



Deliverable 7.1

Quality Assurance Plan

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Abstract:	This document includes the methodology to be followed for assuring quality and managing risk in PBL3.0. In specific, it describes the methodology for performing SWOT analyses, risk analysis and monitoring and deliverables' peer reviews, and it documents the initial SWOT analysis and risk analysis performed by partners.
Keyword List:	Risk, quality, SWOT, plan, monitoring

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Table of Contents

DELIVERABLE FACTSHEET	2
CONSORTIUM	3
REVISION HISTORY	4
TABLE OF CONTENTS	5
LIST OF FIGURES.....	6
LIST OF TABLES	7
LIST OF ABBREVIATIONS.....	8
EXECUTIVE SUMMARY	9
1 INTRODUCTION	10
1.1 SCOPE.....	10
1.2 AUDIENCE.....	10
1.3 STRUCTURE.....	10
2 SWOT ANALYSIS	11
2.1 DEFINING SWOT	11
2.2 APPLYING SWOT IN PBL3.0	11
2.2.1 <i>Internal analysis</i>	12
2.2.2 <i>External analysis</i>	13
2.3 INITIAL SWOT ANALYSIS	15
2.3.1 <i>Internal analysis results</i>	15
2.3.2 <i>External analysis results</i>	16
3 RISK MANAGEMENT	18
3.1 ANALYSING RISK IN PBL3.0	18
3.2 INITIAL RISK ANALYSIS	23
4 PEER REVIEW OF DELIVERABLES	33
4.1 PEER REVIEW PROCESS	33
4.2 REVIEW REPORT	34
4.3 ALLOCATION OF REVIEWERS	34
5 CONCLUSION.....	36
ACKNOWLEDGEMENT	37
ANNEX A – REVIEW REPORT TEMPLATE	38

List of Figures

FIGURE 1. SWOT ANALYSIS CONCEPT.....	11
FIGURE 2. RISK CALCULATION MATRIX	19
FIGURE 3 DELIVERABLE REVIEW REPORT TEMPLATE (1)	39
FIGURE 4 DELIVERABLE REVIEW REPORT TEMPLATE (2)	40
FIGURE 5 DELIVERABLE REVIEW REPORT TEMPLATE (3)	41
FIGURE 6 DELIVERABLE REVIEW REPORT TEMPLATE (4)	42
FIGURE 7 DELIVERABLE REVIEW REPORT TEMPLATE (5)	43

List of Tables

TABLE 1. INTERNAL SWOT ANALYSIS, STRENGTHS / WEAKNESSES TEMPLATE.....	12
TABLE 2. EXTERNAL SWOT ANALYSIS, OPPORTUNITIES TEMPLATE.....	14
TABLE 3. EXTERNAL SWOT ANALYSIS, THREATS TEMPLATE	14
TABLE 4. INITIAL INTERNAL SWOT ANALYSIS FOR PBL3.0, STRENGTHS / WEAKNESSES.....	15
TABLE 5. INITIAL EXTERNAL SWOT ANALYSIS FOR PBL3.0, OPPORTUNITIES	16
TABLE 6. INITIAL EXTERNAL SWOT ANALYSIS FOR PBL3.0, THREATS	17
TABLE 7. RISK REGISTRY TEMPLATE	21
TABLE 8. REVIEWERS AND DEADLINES FOR PBL3.0 DELIVERABLES	34

Executive Summary

PBL3.0 project aims to enhance Problem Based Learning (PBL) with Learning Analytics (LA) and Learning Semantics (LS) in order to produce a new educational paradigm and pilot it to produce relevant policy recommendations.

WP7 is the Quality Assurance work package for PBL3.0. Its main aim is to provide quality monitoring mechanisms that will guarantee the results' superiority as well as the timely progress of the project.

The present deliverable is the first deliverable of WP7, D7.1 – Quality Assurance Plan. Its purpose is to specify and schedule the actions to be executed within the project's duration for the overall quality assurance of its outcomes.

More specific, this deliverable focuses on the following aspects and analyses:

- The initial SWOT analysis for the PBL3.0 project as well as the methodology for conducting it within the project.
- The initial risk analysis for the PBL3.0 project as well as the methodology for conducting it within the project.
- The delineation of the peer reviewers for each technical deliverable the PBL3.0 project as well as the process to be followed for conducting peer reviews within the project.

The initial SWOT analysis revealed that the project is good positioned in management and operational aspects, as the consortium has found all relevant items of neutral or high strength. The size and composition of the consortium, the decision-making processes as well as the collaboration and communication among partners, the existence of a clear work-plan and their scientific and technical capacity are considered strengths of the project. Contrary to these, the least strong items are the technological innovativeness as well as the methods for measuring project's success. Partners also identified a set of opportunities and threats. The most important opportunities relate with PBL3.0's potential to provide policy recommendations that will transform existing policies for education and training and the design of innovative assessment and pedagogical methods that will underpin adaptive learning pathways. The most important threats relate to the perceived difficulty in attracting interest for community building and for the project's results' exploitation.

The initial risk analysis identified 27 risks for the project. The most important risks relate to failure in applying the PBL model to different educational contexts such as university courses, MOOCs, short training sessions etc, failure in partners' communications as well as challenges in policy recommendations design and evaluation criteria definition. The consortium has set up reports plans for risks' mitigation and will be closely monitoring risks on a monthly basis in order to make sure than even if they occur this will be with minimum effect to the project. Finally, the peer-review process and the allocation of the peer reviewers to each technical deliverable are described in detail.

1 Introduction

1.1 Scope

This deliverable presents the procedures to be followed by the PBL3.0 consortium in order to assure high quality of results and effective risk monitoring and mitigation.

