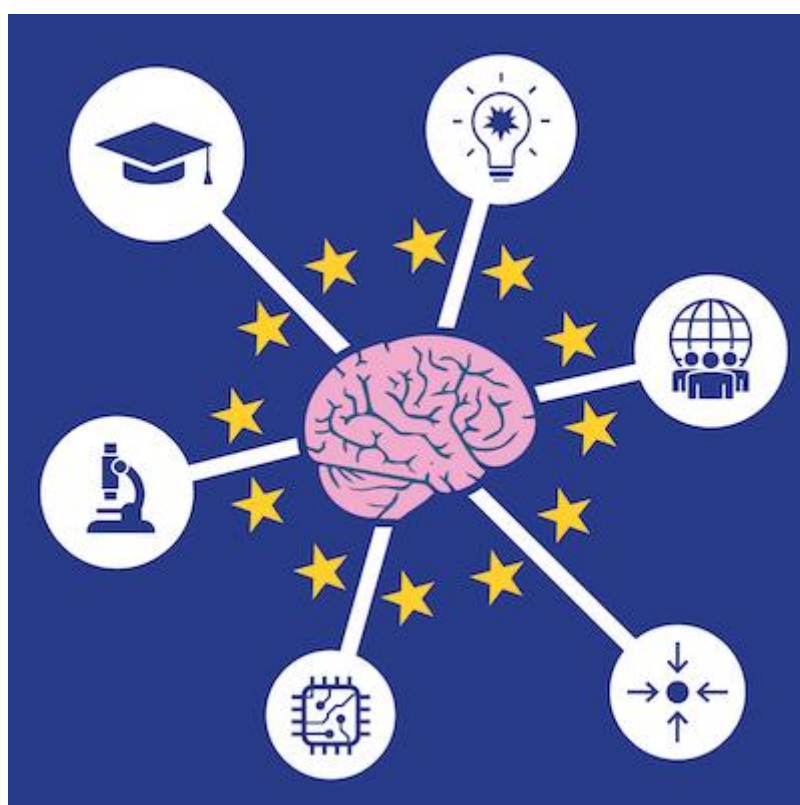


Neurotech^{EU}

The European University of Brain and Technology



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[NERQ Compendium: 2. Q3R]

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Executive summary

This document is the second part of the Neurotech^{EU} Education and Research Quality (NERQ) Compendium, corresponding to the **Design of the Qualitative and Quantitative Quality Reviews (Q3R)**. It contains an inventory of tools (questionnaires, report templates, checklists) and procedures to provide support throughout the Quality Workflow. The current version of the inventory is defined under a pilot trial delimited to quality evaluations of a sample of first achievements delivered by WP4 and WP5, and includes:

1. Internal Quality in learning & teaching outputs: General Prerequisites.
2. Quality Reviews for Summer/Winter Courses:
 - a. Minimum set of data for a transversal identification.
 - b. Student Satisfaction Questionnaire: general guidelines.
 - c. Student Satisfaction Questionnaire (sample).
3. Internal surveys on stakeholder needs.

This inventory will grow incrementally according to a set of prerequisites or quality guidelines pre-defined for each typology of activity. The current iteration of this document points to the need of surveys for Quality Reviews, especially in the laying the foundations phase of Neurotech^{EU}, but it will be updated in future versions with transversal Technical Check Sheets produced based on the results obtained in the pilot trial.

1. Introduction

The **Design of the Qualitative and Quantitative Quality Reviews (Q3R)** made in this document is under the approach defined for Neurotech^{EU} Quality Plan in D2.2, where progress follows successive subsequent rounds Plan-Do-Check-Act (PDCA), with a Quality Workflow based on 4 stages:



Q3R reviews apply particularly in the **third stage of the Quality Workflow (Monitoring Process)**, and their aim is to give the whole Alliance a standard way to verify that *achievements* fulfil stakeholders' needs. At the first project increments, also the first stage (Aim Definition) will require support from Q3R reviews to guarantee an effective way to collect all the key stakeholders' interests and points of view.

