Implementing the AoL Standard for the WI and BIT Curricula in AACSB – Lessons Learned at the FHNW

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Abstract
Before 2014, the quality management process in all our programs has been rather informally and individually organized. In 2014, the management of the School of Business at the FHNW decided to set up a strategic project to achieve the AACSB accreditation to sustainably secure the role among the best business schools. Among other standards, AACSB deals with Assurance of Learning (AoL, standard 5 in the 2020 standards) with the clear goal formulated as "The school uses well-documented, systematic processes for determining and revising degree program learning goals; designing, delivering, and improving degree program curricula to achieve learning goals; and demonstrating that degree program learning goals have been met." The AoL process has been established step by step since 2015 and provided us with a guideline to check the mission-reference of our program goals and learning objectives and to continuously develop the program quality on a common database. This paper describes the implementation of AoL using the four steps "Determining Degree Program Learning Goals", "Measure", "Results" and "Closing the Loop" for the bachelor programs WI (in German "Wirtschaftsinformatik") and BIT (Business Information Technology). As examples, measurements and improvements for various modules (spanning from supply chain to the computer science domain) are discussed, underpinning the clear and significant progress in the management of curricula and in the monitoring of our study programs' effectiveness regarding student learning. Finally, we outline selected AoL initiatives at other universities and show how we can benefit from them to successfully enhance our project.

Keywords: AACSB, Assurance of Learning, Business Information Technology, Process Improvement

1. AACSB as a driver of quality management

AACSB is considered as a highly internationally recognized and demanding accreditation for business schools worldwide (AACSB, 2022). The AACSB quality label proves that international quality standards are applied and met. The AACSB accreditation serves nationally and internationally to raise the profile and reputation of universities in the competitive education market.

AASCB requires systematic quality management through the requirements of nine standards which relate to the qualification of lecturers, the involvement of stakeholders, the target group-oriented quality of teaching and the impact on society. As a frame of reference for the development of the corresponding quality requirements, AACSB attaches great importance to the alignment of the university with its mission. In principle, however, AACSB assumes that successfully teaching at a business school is based on the use of academically and practically qualified teaching staff (faculty) who continuously work on maintaining their qualifications. AACSB pays special attention to continuous and systematic program development to optimize the professional and labour market-oriented learning progress of students.

The accreditation process of the School of Business at the University of Applied Sciences Northwestern Switzerland with the AACSB, initiated in 2014, aimed to sustainably support the cultural change initiated at the turn of the millennium in the sense of self-directed, yet externally controlled quality development (FHNW, 2022). According to the maxim "from a teaching to a learning (adaptable) institution", the quality processes were consistently oriented towards fulfilling the mission of the HSW and systematized at different levels.

To manage this process, a separate university development project was formed with a project leader from the university management and a total of eight specialists with simultaneous line responsibility for day-to-day business. This QM team was responsible for the implementation of the AACSB requirements at the university as well as for the constant exchange with AACSB on the status of ongoing developments until the successful accreditation in 2021. Although many requirements could be integrated into the daily business in the meantime, the project team continues to assume a steering function regarding the reaccreditation in 2026. The mission of our business school corresponds to the educational mandate enshrined in law and emphasizes those elements that are of particular importance for a business school and with which an important impact can be achieved with students and partners from practice and academia. The guiding principle of the mission is our mission statement:

"We educate innovative and responsible specialists and (line) managers for an interconnected and dynamic world."

Derived from this statement, the core business of our school includes evidence-based and scientifically sound teaching in the form of practice-oriented and vocationally qualifying degree programs and executive education programs. The acquisition and development of career-related competences is the focus of the AoL process. This ensures continuous and systematic program development. Goals and objectives are derived from the mission for each degree- and for each major executive education program. The learning objectives define measurable target competences that students and participants in continuing education should have at the end of their studies. The achievement of objectives is systematically and regularly monitored by analyzing performance records and conducting surveys among various

stakeholders. The insights gained from this lead to the continuous improvement of our education and training programs.