1.2 Audience

The intended audience for this document is the PBL3.0 consortium and the European Commission.

1.3 Structure

The structure of the document is as follows:

- Section 2 presents the methodology for applying SWOT in PBL3.0 as well as an initial SWOT analysis.
- Section 3 presents the methodology risk monitoring in PBL3.0 and as well as an initial risk analysis.
- Section 4 details the peer review process.
- Section 5 concludes the document.

2 SWOT Analysis

The SWOT (Strengths, Weaknesses, Opportunities and Threats) analysis is adopted as a suitable method for performing project self-evaluation. In this section, we briefly present SWOT analysis, define the methodology for applying SWOT in PBL3.0 and present the results of the initial SWOT analysis conducted by the consortium partners.

2.1 Defining SWOT

The SWOT (Strengths, Weaknesses, Opportunities and Threats) analysis refers to commonly-used planning tool for analysing and evaluating the status of an organisation or a project, by identifying and isolating key issues that affect performance to facilitate the formation of effective strategies. The SWOT analysis approach addresses this issue from a two-fold perspective: from an external appraisal (external analysis of threats and opportunities in an environment) and from an internal appraisal (internal analysis of strengths and weaknesses in an organisation or project). Figure 1 illustrates the rationale of SWOT by categorising its components to internal and external as well as positive and negative.

	<i>POSITIVE</i>	<i>NEGATIVE</i>
<i>INTERNAL</i>	Strengths	Weaknesses
<i>EXTERNAL</i>	Opportunities	Threats

Figure 1. SWOT analysis concept

With regard to the selection criteria for using SWOT as an evaluation method, apart from its simplicity and effectiveness, it is stressed that in general, an effective strategy is one that takes advantage of the opportunities, avoids the threats (or turns them into opportunities), builds on the strengths and minimizes the weaknesses (or takes action to eliminate them). The dynamic and unrestricted nature of the external environment can seriously hamper the process of detailed strategic planning, whilst internal factors are, or at least should be, more easily manageable. An effective strategy should be adaptive to the circumstances, taking into consideration the changes of internal and external factors that may influence the achievement of the objectives.

2.2 Applying SWOT in PBL3.0

There will be an initial and interim SWOT analysis for PBL3.0 conducted respectively at the beginning (M2) and the middle of the project (M18). The initial SWOT analysis is documented in the present deliverable in the next section. The interim SWOT analysis will be documented in deliverable D7.2 – Interim Quality Assurance Report in M18. The aim of the two SWOT analyses is to validate and evaluate important parameters of the adopted work plan and to investigate means for maximizing

the potential of the strengths and opportunities, while minimizing the impact of the weaknesses and threats.

A different approach will be adopted for performing the internal and external analysis. Both approaches are specified in detail in the next subsections.

2.2.1 Internal analysis

From an internal viewpoint the SWOT analysis focuses on the study of strengths and weaknesses in an organisation or project.

In order to identify project’s **strengths** and **weaknesses** we first identify a list of relevant items as regards managerial and technical aspects of the project, as in Table 1. Then, each partner rates each item for the current project status. Each item is rated according to a 5-point scale for the calculation of the average rate:

1. Not satisfactory,
2. Some problems,
3. Medium,
4. Good,
5. Excellent

Apart from rating, each partner may also provide a comment on the rate or a suggestion for improvement. Based on partner input, the mean value of the rating for each item is calculated. Thus, each item may be categorised as:

- **Strength** - if its mean value is greater than or equal to 4.00;
- **Weakness** - if its mean value is less than 3.00;

All other items, with average values that fall between 3.00 and 4.00 are characterised as Neutral items.

Table 1. Internal SWOT analysis, Strengths / Weaknesses template

No.	Item	Rating	Comment / Suggestion
1	Size of consortium		
2	Composition of consortium		
3	Collaboration between participating partners		
4	Communication between participating partners		
5	Consortium meetings		
6	Decision-making process / consensus-drawing process		
7	Allocation of work		
8	Coordination of work - synchronization of related tasks and processes		

9	Exchange of information - level of transparency between related WPs and involved partners		
10	Technological innovativeness		
11	Scientific/technical capacity of partners for the specific project		
12	Sufficiency of resources (budget, time)		
13	Existence of clear objectives and measurable results		
14	Existence of clear work plan to achieve project's objectives		
15	Existence of clear methods to measure project's success		
16	Sufficiency of risk management methods		
17	Existence and use of a clear Quality Assurance System		
	...		

2.2.2 External analysis

From an external viewpoint the SWOT analysis focuses on the analysis of threats and opportunities in the project's environment.

In order to identify project's **opportunities** and **threats** each partner in the consortium completes Table 2 and Table 3 with respect to opportunities or threats identified and relevant suggestions on how to exploit the opportunities and overcome the threats.

Opportunities: any external circumstance or trend that favours the achievement of the objectives (e.g. new technologies that improve the project results or development of new markets). Useful opportunities can come from such things as:

- Changes in technology and markets on both a broad and narrow scale
- Changes in government policy related to our field of research
- Changes in social patterns, population profiles, etc.

A useful approach for seeking opportunities is to look at the strengths of the project to check whether these open up any opportunities. Alternatively, by looking at the weaknesses of the project, new opportunities could open up in order to eliminate weaknesses.

Threats: any external circumstance or trend that will influence unfavourably the progress towards the achievement of the defined goals (e.g. an unfavourable situation in the market, the establishment of strong competitors, unfavourable governmental regulations or technological advancement).

- Key questions to be asked in order to identify threats include:
- What obstacles do we face?
- Could any of our weaknesses seriously threaten our project?
- What is our competition doing that we should be worried about?
- Might the technology become obsolete?

Carrying out this analysis may be illuminating – both in terms of pointing out what needs to be done, and in putting problems into perspective.

