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Case Development Methodology Adapted to VET Sector

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1. INTRODUCTION

1.1 The Revive VET project

The project addresses European priority to contribute to the development of quality lifelong learning, and to promote high performance, innovation and a European dimension in systems and practices in the field. More concretely, the project suggests reviewing and reviving VET practices with the focus to improve the quality, attractiveness and accessibility of VET services.

While some VET actors are advanced and integrate among online professional communities, others are still operating under old and "inefficient" mechanisms, struggling hard with old-fashioned practice methods.

The project addresses the need to develop the key skills and competences (in particular digital and technological competences) of VET teachers and trainers, and institution managers in any sector.

Another priority area that is addressed by the project is to improve quality assurance practices at VET institutions. The project will exploit former Leonardo and other projects in the area of quality assurance, in order to prepare VET institutions to transfer guidelines, tools and products aiming at the implementation and use of the European Quality Assurance Reference Framework. Revive-VET project will use self-assessment and peer review approach in the quality assurance process.

1.2 Purpose of this document

This document describes in details the Case Development Methodology in four levels:

- institutional strategy level
- curriculum level
- professional skills development level
- national schemes level

based on the Case Development Guidelines.

This document enables to develop Cases in four levels during the project. The detailed methodology prompts:

a) the description of the procedure

b) the participants of the procedure

c) the specific ways of the selection of the four areas, mapping and developing ICT integration related on-line CASES in the respective Revive VET Case levels and provide instruments and tools for working out

- an evidence based positioning the respective cases (self evaluation),
- for the development of the cases (the most complex technique, the peer review described in a separate document)
- analysis of the findings
- recommended roadmap for improvements

d) risks of the procedure
e) the advantages of the procedure

It draws together and further develops strands of work that have previously been carried out within the context of:

- The Hextlearn case development methodology, notably the "Tools and criteria to identify good practices"
- - The Hextlearn peer review methodology, notably the "*Peer Review* as means to enhance quality of ICT integration in teaching and learning"
- The REVIVE project, in particular the "Harmonization of pedagogical and technological methodologies for reviewing and reviving existing VET curriculum".

One of the main objectives of developing this methodology is to ensure a straightforward and coordinated way of self evaluation, development and adequate analysis of the four level ICT related cases and a structured recommendation to improve the cases.

In order to achieve this, the methodology adapted to VET sector explores the possible steps for the positioning of ICT CASES in VET, the methods of development and later, in another document: the methods of peer reviewing.

2. THE SYSTEM OF ICT QUALITY ENHANCEMENT

The project will follow commonly agreed steps:
1. Methodology planning
2. Methodology development with quality criteria defined in another deliverable
3. Methodology training for experts who will implement this Case development work
4. Case positioning
5. Case development (single expert method)

or

6. Case development (Peer reviewing method) in selected cases for complex development and analysis of the quality of ICT integration
7. Analysis of the findings
8. Recommended roadmap for improvements

3. THE TWO PHASES OF CASE DEVELOPMENT

For the sake of effective training and modelling the process for trainee experts the case development is carried out in two phases:
1. Pilot cases – done by partnership experts
2. Cases (internal or external) – done by the invited external experts

Pilot cases will be done in a quicker, so that external experts can contextualise and see examples when they follow the methodology training. External experts here mean external to the project partnership, who have not been involved in the planning phase of the development process.

4. The two types of case development

There are basically two types of cases from the point of the relation of the case and the expert.

- Internal
- External

4.1 Internal case development

We can call internal case development the process when the expert is developing a case which is well known by the expert, either by the fact that the case is in his or her own institution or the subject of the case was made by the expert. The context and details are clear for the expert, there is no need for substantial clarification, the documentation and the involved people are easily reachable for the expert without any further formal request or third party interlocutor. The internal case development is methodologically a self-assessment.

4.2 External case development

We can call external case development the process when the expert is developing a case which is selected by a method and not known by the expert. The case can be found in an external institution or the subject of the case was made by people the expert does not know. The context and details are new for the expert, there is a need for selection and substantial clarification, the documentation and the involved people are subject to map and research for the expert and the development work may require formal request or third party interlocutor on behalf of the case holder. External case development methodologically is an external assessment process.

