Fostering Growth in the Blue Economy by developing an action plan for innovative European aquaculture VET and harmonized qualifications

D8.1 BlueEDU Evaluation Strategy Guideline

WP 8 Evaluation of project results

Authors: Martyn H.Haines[1] and John B. Stav[2]

[1] Pisces Learning Innovations Ltd. (United Kingdom)

[2] Norwegian University of Science and Technology NTNU (Norway)

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Summary

Overview

This Evaluation Strategy Guideline has been based on the project aims and objectives, with reference to the needs of the BlueEDU target audience and stakeholders, the strategy for quality assuring Work Packages (WPs) and the project's success indicators.

Therefore, it should be considered along side the 'Quality Assurance Guideline' which selects those activities within the Work Packages to be quality assured and the mechanism. Quality assurance monitoring and reports will be available and used to help inform formative and summative internal-evaluation by partners and external evaluation. Consequently, partners and external evaluators will be able to determine whether the deliverables are being produced to the required standard on time, fostering a cycle of continuous improvement.

The use of quantitative and qualitative surveys is central to the BlueEDU research methodology, to ensure that reliable information on aquaculture VET supply and demand in the 12 BlueEDU countries is gathered. Therefore, the survey methodology is given full attention within both the Quality Assurance and Evaluation Strategies and Guidelines.

About the evaluation guideline

The overall aim of this guideline is to ensure that all partners and external evaluators are aware of the evaluation methodology, and their role within the evaluation process.

The strategy described in this document has been developed to encourage and support both formative and summative evaluation from the outset. This will ensure that useful information and constructive feedback in being exchanged continuously between the project partners as part of normal working practices to encourage good team work.

The strategy is derived from an understanding of the needs of the BlueEDU stakeholders and the intended impact of the outputs (deliverables) on the BlueEDU target audience. Section 2 provides a comprehensive overview of each target audience and the relevance of deliverables from their perspective.

Both formative and summative activities are included within a range of internal and external evaluation processes, to ensure a sound and unbiased evaluation of the various activities embedded within the Work Packages, leading to a virtuous cycle of remediation and continuous improvement.

The range of VET and industry expertise within the project partnership and carefully selected external experts, will provide a well-informed body of opinion, and a moderating influence. This will strengthen the collaboration ethos underpinning BlueEDU to ensure that the project outputs satisfy industry and VET provider requirements. In addition, the final report will guide key stakeholders towards recommended actions within their authority, and motivate them to promote innovative aquaculture VET development, whenever they have the opportunity.

As evaluation processes are embedded and informed by quality assurance feedback, the lead partner will have acces to a project management information flow that will enable them to monitor work progress and help to solve project challenges and support the partners responsible for each work package, within an open environment.

Purpose and intent

In summary, the evaluation of the project activities will result in:

- continuous feedback during the project lifecycle on the progress made towards the completion of Work Package activities and deliverables, within approved time lines (Gantt charts),
- remediation of deliverables informed by evaluation and quality assurance monitoring, to ensure that the deliverables satisfy the required standard,
- the comprehensive evaluation of VET supply and demand survey methodology, data collection and analysis, that satisfies stakeholder needs in each of the 12 BlueEDU countries targeted,
- consistent recommendations for future aquaculture VET development at national and European level, for stake holders to consider and respond to, derived from a robust and objective analysis.

Development of the evaluation strategy

The evaluation strategy was developed during the project preparatory period in consultation with partners and with reference to the needs of stakeholders and each target audience described in Section 1 below. The aim was to provide a clear specification for all the internal and external evaluation activities and processes. (See section2)

The practicalities of the evaluation process are summarized and tabulated (Tables 1-3), and provide a simple framework and timescale for both the internal and external evaluation responsibilities. The evaluation of the main project deliverables (Work Packages 3-6) which include the research based information and data collection on VET supply and demand (Work Package 5 and 6), are subject to the most regular and rigorous scrutiny as they are critical to the success of BlueEDU.

Section 1: BlueEDU target audience

The BlueEDU partners will complete an investigative project, between December 2016 and the end of November 2018. This could catalyse a new working relationship with industry and vocational education and training (VET) providers. Qualitative information and quantitative data will be collected and evaluated for the 12 European countries to be investigated by BlueEDU.

BlueEDU project overview

The investigative work will begin in northern Europe, where salmon and rainbow trout farming dominate, including; Norway, Scotland, Ireland, Faroes, Iceland and Finland. It will conclude in southern Europe, where Sea Bream and Sea Bass are the main species farmed, including; Greece, Spain, Croatia, Italy, France and Cyprus.