Table 2. External SWOT analysis, Opportunities template

No.	Opportunity	Suggestion
1	E.g. developing markets, creation of new market segments etc.	
2		
...		

Table 3. External SWOT analysis, Threats template

No.	Threat	Suggestion
1	E.g. technical problems, lack of interest etc.	
2		

...		

2.3 Initial SWOT analysis

This section presents the results of the initial SWOT analysis as identified by all project partners.

2.3.1 Internal analysis results

As previously mentioned, internal analysis focuses on studying the strengths and weaknesses of the PBL3.0 project. The results of the internal SWOT analysis are depicted in Table 4 and are structured as follows:

- The first two columns denote the number and description of the item, i.e. the 17 items to be rated as strengths or weaknesses,
- The third and fourth column denote the average rate allocated by the consortium partners, as well as the characterisation assigned – either S for strength or W for Weakness,
- The fourth column includes provided comments or suggestions.

Table 4. Initial internal SWOT analysis for PBL3.0, Strengths / Weaknesses

No.	Item	Rating		Comment / Suggestion
1	Size of consortium	4,3	S	Adequate for working and for supporting effective communication.
2	Composition of consortium	5,0	S	Background knowledge of partners covers the scope of the project
3	Collaboration between participating partners	4,3	S	
4	Communication between participating partners	4,3	S	
5	Consortium meetings	5,0	S	
6	Decision-making process / consensus-drawing process	4,3	S	
7	Allocation of work	4,0	S	
8	Coordination of work - synchronization of related tasks and processes	4,3	S	
9	Exchange of information - level of	4,3	S	

	transparency between related WPs and involved partners			
10	Technological innovativeness	3,7	N	Due to the nature of the project, technological innovativeness is not the main concern of the project.
11	Scientific/technical capacity of partners for the specific project	5,0	S	
12	Sufficiency of resources (budget, time)	4,0	S	
13	Existence of clear objectives and measurable results	3,3	N	There are clear objectives but not all results are yet measurable due to the initial state of the project.
14	Existence of clear work plan to achieve project's objectives	4,3	S	
15	Existence of clear methods to measure project's success	3,7	N	
17	Existence and use of a clear Quality Assurance System	4,3	S	
18	Selection and integration of existing technological tools/platforms	4	S	
19	Integration of different local contexts to the new educational approach	4	S	

2.3.2 External analysis results

As previously mentioned, external analysis focuses on studying the opportunities and threats of the PBL3.0 project. The results of the external SWOT analysis are depicted in Table 5 and Table 6 respectively.

Table 5. Initial external SWOT analysis for PBL3.0, Opportunities

No.	Opportunity	Suggestion
1	New policy recommendations and research potential	Ensure we design policy recommendations in accordance with existing needs and with the potential to transform existing policies.
2	Innovating assessment methods with regard to PBL_LA	Study and design assessment methods that will ensure successful evaluation of all the stages of the learning process using innovative assessment models and tools.
3	Integration of PBL3.0 in MOOCs can open up a whole new research domain and market segment	Include MOOCs in our research and investigate their potentials.
4	New instructional methods in PBL (e.g. the flipped classroom) provide information and structure	

	regarding education material and resources	
5	Contribute to the xAPI initiative record	

Table 6. Initial external SWOT analysis for PBL3.0, Threats

No.	Threat	Suggestion
1	Failure in attracting interest for community building	A detailed and with clear targets dissemination plan
2	Problems stemming from IPRs	Careful consideration of IPR in exploitation plans
3	Lack of interest for results	Focus on quality implementation and effective, efficient dissemination activities
4	Tools with needed functionalities might not be available/easy to use- combine between them	Focus on existing solutions that are in line with the project's objectives and expected outcomes
...		

3 Risk Management

This section illustrates the overall process for the risk management of the PBL3.0 project. On the one hand it provides a maintained overview of all individual activities and on the other hand it determines the different procedures available to prevent risks from happening and for dealing with risks should they occur. Our risk management plan involves continually:

- **Measuring risk:** identifying what the risk factors are
- **Assessing risk:** estimating what is the probability and impact of these risk factors.
- **Monitoring risk:** analysing what is the current status of a particular risk
- **Managing risk:** preventing or handling risks.

In this section, we define the methodology for managing risk in PBL3.0 and present the results of the initial risk analysis conducted by the consortium partners.

3.1 Analysing Risk in PBL3.0

Typically, three characteristics are used for the assessment of a risk:

- **probability** of occurrence of the risk (Pr),
- **impact** or effect of the potential damage (Im), and
- **risk factor** or overall risk estimation (RF).

The risk factor or overall risk estimation is calculated based on the probability of occurrence and the impact of the damage, usually by multiplying these two characteristics. Hence, we assume that:

$$RF = Pr * Im$$

Measuring the probability of occurrence and the impact of the damage in a integer scale from 1 to 10, where value 1 represents a low probability (or low impact) and value 10 represents a high probability (or high impact), the risk factor is assigned a value between 1 and 100. We can depict this relationship with the risk matrix in Figure 2. This matrix may be used for easily calculating the risk given the probability and impact of a risk.

Furthermore, this risk matrix is a useful tool for visually depicting the different risk levels in the project. In specific, we define as:

- **Low risk:** any risk with $RF < 10$ (white zone of the risk matrix),
- **Medium risk:** any risk with $10 \leq RF < 40$ (gray zone of the risk matrix),
- **High risk:** any risk with $40 \leq RF < 70$ (light blue zone of the risk matrix),
- **Very high risk:** any risk with $RF \geq 70$ (blue zone of the risk matrix).