2 The AoL standard

This section describes the milestones in the process of AoL at the School of Business FHNW as well as the tools and committees that support the implementation.

2.1 Strategic initiative for enhancing degree programs at School of Business FHNW

With the implementation of the AoL process as part of the AACSB accreditation, the formal process of defining competency-based goals for degree programs including executive education was initialized. Previously, the programs were rather oriented towards the content taught. The formulation of the goals was developed in several iterative workshops with the program heads. The goals (2) were aligned and sharpened on the one hand with the mission statement of the School of Business (1) and on the other hand with the positions to be attained by the graduates, i.e. in line with the desired professional profile. For each goal, one or two objectives (3) were defined, which specify the competencies to be acquired by our graduates. In order to ensure their implementation in the degree program, the learning goals (4) of the modules are aligned with the objectives of the degree program. Rubrics (5) are designed in collaboration with the faculty for the measurements in the modules, which are used to assess student performance. At the module level, the objectives are broken down into characteristics, resulting in a detailed description of the objective. The application of these rubrics is described with examples in chapter Assessment via rubrics and traits. *Error! Reference Source not found.* illustrates these dependencies.

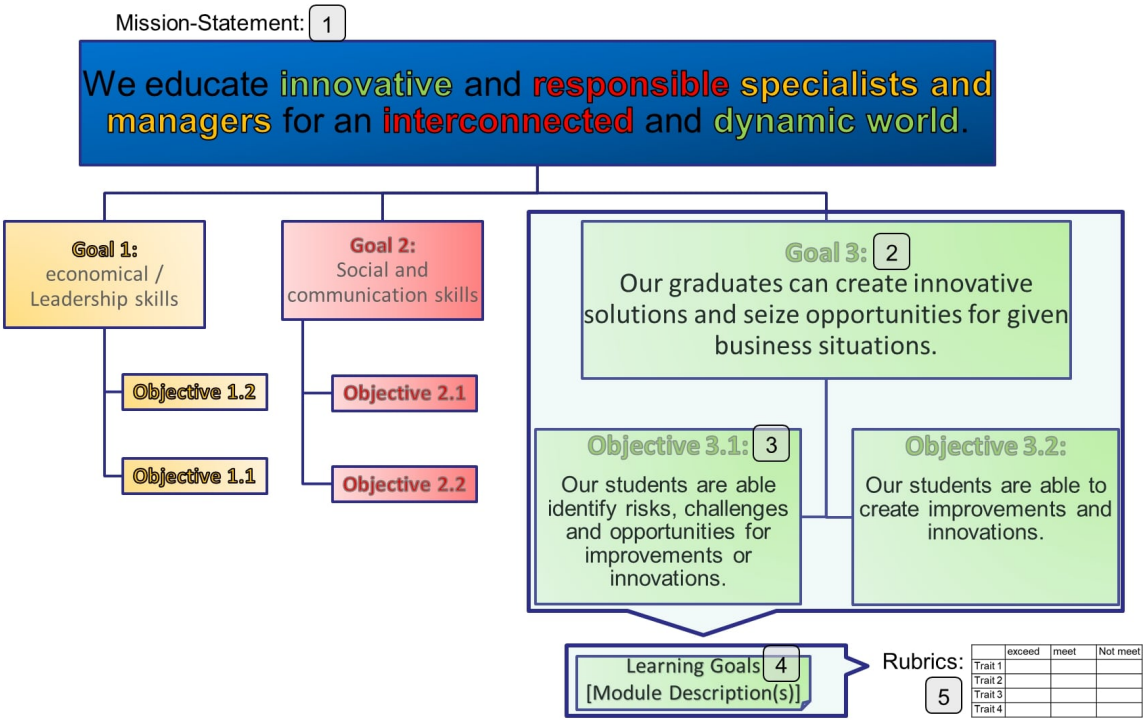


Figure 1: Linking the core elements of our mission with the learning objectives of our modules

The above-mentioned workshops with the participating program heads of the degree programs and executive education were transferred to a new body: the Curriculum

Committee. This platform serves all parties involved in the assurance of learning process to exchange experiences, clarify questions and share best practices. The training offered ranges from Business Administration to Business Artificial Intelligence or, in executive education, delves into topics from Human Resource Management to Consulting. In this respect, the Curriculum Committee also serves the goal of differentiating the diversity of the program offerings. To this end, workshops are held so that the necessary discussions can take place among the program heads.