2. Scope

Q3R reviews will include:

- Tools (questionnaires, report templates, checklists, and others) for the **data collection** required for each incremental Indicators System, and to gather all voices required for a proper incremental Aim Definition.
- Procedures to **make the evaluations of the achievements** reflected by the fulfilled Indicator System, with consideration of all the key stakeholders per increment.

An **inventory of these tools and procedures** will be gradually made in response to each increment needs and according to a **set of prerequisites** or quality guidelines pre-defined for each typology of activity.



As an example of prerequisites, below are the ones related to “learning & teaching outputs,” supported by the common European quality standards frameworks, and the basis of the work in progress to define these prerequisites to build Neurotech^{EU} activities under widening access values.

2.1. Internal Quality in learning & teaching outputs: Prerequisites

These prerequisites as regard **Internal Quality in learning & teaching** outputs:

1. Will be based on the recognition of *differences between* education systems and their corresponding quality approaches as one of the rich aspects of internationalisation. (D4.4)
2. They will also be based on the *recognition of each learning provider institution’s Internal Quality System* as a sound starting point for effective internal quality assurance.

Each learning provider must declare that compliance with their own *Internal Quality System* means full compliance with “Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG).”

3. They must follow Neurotech^{EU} *guidelines and agreement for the transfer of credits* (Deliverable 4.4).
4. They must cover Internal Quality requirements but also Neurotech^{EU} brand¹ requirements.

2.2. Internal Quality in widening access: Prerequisites

Prerequisites as regards **Internal Quality in widening access** are being built within WP7, coping with:

1. The challenge of differences between partner institutions on:
 - Degree of alignment with the UN Sustainable Development Goals.
 - Level of recognition of widening access/participation and/or social inclusion as an active goal in each institution.
 - Formal mechanism in place to establish quality indicators for EDI and implemented data-informed action plans on EDI.
2. Urgent issues emerged due to COVID – 19 pandemic and refugee crisis in Europe.

A questionnaire has been designed (Annex 1) with the purpose of mapping the starting point from partner institutions on these issues. And guidelines will be defined finally from the understanding of the information gathered, but also giving relevance to the crucial value of widening access that Neurotech^{EU} growth requires.

3. Quality Reviews inventory (Increment I)

3.1. Introduction: pilot trial scope

A **pilot trial** has been defined to clearly delimit the scope of the first set of Q3R review tools to develop.

This “**Increment I**”- scope was limited to:

- Neurochallenges in Education & Research (WP4): **Summer/Winter Courses**.

¹ Note: “Neurotech^{EU} brand requirements” refers here to what underpins our European University identity, their mission, vision, and values.



Summer/winter courses have been chosen for this pilot trial, as relevant learning & teaching activities they are, with a multicultural approach, with three coming events planned from three different partner institutions (under the umbrella of WP4).

- Neurochallenges in Technological Innovation (WP5): **Aim Definition of NEURICOO.**

NEURICOO (the central organisational structure for university-industry collaboration of Neurotech^{EU}) has been chosen for this pilot trial, as it is the focus of this first project increment within “Neurochallenges in Technological Innovation.”

Its Aim Definition required specific support of tools to assure voices from all key stakeholders were being gathered.

This will frequently occur in outcoming project incrementals since the cross-functional profile of their key stakeholders is on their roots.

3.2. Quality Reviews for Summer/Winter Courses

Quality Review tools for Summer/Winter Courses were developed, at this first step, with the following priorities:

3.2.1. To have a clear description of the activity under transversal guidelines.

The purpose here is to establish the minimum set of data required to have identified any Summer/Winter Course on a common ground, regardless of the hosting partner.

This will be considered a basic for Internal Quality and a basic under the Growth principle of looking for synergies since it will be required to support any stakeholder to identify the singularity of each Summer/Winter Course.

This minimum set of data is attached in Annex II, and it is the result of the collaborative work done by the three partner institutions involved in the next call of Summer/Winter courses (UD, UMF, and UMH).