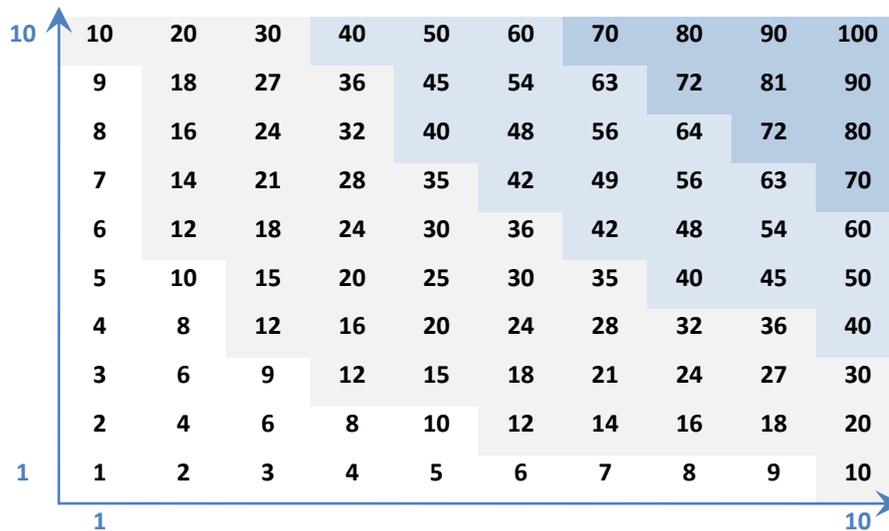


Figure 2. Risk calculation matrix

Table 7 shows the risk registry, a template table for recording and managing risks in PBL3.0. Each of the columns can be defined as follows:

- **No.** This is the number of the risk. Numbers have the format of X.Y. X denotes the WP number (either 1-8 for WPs 1-8, or 0 for risks applying to the overall project), and Y is an incremental number for the specific WP (or the overall project is X=0).
- **Risk.** This is the description of the risk.
- **Effect.** This is the effect(s) if the risk actually occurs.
- **Pr.** This is an integer value between 1 and 10 denoting the probability of the risk occurring.
- **Im.** This is a numerical value between 1 and 10 denoting the impact of the risk if it finally occurs.
- **RF.** This is the total risk estimation and it is determined by using the risk matrix in Figure 2.
- **Mitigation measures (to reduce probability and/or impact).** The actions to be taken for reducing either the probability of the risk occurring or the impact of it are described here.
- **Pr*.** This is an estimation of the probability of this risk after the proactive measures described previously have been taken.
- **Im*.** This is an estimation of the impact of this risk (if it occurs) after the proactive measures described previously have been taken.
- **RF*.** This is the total risk estimation after the proactive measures described previously have been taken.

- **Contingency measures.** This is the description of the actions to be taken if the risk actually occurs.

The risk analysis is conducted by all project partners for each work package and for the overall project. WP leaders, in specific, are responsible for preparing and monitoring the risk analysis for their work package.

There will be an initial and interim risk reporting for PBL3.0, conducted respectively at the beginning (M2) and the middle of the project (M18). The initial risk analysis is documented in the present deliverable in the next section. The interim risk analysis will be documented in deliverable D7.2 – Interim Quality Assurance Report in M18.

Nonetheless, WP leaders are responsible for **continuously monitoring the risks** relevant to their work package throughout the project life. For this reason, the risk registry of the initial risk analysis will be made available online in the project's Google Drive where all partners have access. WP leaders will be responsible to update the risk registry as soon as any change regarding risks takes place, and review it **at minimum once per month**.

Table 7. Risk registry template

No.	Risk	Effect	Pr	Im	RF	Mitigation Measures	Pr*	Im*	RF*	Contingency Measures
General Project Risks										
0.1										
0.2										
WP1 Risks										
WP2 Risks										
WP3 Risks										
WP4 Risks										
WP5 Risks										

D7.1 Quality Assurance Plan

No.	Risk	Effect	Pr	Im	RF	Mitigation Measures	Pr*	Im*	RF*	Contingency Measures
WP6 Risks										

3.2 Initial Risk analysis

In the initial risk analysis, the consortium has identified 27 risks for the overall project. These are analysed in the risk registry in Table 8.

The most important risks identified are:

- Failure in applying the PBL model to different educational contexts (MOOCs, short training sessions)
- Challenges in defining evaluation criteria in the PBL model that can be used for LA
- Partners fail to meet key delivery milestones leading to the project falling behind schedule
- Failure in partners' communication
- Low number of policy recommendations

No.	Risk	Effect	Pr	Im	RF	Mitigation Measures	Pr*	Im*	RF*	Contingency Measures
General Project Risks										
0.1	Lack of effective performance of the consortium	Project results of poorer quality.	3	9	27	The consortium has been carefully selected according to their particular abilities and liability for effectively accomplishing successful research technology development. Performance will be constantly monitored by both the Project Coordinator and the WP leaders.	1	9	9	The coordinator will be responsible for finding out the source of the problem and come up with a solution such as allocate or recruit new, more skilful staff or, in more extreme cases, replace the problematic partner with a different one, according to the provisions of the Consortium Agreement (CA).
0.2	Retreat of a partner from the consortium	Potential deviation in work plan.	2	8	16	The Project Coordinator will constantly monitor the level of partners' commitment to PBL3.0. The advanced payment process will be described in the CA.	1	8	8	Either distribution of the withdrawer's assigned work among the rest of the RTD partners or its replacement by a new, partner with similar expertise.
0.3	Ownership collisions	Potential effect in project's sustainability and exploitation.	3	8	24	The CA and IPR inventory will pay significant attention to preserving the generated and prior IPR, according to the interests of the partners.	1	8	8	In case of extreme conflicts over ownership, we will consider planning an arbitration process.
0.4	Personnel alterations	Potential effect on the work plan and partners'	5	4	20	Partners will reduce probability by trying to keep the same employees	1	4	4	All partners will try to communicate knowledge