The goals in the AoL process represent an "extract" of the program. In order to obtain a more comprehensive target picture of the competences of our graduates, the competences from the objectives were identified and supplemented with other relevant competences, so that a complete graduate competence profile was created. Through this procedure, we have obtained competence profiles of our graduates for all degree programs and the executive education. Here, too, the curriculum committee was chosen to conduct the relevant discussions.

2.2 AoL process and core elements

The key element of the AoL process is the Curriculum Map (see *Error! Reference Source not found.*). This document is a matrix that shows the goals and their corresponding objectives in the horizontal axis and lists the modules of the curriculum in the vertical axis. In the corresponding columns of the matrix, the modules are assigned to the objectives as described in chapter 3.1 AoL IT-*infrastructure*. The objectives described in the previous section are assigned to the individual modules in the curriculum map.

The planning of the measurements is done in the document "Timeline". This is to ensure that the workload is distributed over the five-year cycle. Documentation of results is done in "Curriculum Development". Important events are marked and summarized. Measurements are preferably made on the basis of rubrics, which are also used for the measurements in the performance records. The expected performance results are described in corresponding traits.

2.3 AoL improvement cycle

Competence orientation is making its way into the educational landscape. How can the AoL process contribute to this? As mentioned, a cycle lasts five years. Within this time span, one point of measurement (module) and two assessment dates are defined for each objective. The results of the first measurement are analyzed and, depending on the assessment, measures are defined to improve the result by the next measurement point. The performance of the program is measured and not the performance of the students. Therefore, the measurement in a module of the third semester will be measured again in the third semester for one of the next cohorts. In order to have measurements developed appropriately, they should be applied and verified in at least one implementation of the module before a second measurement is taken and documented for the AoL process.

Furthermore, the point of measurement is shaped by attributes such as location and study model. This means that not only the semester of the module is decisive for the point of measurement. If a module is taught at several locations, the measurement is carried out in parallel at all locations. This should reveal any weaknesses or disadvantages due to different infrastructures or teaching methods. In addition, students of the full-time and part-time study

models are measured in order to focus on possible weaknesses in the curricular sequence or the sequence of modules.

However, the AoL process not only considers performance components, but also qualitative feedback from students as well as from other stakeholders like lecturers and practice partners.

3. Implementation of AoL in the WI / BIT programs

In this section the implementation of AoL in the WI and BIT bachelor programs are discussed. Firstly, we outline the AoL IT-infrastructure, and then for selected modules example assessments are presented for the period 2020 - 2025. We conclude this section with a summary of experiences gathered.

3.1 AoL IT-infrastructure

The IT-infrastructure for AoL consists of an MS Excel spreadsheet and a linkage to MS Power BI for generating dashboards visualizing specific scenarios. The AoL Excel spreadsheet (for short AoL Excel) mainly contains the following register:

- Curriculum Map: The curriculum map shows basic module information (module name, assignment to a module group, percentage of students attending the module). Furthermore, the relationship of every module to the fulfilment of an objective is given via the level of immersion. The following values are possible (listed with increasing level of immersion)
    - No relationship (-)
    - Covered incidentally (C)
    - Introduced (I)
    - Emphasized (E)
    - Reinforced (R)
- Timeline: Overview showing which modules are used to measure the fulfilment of the respective objectives. Additionally, a box gives insight into the results for M1 and M2 together with an expressive color (green and red) and links to the measurement files.
- ProDevGoal: This is a log file for monitoring M1 and M2 together with the dates, type of improvement, actions taken, and Closing the Loop (CtL) information. If findings are significant, they are copied to a summary register.
- Summary AoL: A summary of all important findings, improvements and CtL information which may be used as basis for a discussion across programs. When building an AoL knowledge management system, this is one of the most important sources.
- Competences: For every module this register informs about three relevant competencies which really matter. As basis for selection, a generic list of competencies was developed. In the mid-term of the AoL improvement program, competencies will be mapped onto the objectives.

