessarily presuppose working online. The difference in question wording could be an explanation for the differences between German and British respondents in the frequency distribution of the items f)-k). Therefore, we recommend deleting the word "internet" in the German version:

"Wie oft waren die folgenden Aktivitäten in den letzten 12 Monaten Teil Ihrer bezahlten Hauptbeschäftigung?"

Answer categories: No changes recommended.

## **Cognitive Techniques:**

General Probing.

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### **All Items for Question(Question Text):**

English version: How often have the following activities been part of your main paid job, in the last 12 months?

German version: Wie oft waren die folgenden Internet-Aktivitäten in den letzten 12 Monaten Teil Ihrer bezahlten Hauptbeschäftigung?

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-> Tested Items:

### **Item Text:**

English version:

e) Enter data into business software or databases (e.g. for customer relations management)

German version:

e) Eingabe von Daten in Unternehmens-Software oder Datenbanken (z.B. für Kundenmanagement)

### **Recommendations:**

No changes recommended.

### **Findings:**

The first answer category of item 5e) ("Daily") was selected by 45.90 percent of the English speaking respondents and 39.66 percent of the German speaking respondents. The second answer category ("Less than daily") was chosen by 24.59 of the English speaking respondents and 31.03 percent of the German speaking respondents. Finally, 29.51 percent of the British respondents and 29.31 percent of the German respondents indicated that they have never entered data into business software or databases in their main paid job in the last 12 months.

Only respondents that indicated at item e) of question 5 that they enter data into business software or databases in their main job "daily" or "less than daily" received

Probe 5. That is, respondents that indicated at this item that they never enter data into business software or databases in their main job were not asked this probe. Therefore, 43 British and 41 German respondents received Probe 5 that asked the respondents whether they could explain their tasks in this context a bit further. The intention of Probe 5 was to evaluate whether the respondents' perception of the level of complexity of this task is in line with the questionnaire designers' perception of the level of complexity of this task. From the perspective of the questionnaire designers, entering data should be perceived by the respondents as a relatively basic skill.

The respondents that further explained their tasks in the context of entering data mentioned a variety of specific tasks. These tasks can be subsumed under the broader categories of "accounting & sales management," "updating databases & creating spreadsheets," "customer related tasks," "staff related tasks," and "gathering, processing, & archiving information." In addition, some respondents also mentioned specific software which they use in this context (e.g., Access Data Base, Excel, or SQL). Respondents in both countries that referred to specific tasks that fell in the category "accounting & sales management" mentioned that their tasks are related to accounting records (British respondents: 11.63 percent, German respondents: 4.88 percent), invoicing (British respondents: 4.65 percent, German respondents: 7.32 percent), and inventory (British respondents: 2.33 percent, German respondents: 7.32 percent). However, British respondents additionally referred to tasks related to sales management (6.98 percent), budget (2.33 percent), payment of suppliers (2.33 percent), and VAT remittance (2.33 percent). When respondents referred to specific tasks that fell in the broader category of "updating databases & creating spreadsheets," they either specified that they enter data into databases (British respondents: 9.30 percent, German respondents: 17.07 percent) or spreadsheets (British respondents: 6.98 percent). Most of the respondents in both countries mentioned specific tasks that belong in the broader category of "customer related tasks." In this context, 30.23 percent of the British and 31.71 percent of the German respondents wrote that they conduct tasks that are related to the customer relationship management of their company. A few respondents also mentioned that they enter data for the analysis of customers' waiting time (British respondent: 2.33 percent) and for online mailing lists and profiles (British respondents: 4.65 percent, German respondents: 2.44 percent). Respondents referred less frequently to tasks related to the broader category "staff related tasks." In this context, British respondents specified that they enter staff information into human resource databases (4.65 percent), that they enter data related to the payment of staff (2.33 percent), or daily information on the progress of work (2.33 percent). One German respondent mentioned in this context that he is responsible for the record of working hours.

Depending on the questionnaire designers' perception of what type of task might be classified as a simple task, tasks that fell into the broader category of "gathering, processing, & archiving information" may have the greatest potential to constitute tasks that are "out of scope" of the questionnaire designers' definition. In this broader category, most of the tasks require a more elevated skill set compared to the tasks in the other

broader categories. In this category, a few respondents in both countries reported that they research and gather information (British respondents: 4.65 percent, German respondents: 4.88 percent) and run data analyses (British respondents: 4.65 percent, German respondents: 4.88 percent). In addition, British respondents also mentioned the tasks of creating surveys (2.33 percent), of entering data into a library management system (2.33 percent), and of creating electronic medical records (2.33 percent).