No.	Risk	Effect	Pr	Im	RF	Mitigation Measures	Pr*	Im*	RF*	Contingency Measures
		communication.				assigned to the same roles in the project and build robust working processes. Partner organisations will employ more than one person in this project and will ensure a smooth process for responsibilities' re-allocation in order to ensure continuation as much as possible.				of the project to the new team members in order to familiarise them with the project work and integrate them smoothly in the project team. The online documentation in the website private area will also contribute to this.
WP1 Risks										
1.1	Difficult to understand the PBL model and structure the PBL_LA educational approach	Difficulties in finding the PBL and LA modules to be employed for improving education and learning.	2	9	18	The PBL3.0 consortium contains specialist PBL expertise (AAU) and LA expertise (UOM, UAH) and modelling expertise (OUNL, BOC). Constant collaboration will be ensured in order to produce a high quality educational approach.	1	9	9	The PBL pedagogical approach is a core value for AAU, and is adopted across the entire university. Therefore, AAU can help explaining the PBL model to all partners and can facilitate the development of the PBL_LA educational approach. UOM and UAH have also the expertise in LA for supporting the PBL_LA approach.
1.2	Failure in applying the PBL model to different educational contexts (MOOCs,	Challenges during the trials and their evaluation.	4	8	32	The work in first part of the WP1 will make sure that both PBL and LA are analysed in order to be combined in	1	8	8	Constant advice and support will be provided during trials by the PBL

No.	Risk	Effect	Pr	Im	RF	Mitigation Measures	Pr*	Im*	RF*	Contingency Measures
	short training sessions)					the best possible way. Moreover, special consideration will be paid to the detailed analysis of all the steps and resources in the PBL model, in order for the PBL_LA model to be applied in different contexts.				expert (AAU) and the LA experts (UOM, UAH) in order to support the application of the new educational model in different contexts.
1.3	Challenges in defining evaluation criteria in the PBL model that can be used for LA	Problems with combining LA with PBL.	4	8	32	The PBL3.0 consortium contains experts in both the PBL and LA domains, who will make sure to specify concrete evaluation criteria for each PBL step.	1	8	8	The PBL3.0 consortium has to constantly adjust the PBL_LA model, in case the specified evaluation criteria have to be redefined before trials.
WP2 Risks										
2.1	Difficult to reach to a satisfying solution for the semantic annotation model	Problems identifying the important concepts that describe the learning resources.	2	7	14	The PBL3.0 consortium contains expert modelling designers and high expertise in who have a strong track record working with learning semantics and learning models. Ongoing brainstorming sessions along with thorough research of the current State of the Art will ensure the design of a high quality semantic annotation model.	1	7	7	The consortium has to research all available technologies and standards that will provide guidance to the creation of the semantic model.
2.2	The semantic annotation model will prove difficult to be embedded into an operational semantic	Problems successfully annotating the learning resources.	4	8	32	The PBL3.0 consortium will thoroughly study and use existing technologies that allow re-usage and configuration during the semantic annotation tool	2	8	16	The PBL3.0 consortium will develop the semantic annotation tool from scratch.

No.	Risk	Effect	Pr	Im	RF	Mitigation Measures	Pr*	Im*	RF*	Contingency Measures
	annotation tool					development process.				
2.3	The use of the semantic annotation tool will be difficult to non-technical users	Poor data gathering will occur if no sufficient users use the annotation tool.	5	8	40	Heuristic usability studies will be carried on to ensure an efficient, effective and satisfactory use of the tool for a wide scope of users.	2	8	16	Additional measures will be studied and applied for improving the usability of the tool (e.g. detailed handbooks, use case scenarios etc).
WP3 Risks										
3.1	Difficult to integrate BOC's tools and models to PBL3.0's technologies and activities	Problems successfully designing models for course design, implementation and assessment.	2	8	16	The PBL3.0 consortium will thoroughly discuss the solutions provided by BOC and brainstorm ways in which the models and tools developed can enhance the PBL3.0 activities.	1	8	8	BOC will provide comprehensive guidelines on the tools' and models' utilization.
3.2	Failing to adapt the ECAAD for PBL_LA	Problems in successfully integrating the ECAAD's concepts with PBL_LA.	2	8	16	WP3 work is going to mainly focus on the adaptation and deployment of the currently existing version of ECAAD specifically for the PBL_LA approach. The ECAAD (Evidence Centred Activity and Assessment Design) is an already existing platform used by BOC, resulting from the EU Project NextTell which will be adapted as a result of WP1 and 2.	1	8	8	Possibly usage of another modelling toolkit and approach, however, this is highly unlikely to become necessary.
3.3	Difficulty in choosing and adapting modelling tools for PBL_LA, continuous learning assessment	Problems in successfully assessing stakeholders through the application of the PBL_LA approach.	2	9	18	ADOxx being the metamodeling platform developed by BOC, several relevant modelling toolkits are available that can be used and adapted	1	9	9	UOM and AAU also using LMS technologies extensively allows collaboration in order to