Figure 2 shows a snapshot of the current curriculum map for the BIT program.

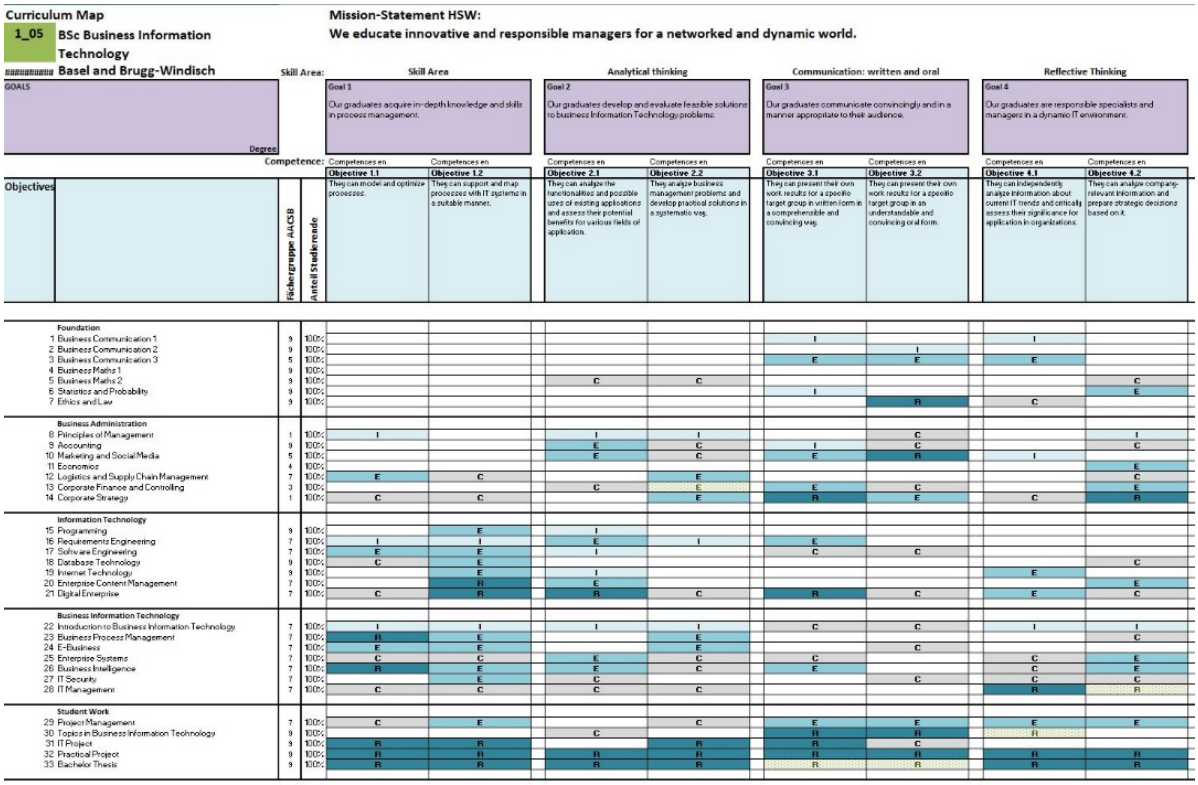


Figure 2: BSc BIT curriculum map

3.2 Selecting modules for assessment

In the following we investigate the assessment of the following three AoL goals / objectives as they are defined for WI / BIT:

- Goal 1: Our graduates acquire in-depth knowledge and skills in process management.
  Objective 1.1: They can model and optimize processes.
- Goal 2: Our graduates develop and evaluate feasible solutions to business Information Technology problems.
  Objective 2.2: They analyze business management problems and develop practical solutions in a systematic way.
- Goal 4: Our graduates are responsible specialists and managers in a dynamic IT environment.
  Objective 4.1: They can independently analyze information about current IT trends and critically assess their significance for application in organizations.