3.2.2. Gather Student feedback.

Students are considered a relevant stakeholder in Summer/Winter Courses. They are the main beneficiaries and, therefore, a key voice to consider where achievements have to be reviewed.

For the scope of this first increment, a **Student Satisfaction survey** (in Annex III) has been defined jointly by all three partner institutions involved in the next call of Summer/Winter Courses as a common tool to be used at the end of the Course.

It has been built under the following premises:

1. Student Profile:

Questions should be added to identify the relevant characteristics of the target audience:

- according to the **aim of the course** (e.g., academic/professional).
- and to allow a **monitoring mechanism for issues related to widening access** (as defined in Deliverable D7.5).



The latter is done, for the scope of this pilot trial, through a question regarding gender identity (Annex III), whose purpose is to serve as a tool (monitoring mechanism) to work on reducing the gender gap in education² as it is one of the disparity evidence identified in Deliverable 7.1.

Definition of questionnaires for next increments should be reviewed to contain questions regarding widening access in a broader sense under EDI (equity, diversity & inclusion) guidelines, where vulnerable population all over their range (e.g., refugees, individuals from lower socio-economic groups)³ should be considered for monitoring mechanisms as appropriated.

2. Student satisfaction before the course:

Questions should be added to gather student satisfaction with the pre-course procedures.

Note: A question regarding the student expectancies is added in this pilot trial (Annex III) as an open-ended question. The operability of this question will be reviewed after the pilot trial for the next questionnaire versions.

3. Student satisfaction with the course development:

Questions regarding the course development will cover the academic development but also the experience itself in global terms.

- Academic development: Questions should be added to gather student satisfaction regarding the course content and all the relevant factors regarding the course organisation that might affect the final achievement of the aims.
[e.g., teacher knowledge and attitude; useful teaching material; course efficiently structured with adequate volume, sufficient time].
- Global experience: Questions should be added to gather student satisfaction regarding complementary services offered, as well as procedures to promote cultural permeability and networking between all participants (student life during the course).

4. General assessment of the course:

A global question regarding the general satisfaction with the course will be included after having gathered satisfaction with its particular factors. This is a requirement for methodological purposes of the envisaged data analysis.

This global question was split into three particular ones (Annex III) to be tested in this pilot trial. The questionnaire for the next increments will be updated according to the results obtained.

5. Observation and suggestions.

A final open-ended question to gather student insights should be added. This could be a relevant opportunity to understand relevant questions from the side of the student not covered with the previous questions (both for improvement or acknowledgment of good practices).

² Gender inequality in research and education is identified as one major disparity still present (Deliverable D7.1): (1) “only a fraction of female students selects Science, Technology, Engineering, and Mathematics (STEM) related fields in higher education. International female enrolment is particularly low in specific fields.”, (2) “women account for a minority of the world’s researchers”.

³

(From D7.1) Vulnerable populations: (1) Individuals from lower socio-economic groups, backgrounds, or locations where access and participation to higher education is scarce, (2) Individuals living with disability, mental health issues, or learning difficulties, (3) International students and staff, as well as individuals with literacy or comprehension difficulties, (4) Ethnic groups or sub-groups, (5) Sexual orientation or gender identities, (6) Older and part-time learners, (7) Residents of rural areas, (8) Care leavers and carers, (9) Traveller community members, (10) Refugees, (11) First-generation students and people who attend schools and colleges where performance is below the national average, (12) Individuals estranged from their families.



3.3. Quality Reviews for Aim Definition of NEURICOO

The Quality Review tool developed here at this pilot test for the Aim Definition of NEURICOO, was a **Check Sheet** for the survey conducted.

This **Check Sheet** assisted the WP5 team to define a methodological approach appropriate for its purpose.