No.	Risk	Effect	Pr	Im	RF	Mitigation Measures	Pr*	Im*	RF*	Contingency Measures
						for the current project. BOC Innovation Group having high expertise in using them allows professional deployment and adaptation of currently existing modelling tools.				choose the right tools for the PBL_LA, learning assessment and adapting them appropriately.
WP4 Risks										
4.1	University students and / or private and public employees do not participate in the trials	Difficulty to test the validity of the project's results.	2	9	18	Each partner will make sure to gather members of their target groups in order to participate in the trials.	1	9	9	All partners will reinforce their efforts in gathering stakeholders to participate in the trials by using their organization's networks.
4.2	Evaluation mechanisms different for each organization	Difficulty to draw homogenous conclusions.	2	7	14	The consortium will study all available assessment methods and agree on a template that covers all partners' contexts.	1	7	7	Partners will perform additional analysis of the evaluation data to draw high quality conclusions.
WP5 Risks										
5.1	Selection of tool for CoP doesn't meet match/suit purposes	Problems in building a PBL3.0 community	5	8	40	Creative ways will be sought in order to gather content and individuals to visit the CoP and perform knowledge transfer and content exchange activities.	2	8	16	Partners will reach their networks and promote the CoP platform for increased interactions and content.
5.2	Project outcomes are beyond expectations making difficult to form policy recommendations	Low number and quality of policy recommendations	4	9	36	The PBL3.0 consortium will consult with stakeholders from the public sector for guidance in forming policy recommendations that could have an impact on future policy reforms in	2	9	18	WP leader based on their experience & presumably that project outcomes are delivered as promised will formulate policy

No.	Risk	Effect	Pr	Im	RF	Mitigation Measures	Pr*	Im*	RF*	Contingency Measures
						education and training.				recommendations
WP6 Risks										
6.1	Conflict arises over potential IPR issues for future exploitation	Created knowledge during project cannot be utilized and/or existing tools cannot be employed.	3	9	27	IPR management will be covered in the Consortium Agreement before the start of the project. IPR for all newly created knowledge will be shared by the Consortium. The Dashboard tools will be created using open source software where possible.	1	9	9	Issues connected with IPR will be solved by discussions within the consortium and will be addressed in the updated exploitation plans.
6.2	Solution fails to find new adopters before the project end	The project results fail to have an impact on educational practice.	5	4	20	Exploitation activities will begin from Month 1 of the project. All partners will be involved in the promotion of PBL3.0 and its results as well as coming up with an appropriate business plan to ensure sustainability. All partners have experience in spinning off successful products from EU projects which helps to minimise risk.	2	4	8	Failure to find new adopters will be identified and dealt with before the end of the project. Moreover, further dissemination activities may be planned.
6.3	Outdated website	Reflect poorly on the project as a whole or discourage potential interest in the project from external sources.	2	9	18	Channels of communication will be established between all project partners, to ensure that any new information can be uploaded to the website the soonest possible. If the project partners do not volunteer news updates, the website developer is responsible for retrieving updates periodically.	1	9	9	Other dissemination channels will be also employed in order to overcome problems with the website.

No.	Risk	Effect	Pr	Im	RF	Mitigation Measures	Pr*	Im*	RF*	Contingency Measures
6.4	Solution fails to find new adopters before the project end/Solution fails to approach policy makers	The project results fail to have an impact on educational policies.	5	4	20	Exploitation activities will begin from Month 1 of the project. All partners will be involved in the promotion of PBL3.0 and its results as well as coming up with an appropriate business plan to ensure sustainability. All partners have experience in spinning off successful products from EU projects which helps to minimise risk.	2	4	8	The PBL3.0 consortium has its own network and contacts in the policy making field, which will be exploited to advance the dialogue with policy makers.
6.5	Solution fails to target the market needs	Low exploitation.	4	7	28	One of the main objectives of this WP is to investigate market needs. Moreover, the consortium contains partners from the industry, which will help to produce results in accordance with market needs.	1	7	7	The constant updates in the exploitation plan will help to alleviate the effects of this threat.
WP8 Risks										
8.1	Partners fail to meet key delivery milestones leading to the project falling behind schedule	Deviation in work plan and possibly in results' quality.	7	9	63	Use of PRINCE2 project management principles, regular calls, meetings and a shared document repository, will help the experienced UoM Project Managers coordinate the project. A small consortium facilitates closer relationships between the partners. Risk monitoring will ensure any potential issues/risks are identified and corrected asap.	5	7	35	The consortium will decide appropriate corrective actions, e.g. release of draft versions of the late outputs in order for the next tasks to be able to progress although the final output was not yet delivered.
8.2	Inadequate partners'	Potential work plan	2	7	14	Project management will be	1	6	6	The consortium plans to

No.	Risk	Effect	Pr	Im	RF	Mitigation Measures	Pr*	Im*	RF*	Contingency Measures
	coordination	deviations.				responsible for efficiently managing the consortium and ensuring that each partner will be acting according to his assigned responsibilities and roles.				consider replacing the project coordinator with a new, more skilled person, according to the provisions of the CA.
8.3	Conflicts over financial issues	Potential deviation in work plan and objectives' accomplishment .	3	7	21	PBL3.0 consortium, having the coordinator as a leader, will be responsible for assessing and examining costs, spending, and excess issues on budget for ensuring the appropriate distributing of the project's budget.	2	4	8	If conflicts over financial issues do occur, the consortium plans to confront them by organizing a meeting for partners to negotiate having the coordinator as a leader. Standard voting procedures will be followed according to the provisions of the CA. In case, however, of extreme financial issues, the consortium will follow the appropriate, European legal procedure.
8.4	Failure in partners' communication	Potential deviation in work plan and results' quality.	5	8	40	In order to ensure succesful communication channels between partners, PBL3.0 plans to organise teleconferences as well as plenary meetings at short uniform intervals.	3	6	18	In case of serious problems in the communication of the partners, the coordinator will be responsible for organising a meeting to find out and

No.	Risk	Effect	Pr	Im	RF	Mitigation Measures	Pr*	Im*	RF*	Contingency Measures
										confront the communication problems. Standard voting procedures will also be followed according to the provisions of the CA.
8.5	Delay of reporting to the European Commission	Project's accountability and financing is endangered.	3	7	21	The Project Coordinator will ensure that management reports' preparation starts timely and will provide detailed information to the partners on what is expected from them to contribute and by when. A dedicated session in a meeting or telco will also be organised before each report deadline.	2	6	12	Coordinator will draw the attention of all partners to the importance of these reports for the overall project and will request immediate actions for all organisations (including the coordinator's organisation), such as dedication of more personnel etc., in order to complete this task.