4.3 Case development and peer review

In case of internal assessment the peer review phase is a part of the whole process when self-assessment is enhanced by external assessment tools and methods, but finishes at the end by self development methods (roadmap for improvement). In case of internal case development, the internal expert is the host of the peer review.
In case of external case development the peer review is only a complex tool at the development phase, and the whole process remains still entirely external. In case of external case development, the external expert is part of the peer review board of experts.

5. Participants of the process

The process mainly involves the case development expert. The expert as described earlier can be familiar with the case and can be seen as internal expert. Internal expert use the methodology to fulfil a self evaluation process. If the internal case development process requires a peer review, than the process will be a combined self-assessment and external assessment process. If the expert is outside of the context of the case, we call it external expert, and the process becomes an external assessment process with or without peer review as tool.

In case of external expert work, the process requires one or more representatives of the institution where the case takes place. The representative(s) has/ve to be familiar with the details of the case, has/ve the possibilities and the right to give information to the external expert about the case details, is/are able to forward documentation, is/are available for the evaluation process either in written or oral form.

Case development expert profile:

- Expert in educational field for at least ten years
- Have an attitude of objective observation and evaluation
- Good ICT knowledge
- Familiar with Case development process
- External expert has long experience of consultancy
- During the project period: fluent English knowledge

The process may involve other interested parties depending on the tool to be used for developing the case:

- Learners who are involved in the specific case: learning in the institution, learners of a given course
- Teachers who are involved in the specific case: teaching in the institution, teachers, tutors, instructors, or mentors of a given case
- Managers who are involved in the specific case: leading the institution or involved in the case as managers.
- Experts who are invited to the process: some tools may require more than one external expert. Those experts are not familiar with the case and are involved only at specific stages of the case development process, like in peer review as board members, or focus group moderator(s)

6. Overall approach

The overall approach to this activity can be derived from the project outline, and from three methodological reports from previous Hextlearn and Revive projects. Those theoretical descriptions followed by coordinated research work conclude to a logical process of the following milestones of procedures:

1. Expert Case development preparation:

   This phase is the theoretical basement. In this phase researcher is selected and is preparing for the case development work. This is done by training on-line and face to face.

2. Expert Case development (data collection with different techniques):

   By working out the tools for case development, data collection will be carried out by the whole partnership. This data collection will be helped by worked out common methodology, tools if needed, and specific quality criteria to be able to map different levels of cases. This work will be done in three phases (elaborated in detail later):

a. Case identification (Pre-selection phase). In this first selection phase partners will be able to pre-select by commonly agreed minimum selection criteria to be developed as VET Cases by the help of ID cards.

b. Case setting (selection). During this phase the case is selected and the case holder/leader (a representative) is contacted or in internal case informed to be able to start methodological work.

c. Case diagnosis (positioning phase). In this first diagnostic phase partners will be able make an initial data collection and evaluation with a so called positioning questionnaire. This is a self evaluation phase, in case of external expert work, the positioning can be done by the case representative alone or by the representative working together with the expert. Working together does not mean of instant evaluation only a technical help for clarification of the criteria and to be able to decide the rating level.

d. Case development (developmental phase). The identified and positioned VET Cases will be than worked out in more detail in the areas of weak results or missing data and in the light of possible development with different techniques, like

- desk research
- interviews,
- focus group sessions,
- Peer review

All techniques have to be done in a common framework (set of quality criteria) in order to present comparable Cases.

3. Peer review:

Some of the most appropriate and complex cases will use Peer review as a development tool. With peer reviewing where the tools for development are more complex and involves more interested parties on case owner side. This methodology is discussed in detail in the Peer review methodology.

4. Case analysis:

Developed cases will hold clarified evaluation data on the case and will require a detailed analysis to see what are the areas of development of the case, and will be edited and presented on the project website.