- **Aim:** Identify “What is needed to translate Innovations into industry.”
- **Survey methodology:** online.
- **Survey date:** June - August 2021
- **Type of questions:** mainly close-ended questions (questionnaire in Annex IV).
Note: Questions were defined jointly from a cross-functional profile, with the participation of Can Yucesoy (Boğazici University), Mohsen Kaboli (BMW and Radboud University), Dafin Muresanu (Iuliu Hațieganu University of Medicine and Pharmacy Cluj-Napoca) and Tansu Celikel (Radboud University).
- **Methodology used to identify questions:** discussions in breakout rooms and roundtable discussions during “The European University of Brain and Technology NEURICOO event” (May 25th, 2021).
- **Universe:** Participants from all Neurotech^{EU} partnering universities and companies.
- **Profile of the participants:** Social references and opinion leaders from academics, students, company, cluster, and TTO (Technology Transfer Offices) representatives.
- **Sampling technique:** Convenience sample (non-probability sample technique).
Researchers appointed directly to a selected sample of **social references and opinion leaders from each partner institution** (in accordance with the aim of the survey).
- **Sample size:** 140.
- **Rate Scale in preference questions:** 1-5
- **Questionnaire:** in Annex IV (<https://bit.ly/NEURICOO-Survey>).

4. Responsibility

Main responsibilities regarding Q3R reviews are detailed below:

- **WP2 Team:** will **update the Q3R inventory** with the tools and procedures required for each new increment (under the supervision of the Quality committee).
- **Internal Quality organism per each typology of Neurotech^{EU} main activities.** (eg. summer/winter courses, internships):

It will be the transversal competent organism, per each typology of activity, and with respect to Internal Quality, to **own the whole set of guidelines and tools** applicable to the correspondent activity in each increment.

It will serve as a **contact point** for quality issues to all activity owners.

At the end of month 36, a list of key activities for the scope of Internal Quality will be defined. (e.g., Short courses, internships).

And a set of transversal competent Organisms will be set according to these key activities identified.

- **Quality officer in each partner institution:** He/She will perform the Q3R reviews regarding the activity held in each partner institution and following the standards and guidelines provided by the correspondent Internal Quality organism.



5. Reference framework

- Deliverable 1.5. Process of monitoring.
 - *Annex I. Monthly progress report*
 - *Annex II. Sub-processes for annual data collection*
 - *Annex III. Annual WP Progress Form*
 - *Annex IV. Annual Progress Report (Template)*
- Deliverable 2.2. 'NERQ Compendium/ 1. Quality Plan'
- Deliverable 2.4. 'NERQ Compendium/ 3. Improvement Plan'
- Deliverable 4.1: 'CAMPUS+ inventory of teaching content and supervisors for undergraduate and graduate students'
- Deliverable 4.4. Guidelines and agreement for transfer of learning credits.
- Deliverable 7.1 Widening Access within Neurotech^{EU}. Summary of best practices.
- Deliverable 7.5. Neurotech^{EU} Policy&Action Plan on Equality, Diversity and Inclusion.
- Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG). (2015). Brussels, Belgium

Annex I. Widening Access – Prerequisites. Questionnaire

Aim: to guide WP7 team to gather a realistic starting point from Neurotech^{EU} partner institutions on EDI, Equity/Ethics, SDGs.

Universe: All partner institutions (8). (A competent representative inside each partner institution for the scope of the questionnaire will be selected. The profile of the interviewee should be recorded).

Sampling technique: Total global universe.

Type of questions: Qualitative.

Block Id	Questions
1	Is widening access/participation and/or social inclusion an active goal of your institution? If so, please say more about the institutional structures (e.g., departments, committees, staff), legal framework (e.g., university charter), and mechanisms (e.g., admission procedure) that are already in place to address this topic. Do you have a dedicated department/unit? What is the scope of activity of this unit? Are vulnerable students defined within your university? If yes, please give us any information you have on these groups.
2	Is the universal access of students and staff enforced in your university (e.g., policies for persons with disabilities)? For example, are online teaching programs accessible to all students? What support services does your university offer for incoming/outgoing international students? How has the COVID-19 pandemic impacted access of international students to your university's educational programs?
3	Are there any core documents (e.g., guidelines, procedures, whitepapers) you feel are relevant for the activity of establishing quality indicators for EDI?
4	What are the main groups or events organised within your university that come to mind when thinking about multiculturalism?
5	Are there any mechanisms in place in your university for the retention of students and staff (in the university or country) to combat brain drain?
6	Does your university have any policies regarding gender equality in place?
7	Is your university a Magna Charta signatory? If yes, are you currently developing the Living Values project? How do your university's goals align with the UN Sustainable Development Goals? Are there any specific initiatives or activities in your university that are related to SDGs?
8	What is your university's policy regarding the ongoing refugee crisis in Europe?