A combination of structured interviews, demonstrations, group seminars and on-line questionnaire surveys will be deployed. Quantitative data will be gathered on the "skills and education and training needs for cage farming husbandry operatives, both supervisors and site managers". Staff at all levels of the fish producing companies and VET school providers, will be offered the opportunity to provide their views and to answer surveys, encouraged by their employer.

This is to establish:

- The aquaculture knowledge and practical skills that aquaculture companies require of their husbandry staff and supervisors.
- The anticipated impact of technological advances on the future knowledge and skills needs of the husbandry operatives and site managers.
- The current and emerging aquaculture knowledge and skills gaps at company, national and European level.
- The readiness of industry and education and training providers to adopt more innovative training methods to improve work based training and its accessibility.

Target groups for dissemination

Therefore, the BlueEDU beneficiaries fall in to three main categories; the aquaculture industry, VET sector and learners. Each group can be reached through direct communication approaches and information cascaded by others.

For BlueEDU to acieve its aims and objectives, effective dissemination is mission critical. A communication strategy and guideline has been developed to ensure that the right type of communication content is developed to suit each target audience and is disseminated through the most appropriuate channels. The content and effectiveness of communication within disseminationi is subject to quality assurance. (See D7.1 Quality Assurance Guideline, Chapter 2)

Therefore, the evaluation of communication to the target groups below, and its effectiveness, will be informed by;

- QA information and reports on any communication non-conformances observed and remediated by the BlueEDUpartners, and
- Success indicators and targets summarized in Table 3 – BlueEDU success indicators. (See page 12)

Aquaculture industry

The aquaculture industry is represented within BlueEDU at various levels and each is involved in the dissemination process in different ways.

More specifically:

- At **European level**, FEAP will use the final report and proposed action plan to lobby national VET sector providers, and regulatory bodies, regarding VET. Subsequent EU bids to establish collaborative projects for the development of innovative aquaculture VET solutions will be informed. In addition, producer organisations will have the opportunity to shape occupational definitions and standards relevant to their member's needs whilst engaging them in the process.
- As a full partner, FEAP will keep its membership continuously abreast of progress through routine meetings, newsletters and via its web site, encouraging national producer organisations to cascade the information to their company members and other stakeholders.
- The **champions and advocates** within the aquaculture companies an denrolled to the BlueEDU cause during initial engagement, will be encouraged to directly cascade outputs to their own organisations, including the survey results, reports and final outcomes.
- **Industry employees** will be reached directly through conferences presentations and articles in aquaculture journals. A new opportunity to contribute to workforce development through an open dialogue in workshops and selected social media sites will be offered

VET Sector

The project outputs will inform the VET sector at all levels, including national regulators, VET providers and individual teachers and instructors, regarding the priority areas for development in each country and at European level.

More specifically:

- **VET regulatory bodies and Qualification Authorities** will be informed of gaps in their provision and of opportunities to improve learner mobility through qualifications updating or development.
- **VET providers** will be provided an insight to the curricular content and delivery modes needed to ensure that VET is accessible and current, helping them to forge a new partnership with industry locally and nationally.
- **VET provider networks** will be established and nurtured, leading to the sharing of good practice and resources, and encouraging future collaborative VET projects.

Learners

Learners are not a primary beneficiary of this BlueEDU Lot 1 project. However, they will have access to occupational maps and a transparent inventory of existing European aquaculture courses and qualifications, highlighting qualification equivalencies and career pathways

More specifically:

- **Work based learners** will be informed of any BlueEDU outputs that provide useful VET and careers information, via the aquaculture journals and their employers, through effective cascading.
- **Education facilkity based learners** will be informed of any BlueEDU outputs by VET providers cascading the information

Section 2: Evaluation Strategy and Process

The evaluation of project management processes and tangible outputs (deliverables) will be informed by the quality assurance reports, in addition to the holistic evaluation of key deliverables, including the final BlueEDU recommendation and report. This is to ensure that project outcomes meet the needs of the target audiences described in Section 1, in terms of relevance and effectiveness. Some important targets must be met, necessitating the use of success indicators, which are summarized in Table 3 below.

There are two types of evaluative activity, formative and summative.

Formative evaluation is an on-going process conducted at every stage of the project. Its purpose is to ensure that all key activities are completed on time and to the required standard by all project partners. Interim results, as they emerge, will be demonstrated and shared by partners to stimulate creative thinking and where necessary, problem solving. Work Package leaders, using videoconferences and/to asynchronous collaboration tools, will schedule meetings for this purpose. A culture of continuous improvement will be promoted through the scrutiny of interim deliverables, which will inform the final report and proposal, on the 'harmonization of qualifications and development of innovative VET solutions'.