4 Peer Review of Deliverables

The PBL3.0 consortium is committed to delivering results of outmost quality. For this reason the consortium decided to adopt a peer review process for all technical deliverables of the project.

4.1 Peer review process

The following peer review process will be followed within PBL3.0:

1. The deliverable lead partner (usually the WP Leader or Task Leader) is also responsible for coordinating the peer review process and ensuring that it is completed in a timely fashion. The deliverable lead partner will provide the pre-final version of the deliverable as well as all other needed documentation and assistance to the assigned reviewer.
2. The reviewer will then perform a full review of the deliverable validating it according to technical/scientific value, relevance to objectives, structure of the deliverable, clarity of content, etc. The review results will be reported in an official form provided by the consortium.
3. The deliverable lead partner will address each of the reviewer comments in the deliverable and document relevant answers. Only after the reviewer comments are addressed the deliverable will be considered as final and will be submitted to the European Commission.

Some other considerations for the peer review process are as follows:

- *Planning of the peer review process.* The reviewer should have a few days to assess the provided material. In addition there should be enough time after the peer review in order to revise the deliverable according to the feedback and recommendations provided by the reviewer. It is within the responsibilities of the deliverable lead partner to ensure that the peer review process starts and finishes in time both for fully exploiting its outcome and without causing any delays to the actual submission of the deliverable.
- *Provision of the necessary material and support.* The deliverable lead partner is responsible for contacting the reviewer and providing all the necessary material for performing the review. This includes the deliverable to be reviewed along with all appendices and contributing material, the review report form, and, in the case of an external reviewer, the technical annex so that the matching between objectives and results of the deliverable may be assessed. Where relevant, other results of the project that are in relation to the content of the deliverable should also be provided to the reviewer. In overall, the reviewer should be assisted during her/his reviewing work by the deliverable lead partner in order to guarantee that s/he has all necessary material available and to make sure that the review will be done according to the specification herein.
- *Feedback to the project.* The assessment of the reviewer (review report) and the resulting modifications in the deliverable (in the form of replies for each recommendation/comment if it was tackled or not and in what way) have to be documented by the deliverable lead partner and made available to the project coordinator. Of course, the deliverable has to be revised again to accommodate changes proposed by the reviewer.

- *Payment of the reviewer.* No payment has been foreseen in the budget for deliverables’ review, so PBL3.0 deliverables’ reviewing is considered a voluntary, free-of-charge task.

4.2 Review report

For facilitating and formalising the review process a review report template has been prepared and is provided in Annex A of this document. This review report will be completed for each reviewed deliverable. It includes 3 sections: evaluation, recommendation and comments. In the **evaluation** section, the reviewer is requested to evaluate the deliverable against the following criteria:

- **Technical/scientific value.** Are the results depicted in the respective deliverable worth mentioning of the scientific point of view? Is the regarded technical area covered sufficiently? Are the results relevant in comparison to other research activities in this area?
- **Structure.** Is the structure of the deliverable sensible and logical?
- **Clarity of content.** Are the results depicted in a way that other readers – who are not directly involved in this project but have a certain relation to the topic – can clearly understand the contents of the deliverable?
- **Relevance to objectives.** Are the deliverable results covering the objectives of the project and of the respective work package in particular?
- **Applicability of results (if relevant).** Are the results applicable in the domains of this project?

Then, the reviewer should summarise his/her **recommendation** regarding the overall deliverable choosing between three distinct options: whether the deliverable has sufficient quality as it is, whether it needs minor re-writing, or whether it needs major-rewriting. For the latter two options, the reviewer should justify the chosen option and provide guidelines relevant to the proposed re-writing. Finally, in the **comments** section, the reviewer is requested to propose specific modifications for the deliverable and provide a rating for the importance of each of the proposed modifications.

4.3 Allocation of reviewers

All implementation deliverables of PBL3.0 will be peer reviewed, which essentially means that only management deliverables (deliverables of WP7 and WP8) will be excluded from the peer review process. The list of all deliverables subjected to peer review is available in Table 8. The table also includes the partner responsible for each review. For objectivity reasons, the review partner is always different than the leading partner. The reviewer may be employed by the review partner or not. However, the reviewer should preferably not have been involved in the deliverable creation. The empty information on the Table for deliverables due after the first year of the project will be updated in the Interim Quality Assurance Report for the corresponding deliverables.

Table 8. Reviewers and deadlines for PBL3.0 deliverables

Deliverable	Leader	Nature	Diss Lev	Reviewer	Indicative dates due		Submission to EACEA
					To Reviewer	Reviewed	
D1.1 – PBL analysis	AAU	R	PU	UOM	29/02/2016	05/03/2016	M3