5. Recommended roadmap for case improvement.

6. INTERNAL CASE DEVELOPMENT

1. Case formulation:

   Internal experts will clarify their own cases to work with. For this reason internal experts should decide the level where they want to develop their cases.

2. Case diagnosis (positioning phase):

   A positioning questionnaire should be filled in by the internal expert. The level specific positioning questionnaire is based on Quality Criteria Grid. All questions that are not self evident to fill in by the internal expert will be develop in the text phase.

3. Case development (developmental phase):

   In this phase internal experts have to go back to questions that were not filled in during the first round. The lack of answers may indicate two problems:

   a. The quality criteria questions were not clear enough: internal expert should discuss the issue with the designer of the criteria in the partnership, and try to answer after clarification.

   b. The answers could not be given by the internal expert, and therefore further research is needed within the organisation. For this research, internal experts may carry out a planned and customized case enhancement from different persons and with different tools in the different levels by already specified interactive (for example: interview, focus group, forum) or developmental (for example pedagogical) tools attached to this document.

4. Peer review (if needed) as complex developmental tool. Discussed separately.

5. Case analysis:

   Developed cases (with or without peer review) will hold clarified evaluation data on the case and will require a detailed analysis by the internal expert to see what are the areas of development of the case. The selected method must be objective factual, and based on collected data. The analysis should use the quality criteria grid as tool to quantify the points gathered, and in case of weaker performance, the gap between the collected points and the maximum compliance (Excellently met) of the given criterion. The analysis can follow the order of criteria in the grid and describe the compliance in detail. The analysis can also be grouped by:

   c. Areas of Excellent performance and

   d. Areas for improvement.

   The analysis should finish with a concluding paragraph of the analytical work. The conclusion can be descriptive or can be a swot analysis. The draft analysis should be discussed within the organisation.

6. Case development ends with a Recommended roadmap for case improvement. This is an internal recommendation to the institute on specific steps that

professionally may lead to improved performance. This roadmap can be converted to an Action plan by the institutions themselves by specifying the responsibility and timing issues. This Recommended roadmap should also be discussed with the institution management if needed. Permission for publication of the case is also needed.

7. The drafted and negotiated case will be edited by the internal expert, quality reviewed by a project partner, and will be presented on the project website.

7. External case development

1. Case identification (pre-selection phase):

   With the help of minimum selection criteria tool presented on the ID cards experts will identify cases to work with. Cases must be:

   a. European case

   b. Falls in one of VET areas and levels

   c. ICT related

   Cases can come from own institution, previous projects, professional network, web research, literature. If there are more specific technical criteria, level detailed methodology must define it. Cases must be reachable, researchable, and developable.

2. Case diagnosis (positioning phase):

   When sufficient number of cases are gathered that match the minimum requirements of Revive VET from the European VET arena, a positioning questionnaire should be forwarded (by the expert) to the institution and when positioning questionnaires are available (answered), expert(s) will study gathered data by positioning questionnaire. The first phase is the clarification phase, where experts prepare questions where gathered data is not self-explanatory or ambiguous. When diagnostic data is clarified and amended, the developmental phase starts.

3. Case development (developmental phase):

   In this phase thorough analysis of clarified information has to be done. Experts analyse data (case elements) and contrast them with already worked out quality criteria grid and ask specific developmental questions, developmental criteria. Case owners (contact persons of cases or developers themselves) carry out a planned and customized case enhancement with different tools in the different levels by already specified interactive (for example: interview, focus group, forum) or developmental (for example pedagogical) tools attached in this document.

4. Peer review (if needed) as complex developmental tool. Discussed separately.

5. Case analysis:

   Developed cases (with or without peer review) will hold clarified evaluation data on the case and will require a detailed analysis to see what are the areas of development of the case. The selected method must be objective factual, and based on collected data. The analysis should use the quality criteria grid as a tool to quantify the points gathered, and in case of weaker performance, the gap between the collected points and the maximum compliance of the given criterion. The analysis can follow the order of criteria and describe the compliance in detail. The analysis can also be grouped by:

   a. Areas of excellent performance and

   b. Areas for improvement.