Summative evaluation will be conducted on the 'final draft of each deliverable in Work Packages 3-6, which must be available 10 working days before the completion deadline. Summative evaluation will determine whether each deliverable meets the prescribed criteria. The results of summative evaluation will be used by the Project leader and presented to the Management Board when reviewing progress and re-confirming the next phase of work. They may lead to a revision and changes to work plans and/or objectives, ensuring that the project remains responsive to the newly discovered realities at all times.

Internal evaluation will include both formative and summative activities. The external evaluation activities will be summative only, and conducted according to the strategy in Table 2. This combination of approaches will ensure synergy between the two types evaluative activities and between internal and external evaluation to help to ensure high quality outputs and good time keeping.

Internal evaluation

Informal 'formative' evaluation and documented feedback will be encouraged from all partners on outputs at interim stages of development, to influence their content and provide constructive feedback on their completeness, quality and coherence.

Draft papers will be submitted to the stimuli project management web site for comment by partners within 5 working days. The comments must be considered and responded to by the author, leading to a final draft for approval by the lead partner. All comments by partners will be retained within stimuli, providing a transparent evidence trail that can be referred to by any partner, as and when necessary during the project.

In addition, the deliverables will be subjected to 'summative' evaluation at appropriate stages by the Technical Board (TB) with reference to Gantt chart completion deadlines. The summative evaluations will be undertaken by senior representatives from each partner, with reference to any relevant Quality Assurance (QA) reports and according to the responsibilities in Table 1 below. Each partner will provide comments on the deliverables assigned to then for formal summative evaluation, at the final draft stage. This is in addition to commenting on earlier drafts as a part of the informal evaluation process referred to above.

Partners have been assigned to Work Packages based on their expertise and experience to ensure that the formal summative internal evaluations are as well informed, meaningful and constructive as possible, and effectively utilize the individual strengths and experience of each partner.

Table 1: Partner responsibilities for internal evaluation of Work Package deliverables (summative)

Work Package	Work Package leader	Evaluator
WP 1 Project Management	NTNU	Subject to internal evaluation by all partners, prior to interim and final reporting to the Commission, and external evaluation
WP 2 Preparation of Communication Strategy/ Guideline and Initial Opinion Study	Pisces Learning Innovations	FEAP
WP 3 Evaluation of existing information on VET supply and demand	IOA University of Stirling	NTNU
WP 4 Derivation and Application of occupational standards to VET	PLI	IOA
WP 5 VET supply analysis	Froya Upper Secondary	IOA
WP 6 VET demand analysis	Aquark	PLI
WP 7 Quality Assurance	NTNU	External evaluation only
WP 8 Evaluation	NTNU	External evaluation only
WP 9 Dissemination	FEAP	External evaluation only

Internal evaluation will be a fixed agenda item at each bi-annual Management Board (MB) meeting and internal evaluation reports will be the submitted by the WP leader responsible for inclusion with the agenda. (See Table 1 above). The internal summative evaluation of deliverables will be partly informed by QA processes, including; QA monitoring and reports, Issue Logs and Action Minutes.

The MB meetings will encourage a more detailed and interactive exchange of ideas, informed by internal formal summative evaluation reports and may lead to a revision of project plans and objectives. Minutes of these MB meetings and associated papers will be documented and posted on stimuli, the project management web site.

External Evaluation

External evaluation strategy

Three experts, not directly involved with the BlueEDU partnership, will be recruited to undertake external evaluations. Full partner organizations are ineligible, but associated partners will be eligible, including:

- Umbrella organizations representing the aquaculture industry and the VET sector
- VET providers (VET schools and private training companies)
- Producer and technology supply company senior managers
- Stakeholders from sectors other than aquaculture, e.g. fisheries, agriculture and social partners

External evaluators will determine progress against the projects aims and objectives, evaluate the deliverables, and offer advice as "critical friends". They will be chosen to provide the range of expertise and experience needed to ensure meaningful evaluation and feedback on all Work Packages. (See Table 2 below). At least one of the external evaluators will have had previous experience of funded European projects

As the aquaculture VET qualifications levelling undertaken in Work Package 4 will lead to published results intended to guide industry, VET providers and learners in the future, a specialist external evaluator with experience in qualifications levelling must evaluate the EQF levelling undertaken. This will be a two-stage process, undertaken at the 25% and 75% completion stage, to allow plenty of time for any remediation.