As examples, measurements and improvements for selected modules are discussed, underpinning the clear and significant progress in the management of the curriculum and in the monitoring of our study programs' effectiveness regarding student learning. A module can only be selected for measuring an objective when its level of immersion is strong enough, i.e. emphasized (E) or reinforced (R).

The modules which serve as examples for the assessment of objectives in this paper are:

- Module Logistics and Supply Chain Management (LSCM, Objective 1.1)
- Module Corporate Finance and Controlling (CFC, Objective 2.2)
- Module Topics in Business Information Technology (ToBIT, Objective 4.1)

3.3 Assessment via Rubrics and Traits

Assessment in the modules LCSM and CFC is done via an exam, in the module ToBIT students write a report. For each module the responsible lecturer describes traits together with criteria defining levels when exceeding, meeting and not meeting expectations. For CFC an example trait is defined as follows (Table 1):

Trait No	2.2a
Trait Name	Investment and financing decision-making
Level Exceeds Expectations (EE)	Can distinguish between investment and financing decisions and correctly classify all examples.
Level Meets Expectations (ME)	Can distinguish between investment and financing decisions and correctly classify some examples.
Level Does not meet Expectations (DnM)	Cannot distinguish between investment and financing decisions or cannot classify examples.

Table 1: Example trait for module CFC

AoL measurements are normally integrated as questions or sub questions into the regular exam in order not to overburden the lecturer with redundant correction work. The measurement results for all traits are entered into the AoL Excel and analyzed if improvement actions are necessary. For that purpose, the lecturer may use some predefined rules or overrules (with regards to the thresholds) them if needed. Some example rules are shown in the following Table 2.

Assessment too good when EE >= 30%
Assessment ok, when 30% <= ME >= 60%
Assessment not accurate when ME + EE >= 90%
Assessment too bad when DnM > = 20%
Assessment too bad when EE < = 10

Table 2: Predefined business rules for AoL assessments

The person in charge for AoL in a degree program and the responsible lecturer are then discussing if improvements should apply and if this is the case what actions must be taken in detail.

If an improvement applies, because one or more business rules are violated, the key decision is to go for a content or – or system improvement. A content improvement (CI) comprises all actions related to "modifying" content. In particular, the following actions are possible:

- Content: adding, deleting, replacing, deepening content, changing the order of content
- Entry knowledge: updating requirements
- Adapting methods: integrating e-Learning, changing from individual to group work or vice versa
- Module assessment: oral instead of written exam, changing from individual to group work or vice versa

System improvement (SI) deals with changing the measurement system consisting of objectives / goals, rubrics and measurement points:

- Rubrics: redefining metrics, redefining rubrics
- Lecturer: training lecturers in AoL
- Measurement point: moving the module to a different term, replacing the module
- Objectives / goals: redefining goals / objectives