Besides tasks that can be summarized in the broader categories, some respondents wrote specific software programs. That is, respondents did not describe their tasks more precisely. Instead, these respondents described how they enter the data into the datasets and spreadsheets. Only British respondents mentioned specific software programs. Respondents reported the following software programs in this context: Access data base (4.65 percent), Mango db (2.33 percent), Cisco (2.33 percent), Excel (4.65 percent), Phocas (2.33 percent), SPSS (2.33 percent), and SQL (4.65 percent).

Finally, some respondents refused to answer this probe (British respondents: 11.63 percent (n=5), German respondents: 17.07 percent (n=7)). Nearly none of the respondents indicated that they don't know how to respond to this question (one British and one German respondent).

For a more detailed breakdown of the respondents' answers please refer to the tables in the attached PDF document.

## **Question Topic:**

Digitalization/ Use of digital systems

## **Construct:**

Frequency of performing ICT activities at work

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## **-> Not Tested Items:**

### **Item Text:**

English version:

a) Exchange emails

German version:

a) Senden/ Empfangen von E-Mails

**Question Topic:**

Digitalization/ Use of digital systems

**Construct:**

Frequency of performing ICT activities at work

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**Item Text:**

English version:

b) Use social media to work

German version:

b) Nutzung sozialer Netzwerke zu beruflichen Zwecken

**Question Topic:**

Digitalization/ Use of digital systems

**Construct:**

Frequency of performing ICT activities at work

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**Item Text:**

English version:

c) Browse the internet to get work-related information

German version:

c) Suche nach arbeitsbezogenen Informationen im Internet

**Question Topic:**

Digitalization/ Use of digital systems

**Construct:**

Frequency of performing ICT activities at work

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**Item Text:**

English version:

d) Conduct online transactions (e.g. commercial, financial, transport, etc.)

German version:

d) Durchführung von Online-Transaktionen (z.B. Einkauf/ Handel, Finanzen, Transport, usw.)

**Question Topic:**

Digitalization/ Use of digital systems

**Construct:**

Frequency of performing ICT activities at work

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**Item Text:**

English version:

f) Create or edit electronic documents

German version:

f) Erstellen oder Bearbeiten elektronischer Dokumente

**Question Topic:**

Digitalization/ Use of digital systems

**Construct:**

Frequency of performing ICT activities at work

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**Item Text:**

English version:

g) Use specialised software for design or simulation (e.g. CAD)

German version:

g) Nutzung spezieller Software für die Gestaltung und Simulation (z.B. CAD)

**Question Topic:**

Digitalization/ Use of digital systems

**Construct:**

Frequency of performing ICT activities at work

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**Item Text:**

English version:

h) Use specialised software to analyse data (e.g. technical, financial, etc.)

German version:

h) Nutzung spezieller Software für Datenanalysen (z.B. technische, finanzielle Daten, usw.)

**Question Topic:**

Digitalization/ Use of digital systems

**Construct:**

Frequency of performing ICT activities at work

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**Item Text:**

English version:

i) Use computerised equipment to control, operate or repair machines (e.g. car electronics, CNC, etc.)

German version:

i) Verwendung von computergesteuerter Ausstattung zur Kontrolle, Bedienung oder Reparatur von Maschinen (z.B. Kfz-Elektronik, CNC, usw.)

**Question Topic:**

Digitalization/ Use of digital systems



**Construct:**

Frequency of performing ICT activities at work

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**Item Text:**

English version:

j) Design or maintain computer networks, servers, websites, security functionalities

German version:

j) Entwurf oder Wartung von Computer-Netzwerken, Servern, Webseiten, Sicherheitsfunktionen

**Question Topic:**

Digitalization/ Use of digital systems

**Construct:**

Frequency of performing ICT activities at work

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**Item Text:**

English version:

k) Programming and software development

German version:

k) Programmierung und Software-Entwicklung

**Question Topic:**

Digitalization/ Use of digital systems

**Construct:**

Frequency of performing ICT activities at work