Annex II. Summer/Winter Course – Minimum set of data for a transversal identification

Minimum items

1. Description
2. Learning outcomes
3. Programme Coordinator
4. Lecturers/trainers
5. Academic structure
6. Admission requirements

Minimum Content for each item

At a minimum, the following data should be provided per item:

1. **Description:**

- Title
- Target audience
[with mention to the moment in the life cycle of the student or professional working life the course is applicable], E.g., bachelor, master, doctorate, post-doctoral, ...
- Dates and duration
- Program fees
- Contact (for pre-course administrative issues)

2. **Learning outcomes:** (including both academic goals and transversal competencies).

It could be split into **Curriculum Contents** and **Learning outcomes** if it applies to the Summer/Winter Course.

Examples of transversal competencies: leadership, creativity, problem-solving, decision making, ...

3. **Programme Coordinator:**

- Name
- Short reference to the suitability of the director profile to the main knowledge area addressed in the Summer/Winter Course
- Hosting partner: HE Institution to which the director belongs and whose Internal Quality System will manage all the internal quality assurance procedures.

4. **Lecturers/Trainers:**

- List of lecturers
- Short reference to each of their suitability to their role in the course.

5. **Academic structure:**

- Total workload: in ECTS or hours
- Structure of the program (schedule and workload per any distinct academic sections included in the course).
- Resources made available (e.g., facilities, ...)
- Type of certificate that can be obtained:
 - Statement of Participation
 - Certificate of Achieved Learning Outcomes
 - Transcript of Records
- Assessment procedure (procedure to assess that the learning outcomes have been achieved).





6. Admission requirements:

- Eligibility requirements (minimum requirements to be an eligible candidate & other requirements that could be used as final admission criteria if placements are limited).
- Admission procedure (if required to fit with limited placements: calendar for admission, committee responsible, communication channels).



Annex III – Student Satisfaction Survey for Summer/Winter Courses - Questionnaire

- **Aim:** To gather a quality review of Summer/Winter Courses achievements from the student's point of view.
- **Universe:** All students attending the course.
- **Sampling technique:** Total global universe.
- **Type of questions:** Mostly quantitative.
- **Moment to launch the survey:** immediately after the end of the course.

Note: Particular questions of relevancy for each Summer/Winter Courses could be added in the corresponding Block.

Summer/Winter Course Questionnaire (sample)

This satisfaction survey aims to compile your level of satisfaction with different aspects of the Summer/Winter Course that you have recently completed.

This is an anonymous questionnaire.

Thank you for your time in responding.

BLOCK 1 – General questions.

Note 1: First question below is added to serve as a tool (monitoring mechanism) to work on reducing the gender gap in education] Please adapt the questions in this BLOCK 1, as recommended in bullet 3.2.2/1 of this document D2.3.

Note 2: First question will also be under WP7 team supervision before its inclusion in the questionnaire.

1.1 How would you currently describe your gender identity?

Woman Man Transgender Non-binary/Non-conforming Prefer not to respond

Prefer to self-describe:

1.2 Which university and faculty are you studying at? [drop-down menu with options].

BLOCK 2 –Satisfaction with pre-course procedures.