   The analysis should finish with a concluding paragraph of the analytical work. The conclusion can be descriptive or can be a swot analysis. The draft analysis should be discussed and negotiated between case developers and contact persons.

6. Case development ends with a Recommended roadmap for case improvement. This is an expert recommendation to the institute on specific steps that professionally may lead to improved performance. This roadmap can be converted to an Action plan by the institutions themselves by specifying the responsibility and timing issues. This Recommended roadmap should also be discussed with the institution contact person and with the institution management if needed. Permission for publication of the case is also needed at this case.

7. The drafted and negotiated case will be edited by the case developer, quality reviewed by a project partner, and will be presented on the project website.

8. Tools

To be able to gather useful and relevant information about Cases to develop, different working methods will be used, according to the nature of the activity. The following methods represent a list of well-known techniques in an increasing resource intensive order:

1. desk research
2. interviews
3. focus group sessions
4. peer review sessions

Different working methods for data gathering and analysis however will hold some common elements in the approach:

- Revive VET project will be presented before.
- Feedback and outcomes will be offered for respondents.
- All respondents will be invited to Revive VET community highlighting the benefits of participating in the network, and the explaining the potential of an active web2.0 type contribution.

8.1 Desk research

Desk research is a relatively easy, but long process mostly for external evaluators to use available documentation on the case to be developed.

Work starts with extensive data collection and short listing. Data may be found in different forms according to the method that was used in the case observed. The most common categories of research data are:

- statistics
- policy documents
- regulations
- articles
- specifications
- methodological documents (curriculum)
- interviews
- case studies
- focus group discussions
- peer review procedures

Those data may be found in forms of primary or secondary data. If primary data is available (original interview notes, collected documents, observations), it is more likely to be useful in the case development. Secondary data (analysed, edited, briefed, anonymized, referred data) may contain also relevant information but here we suffer from data loss. In case of secondary data sources it is worth cross checking. Two practical aspects should be used when desk research is done:

- The data gathered by desk research cannot be older than 5 years before Revive VET project.
- In case of desk research it is important to track the data.

This means that publications cannot be dated earlier than 2007. A follow up activity should validate all practices that are made by desk research. If the follow up do not validate the activity the data cannot be used for the case development.

8.2 Interviews

An **interview** is a conversation between two or more people (the interviewer and the interviewee) where questions are asked by the interviewer to obtain information from the interviewee. This kind of working method starts with Detailed analysis of the Positioning questionnaire weak points. An interview is worth using when there is no simple and already designed guideline for the enhancement of the weak point, there is a need for further clarification, and the complexity of the topic allows one person to have objective in-depth knowledge and overview on the activity. In order to facilitate analysis of collected interview data, it is required to have a common interview template and evaluation chart to follow. Annex X. proposes resources for Revive VET interviews and for their evaluation together with other data gathered (positioning questionnaire, documentation).

Interviews can be made in different forms. The most common interview techniques are:

- face-to-face
- telephone
- written

In case of oral interviews it is advisable to record them to be able to easily writing them down. Completed interviews then have to be checked and accepted by the interviewee before analysing it.

8.3 Focus Group

Focus groups can be thought of as face to face interviews with people who habitually interact with each other. They are typically used to examine group processes and interactions; examine power structures within groups; identify weaknesses and room for improvement in innovations. The main types of Focus group method are:

- Discussion group (where a facilitator or expert facilitates debate on a structured theme).
- Nominal group (where a question is asked and answered individually and anonymously be each member of the group and then the answers are collected and explored collectively.
- DELPHI technique, where experts individually provide written answers to selected open-ended questions; the answers are individually analysed and then fed back to experts for review and feedback.

A representative sample of the 'target' audience:

- teachers/tutors/trainers
- learners
- support staff
- management and administrative staff.

This sample needs to reflect the characteristics of the people involved in the application. Different user groups should be separated in order that their views do not get 'tainted', or in situations where one group could feel constrained in making observations that may be controversial in the face of others' (for example learners with instructors).

The targeted number of a focus group is a maximum of around ten people per group.