The final report and recommendation resulting from Work Package 9 is of the greatest significance. It is the culmination of two-year project and will inform future European project bids. It will need to be effective and influential with European level policy makers, as well as senior representatives of the VET sector and industry. Therefore, it will be subject to scrutiny by three external evaluators in Month 23 of the project.

Table 2: External Evaluation strategy

Interim report	Evaluator specification (expertise/experience)	Evaluative process	Timing
WP1	Experienced evaluator of European projects	Establish the degree of concordance between the Project Management Handbook and project management processes applied (Action Minutes, Issues Log risk assessment and remediation)	Month 14
WP2	Experienced evaluator of European projects	Establish the degree of concordance between the communication strategy and guidelines and the communication content. Review the evaluation of communication effectiveness	Month 14 and 18
WP 3	European Aquaculture VET specialist	Review the WP 3 output in relation to their knowledge of published and unpublished literature on VET supply and demand.	Month 18
WP 4	VET specialist with experience of occupational standards	Review of the integrity of the common standards developed for north European aquaculture and the correlation with south European aquaculture	Month 21
WP 5	VET specialist with experience of VET development and levelling processes	Review of the VET supply analysis and EQF levelling of available aquaculture VET NRQs	Month 18 and 21
WP 6	Industry specialist with staff development and survey/data collection and analysis experience	Review of the survey process, results and conclusions	Month 14 and 18
WP 7	Experienced evaluator of European projects	Establish the degree of concordance between QA guideline D7.1 and the final QA report D7.2	Month 14 and 18
WP 8	Experienced evaluator of European projects	Establish the degree of concordance between the evaluation guideline and evaluation implementation and impact	Month 14 And 18
WP 9	Three evaluators with different expertise: European projects, VET specialist (managerial) and	The quality and effectiveness of dissemination will be evaluated by the same evaluator for WP2, as there is a clear linkage between the two. The final report and recommendation will be	Month 23

member of the aquaculture industry	scrutinised by three evaluators with different expertise as described	

External evaluation process

Project management processes and the deliverables as defined in the approved bid and other operational plans formed post kick off, will be externally evaluated, to ensure that the work meets the specification required. They will be encouraged to seek evidence to justify their interim report findings as objectively as possible, corelated to internal evaluations by the Technical Board.

The evaluators will familiarize them with the project objectives, the interim report and any associated documented evidence, including internal evaluation records, before evaluating the deliverables. They will refer to Table 2 below to help them to find the appropriate information and data sources that they need.

Evaluation depends on the systematic analysis of the project's actual performance in comparison to the initial aims and objectives and any operational plans derived that have been derived from them following 'kick off'. The evaluators will refer to performance indicators, quantitative targets and the quality standards established for key activities. (See Quality Assurance Guideline)

The final external evaluation report will clearly indicate;

- achievements and areas of strength,
- areas for improvement, and,
- any project objectives and methodology that should be reviewed.

The recommendations will be documented by the external evaluators and discussed with the lead partner. They will then provide a copy of the external evaluators full report, with any comments of their own appended, for consideration by the partners, prior to the next MB meeting, where the external evaluation report will be fully discussed and considered during progress review.

Documented feedback will be provided to the lead partner on concordances and variances in relation to;

- internal evaluations,
- project aims and objectives
- operational plans
- Reports to Brussels Commission

Success Indicators

Various quantitative targets were established at the project design stage for a range of key project success indicators.

Table 3: Quantitative success indicators

Indicator	Audience	Target
1) initial engagement activities and events	The number of multinational fish producer companies represented	3
	The number of national producer companies represented	6
	The number of aquaculture supply companies represented	3
	The number of SMEs represented	15
2) Survey data returns	Overall % return rates from surveys	30%
	The number of countries responding	12
	The number of VET schools responding	20
	The number of companies responding	20
3) Dissemination and exploitation	Engagement with European Associations	10
	Stakeholder organizations	50
	VET schools	50
	Presentations at conferences	8
	Articles in aquaculture trade journals	8

In addition to the above quantitative indicators, an important qualitative indicator was devised at the project initiation stage:

- To monitor attitudinal change of industry and VET providers towards workforce development.

The intention is to correlate initial opinion with the opinion of industry and stakeholders in the final 6 months of the project. This is to guage the impact of blueEDU on stakeholders and to evaluate any ,attitudinal change that has occured as a result of project disseminiation and other activities.

Contact persons for this report:

Martyn Haines   - info@piscceslearning.com

John Birger Stav   – john.b.stav@ntnu.no

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