On a scale from 1 to 5 (where 1=completely disagree; 2= mostly disagree; 3=neither agree or disagree; 4= mostly agree; 5= completely agree), please rate the extent to which:

1. The objectives of the subject and the skills to be developed were perfectly explained to you. 1 - 5
2. The registration and admission procedures were easy to follow. 1 – 5
3. The administrative staff from the host University showed a collaborative attitude in the pre-course assistance. 1 - 5

In the space below, please briefly describe which were your expectations for the course when you enrolled in it.

BLOCK 3 –Satisfaction with the (academic) development





Please rate how satisfied you are with the following aspects of your academic experience (where 1= completely dissatisfied; 2= mostly dissatisfied; 3= neither satisfied nor dissatisfied; 4= mostly satisfied; 5 = completely satisfied).

1. The contents taught. 1 - 5
2. The methodology employed. 1 - 5
3. The supplied course materials. 1 - 5
4. The instructor(s) who taught the course (if several instructors, please give an average rate). 1 - 5

BLOCK 4 - Satisfaction with the global experience

Please rate how satisfied you are with the following services (where 1= completely dissatisfied; 2= mostly dissatisfied; 3= neither satisfied nor dissatisfied; 4= mostly satisfied; 5 = completely satisfied).

- 4.1. Dorm-related services (if applicable). 1 - 5
- 4.2. Social programme. 1 - 5
- 4.3. Library services/online availability of learning materials. 1 - 5

BLOCK 5 – GENERAL assessment

On a scale from 1 to 5 (where 1=completely disagree; 2= mostly disagree; 3=neither agree or disagree; 4= mostly agree; 5= completely agree), please rate the extent to which:

1. You are happy with what you have learned in the course. 1 - 5
2. You consider it has been an interesting course. 1 - 5
3. You would recommend this activity to your peers. 1 - 5

BLOCK 6 – Observations and suggestions

Below please write the added comments (suggestions, positive and negative aspects) you consider relevant to give a full global assessment of the course:

Thank you for completing our survey!



Annex IV – Aim Definition of NEURICOO – Questionnaire

<https://bit.ly/NEURICOO-Survey>

NEURICOO: NeurotechEU's university-industry collaboration structure

Following the NeurotechEU - NEURICOO event on 25 May 2021 (see below for aims and facts), with this short survey, we will collectively determine needs and expectations of companies, clusters, academics and students for translating innovations into industry. Please indicate your choices for the questions below, which were posted during the Round Table Discussion. The aim of this survey is to provide a platform for all participants to respond to those questions.

My name & last name is

Tu respuesta _____

I am a

- Student
- Academic
- Cluster representative
- Company representative
- TTO representative
- Otro: _____

I am from the following university/cluster/company

Tu respuesta _____



I can benefit from a matchmaking NeurotechEU - NEURICOO can provide for
A choice of 1 indicates the least, and 5 indicates the greatest need

(1) Recruiting well educated top-level employees

1	2	3	4	5
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

(2) One-on-one shared technology co-development

1	2	3	4	5
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

(3) Licensing opportunities for innovations (TRL4+)

1	2	3	4	5
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

(4) Space, equipment, knowhow, innovations available in partners

1	2	3	4	5
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>





I can benefit from being a part of NeurotechEU - NEURICOO ecosystem for:
A choice of 1 indicates the least, and 5 indicates the greatest need

(5) Subsidy funded research projects

1	2	3	4	5
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

(6) Forming consortiums for European Commission Research & Development funds

1	2	3	4	5
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

(7) Attracting matching funds and/or large investment funds from governments

1	2	3	4	5
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

(12) Entrepreneurship training for students and academics.

1	2	3	4	5
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Any other need/expectation that NeurotechEU - NEURICOO can help you with?

Tu respuesta _____





(9) Cooperation of TTO's for developing research collaboration agreement and IP management formats

1	2	3	4	5
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

(10) Utilizing NeurotechEU portal and NEURICO website to provide a platform for jobs, training, partnering, career, licensing and matching opportunities

1	2	3	4	5
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

(11) Online training videos on topics related to neurotechnology and lab training for a certificate.

1	2	3	4	5
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