Running the discussion

The group discussion is 'focused' or structured by a 'facilitator' and there should in addition be present one or two additional observers or recorders to gather data on the outputs of the discussion. Audio recordings of the discussion may assist in subsequent analysis of the data.

The main purpose of focus group is to elicit the experiences of a representative sample of different stakeholders involved in the particular VET Case being explored. The Focus Group Discussions usually takes the form of a five stage process.

Stage 1: Introduction to the purposes of the group discussion.

- State the general purposes of the session.
- Establish rules: everyone will be asked to talk; each person's opinion counts; participants should not interrupt each other.

Stage 2: Gather data on the characteristics of the focus groups.

Ask the participants to provide brief information on what role they play in the VET institution (e.g. job description)

Stage 3: Establish the experiences of the group before 'virtualisation process'.

Prompts: What were previous teaching/management/support structures, protocols and procedures? What were the expectations about using ICTs in teaching/management/support?

Stage 4: Establish the experiences of the group following ICT integration.

This is the main data-gathering phase. During the phase a series of 'focused questions' are posed. For each question, the procedures should be as follows:

- Facilitator writes down question on white board/flip chart.
- Participants are given a few moments to jot down responses to the question.
- Facilitator asks each participant to present their answer in turn. Facilitator writes down on flip chart each response, noting major similarities and differences in questions.
- Facilitator leads group discussion about responses.
- Facilitator summarises group discussion, highlighting group agreements and disagreements.
- Focus group discussion unpicks in more detail the major agreements and disagreements.

Focus group questions like interview questions have to be designed before.

Stage 5: Summary and close-down

- Facilitator summarises the main conclusions for each question.
- Participants are invited to confirm, make adjustments or add to the conclusions.
- Thanks participants and closes meeting. Allows opportunity for anyone interested to obtain results of evaluation.

8.5 Peer Review

The specific approach will be specified in detail in the 'Peer Review Methodology'. Peer review will be used for the following purposes:

- To carry out a review, based on collaboration between participants and 'experts', of the delivery and support services in the REVIVE VET cases
- To provide formative feedback on the current 'state of the art' in the participating VET institutions
- To identify 'gaps' in provision, and suggest ways of addressing these gaps
- To provide support to enable the participating VET institutions to improve and further develop their 'virtual capacity' and to improve their practices

- To apply the results of the Review to developing a recommended roadmap for case improvement.

The Revive VET peer reviews will be focused on one or more quality aspects of:

- institutional strategy level
- curriculum level
- professional skills development level
- national schemes level

9. Risks of case development

There are a few risks during case development:

- The case is not specific enough or not falling within the scope of the project. Partnership should opt out the case and choose another case.
- The case research data and the report are in national language. Partnership should employ national expert, use translator during peer reviews, and translate it to English, or publish it in National language for the benefit of national actors.
- The case cannot be published. Partnership should try to negotiate on sensitive parts and leave them out in the public part. While the whole case will be published only internally to the partnership and the Commission.
- Expert is not aware of some or all of the developmental steps to make. Partners should train experts and give continuous guidance during Case development.
- The number of the cases is limited. Partners should make extra effort at the beginning of the process to collect enough ID cards.
- The case development is too slow in the light of deadlines. Experts should use quicker tools than originally planned (telephone rather than correspondence), and develop cases in parallel with more experts than originally planned.

10. Advantages of case development

There are many advantages of the case development mostly to the institution but also to the VET community.

VET and HE institutions developing cases may:

- increase overall quality of educational service
- have an extra external help to round up already started developments
- can find side-effect findings as benefit during the complex analysis process
- involve staff in complex non-daily routine developments to motivate their professional career
- deepen intra-institutional professional and social relations between trainer staff
- may use the process for institutional promotion to increase enrolment and international reputation

- may raise awareness of stakeholders, local ministries
- institutional embedment in VET market may be deepened
- create new connections with international VET experts
- get new project development ideas

European VET and HE community may:

- increase ICT integration processes in many VET institutions
- trends become more visible
- VET researchers use cases to further analyses
- create new connections with case owner institutions
- capture new project development ideas