							31/03/2016
D1.2 - LA analysis	UOM	R	PU	OUNL	29/02/2016	05/03/2016	M3 31/03/2016
D6.1 - Dissemination plan and material	AAU	R&O	PU	UAH	31/03/2016	08/04/2016	M4 30/04/2016
D1.3 - PBL_LA educational approach	UOM	R	PU	AAU	30/05/2016	10/06/2016	M6 30/06/2016
D2.1 - Semantic model design	UAH	R	PU	BOC	30/05/2016	10/06/2016	M6 30/06/2016
D2.2 - Semantic annotation tool	UOM	R,S	PU	UAH	30/11/2016	09/12/2016	M12 31/12/2016
D3.1 - PBL modules analysis and configuration		R,S	PU				M18 30/06/2017
D3.2 - LA modules analysis and configuration		R,S	PU				M18 30/06/2017
D4.1 - Courses design and materials		R	PU				M18 30/06/2017
D5.1 - Community building platform v.1		R,S	PU				M18 30/06/2017
D6.2 - Dissemination activities Report		R	PU				M18 30/06/2017
D6.4 - Interim Exploitation and Sustainability Plan		R	RE				M18 30/06/2017
D4.2 - Trials report		R	PU				M36 31/12/2018
D4.3 - Trials evaluation report		R	PU				M36 31/12/2018
D5.2 - Community building platform final version		S	PU				M36 31/12/2018
D5.3 - Policy recommendations		R	PU				M36 31/12/2018
D6.3 – Final Dissemination activities Report		R	PU				M36 31/12/2018
D6.5 - Final Exploitation and Sustainability Plan		R	RE				M36 31/12/2018

5 Conclusion

The purpose of this deliverable is to determine the tools and methods for managing risk and assuring quality in the PBL3.0 project. Information included in this deliverable is valuable to all partners for ensuring smooth cooperation and responsibility allocation within the consortium.

More specific, this deliverable presented the following aspects and analyses:

- The initial SWOT analysis for the PBL3.0 project as well as the methodology for conducting it within the project.
- The initial risk analysis for the PBL3.0 project as well as the methodology for conducting it within the project.
- The delineation of the peer reviewers for each technical deliverable the PBL3.0 project as well as the process to be followed for conducting peer reviews within the project.

The initial SWOT analysis revealed that the project is good positioned in management and operational aspects, as the consortium has found all relevant items of neutral or high strength. The size and composition of the consortium, the decision-making processes as well as the collaboration and communication among partners, the existence of a clear work-plan and their scientific and technical capacity are considered strengths of the project. Contrary to these, the least strong items are the technological innovativeness as well as the methods for measuring project's success. Partners also identified a set of opportunities and threats. The most important opportunities relate with PBL3.0's potential to provide policy recommendations that will transform existing policies for education and training and the design of innovative assessment and pedagogical methods that will underpin adaptive learning pathways. The most important threats relate to the perceived difficulty in attracting interest for community building and for the project's results' exploitation.

The initial risk analysis identified 27 risks for the project. The most important risks relate to failure in applying the PBL model to different educational contexts such as university courses, MOOCs, short training sessions etc, failure in partners' communications as well as challenges in policy recommendations design and evaluation criteria definition. The consortium has set up reports plans for risks' mitigation and will be closely monitoring risks on a monthly basis in order to make sure than even if they occur this will be with minimum effect to the project.

Finally, the peer-review process and the allocation of the peer reviewers to each technical deliverable are described in detail.

Acknowledgement

The aforementioned quality and risk management plans have been based on and evolved from similar plans that were developed for previous successful projects managed by the same Project Coordinators, such as the OneStopGov project (FP6-026965), the EA Training 2.0 project (143434-2008-LLP-GR-KA3-KA3MP), and the WAVE project (EP-08-01-002).

Annex A – Review Report Template

A specific document template for the reviewing process has been prepared. This template follows the internal document template structure, and includes fields for the results of the review as well as the reviewer's expertise.

Review Report for D_{x.x} [Deliverable Name]



[Project Logo]

Review Report for
D_{x.x} [Deliverable Name]

Reviewer(s):	[Name (Organisation)]
Review Organisation:	[Organisation]
Deliverable Lead Partner:	[Organisation]
Deliverable Due Date:	dd/mm/yyyy
Version of Deliverable Reviewed:	V _{x.x}
Review Date:	dd/mm/yyyy
Dissemination level:	OO

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Figure 3 Deliverable Review Report template (1)

[Project logo]

Review Report for Dx.x [Deliverable Name]

1 Evaluation

This section refers to your overall evaluation of the deliverable. Please mark each of the criteria in Table 1 with an X to the column of your choice. Mind that 1 is the lowest and 5 is the highest (best) grade in the scale.

Table 1. Overall evaluation result

	1	2	3	4	5
Technical/Scientific value					
Structure					
Clarity					
Relevance to objectives					
Applicability of results (if relevant)					

Figure 4 Deliverable Review Report template (2)

[Project logo]

Review Report for Dx.x [Deliverable Name]

2 Recommendation

This section refers to your recommendation as regards the quality of the deliverable. In Table 2 there are three options to choose from; you should choose only one of the three options and justify your decision in the respective table cell.

Table 2. Recommendation for the deliverable

<i>Options</i>	<i>Justification</i>
Report has sufficient quality as is:	
Report needs minor re-writing (please specify):	
Report needs major re-writing (please specify):	

Figure 5 Deliverable Review Report template (3)

[Project logo]

Review Report for Dx.x [Deliverable Name]

3 Comments

Independent of the two previous sections (and even if the marks are good and the quality is sufficient) there may be specific modifications to be proposed for the deliverable. These modifications should be proposed in Table 3 below. In the same table you should also indicate the significance of each proposed modification by selecting one of the following options: E (essential), HR (Highly Recommended), R (Recommended). You may add as many table rows as needed in order to fill in all proposed modifications.

Table 3. Proposed modifications

No	Description of the proposed modification	Importance (E / HR / R)
1		
2		
3		
4		
5		

Figure 6 Deliverable Review Report template (4)

[Project logo]

Review Report for Dx.x [Deliverable Name]

4 Reviewer expertise

[Please provide here a short CV and/or relevant publications that prove expertise in the domain of the deliverable.]

Figure 7 Deliverable Review Report template (5)