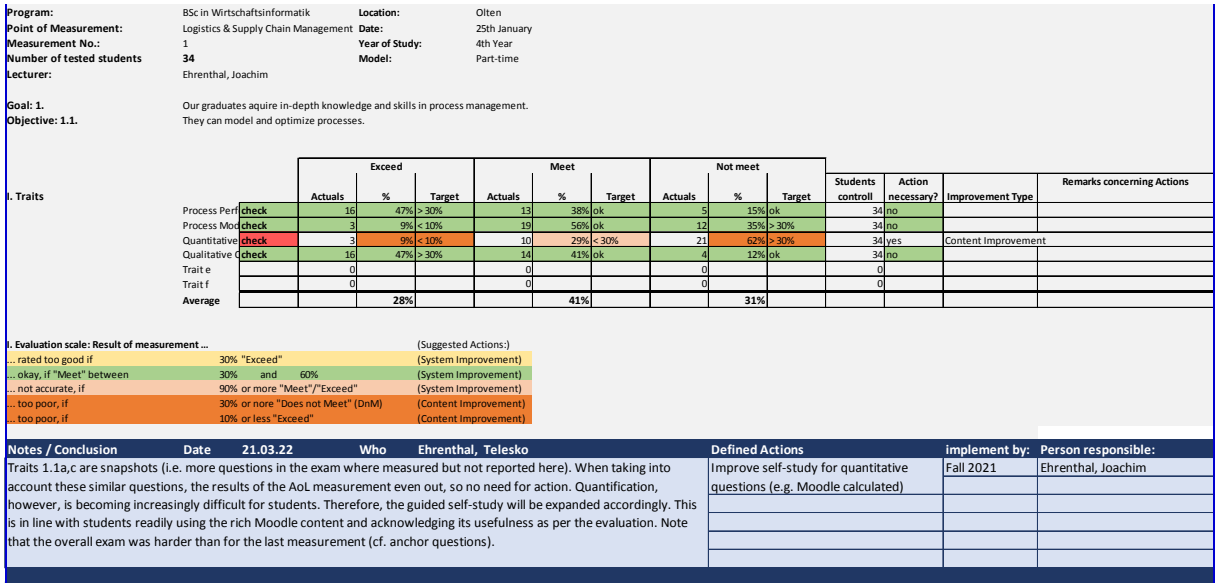
Documentation of a measurement includes the date, participating actors, defined actions, deadline for implementation and actors in charge. The key information regarding the assessment together with a link to the assessment sheet is entered into the AoL Excel.

3.4 Experiences gathered

3.4.1 Module LCSM (WI)

For M1 (part-time class) it turned out that students faced difficulties with regards to understanding SCM methods. The lecturer decided to put more material about modelling and quantitative optimization on the e-Learning platform Moodle (CI) to foster the understanding.

For M1 (full-time class) the results were like M1 in the part-time class. Therefore, the guided self-study on Moodle was expanded accordingly (CI) considering that Moodle is the most important source of information for students. Figure 3 contains a screenshot of the results of the discussion between the LSCM lecturers and the AoL representative.



Program:	BSc in Wirtschaftsinformatik		**Location:**	Olten											
Point of Measurement:	Logistics & Supply Chain Management		**Date:**	25th January											
Measurement No.:	1		**Year of Study:**	4th Year											
Number of tested students	**34**		**Model:**	Part-time											
Lecturer:	Ehrenthal, Joachim														
Goal: 1.	Our graduates aquire in-depth knowledge and skills in process management.														
Objective: 1.1.	They can model and optimize processes.														
			Exceed			**Meet**			**Not meet**						
I. Traits			**Actuals**	**%**	**Target**	**Actuals**	**%**	**Target**	**Actuals**	**%**	**Target**	**Students controll**	**Action necessary?**	**Improvement Type**	**Remarks concerning Actions**
	Process Perf	check	16	47%	> 30%	13	38%	ok	5	15%	ok	34	no		
	Process Mod	check	3	9%	< 10%	19	56%	ok	12	35%	> 30%	34	no		
	Quantitative	check	3	9%	< 10%	10	29%	< 30%	21	62%	> 30%	34	yes	Content Improvement	
	Qualitative C	check	16	47%	> 30%	14	41%	ok	4	12%	ok	34	no		
	Trait e		0			0			0			0			
	Trait f		0			0			0			0			
	Average			**28%**			**41%**			**31%**					

I. Evaluation scale: Result of measurement ...		(Suggested Actions:)
... rated too good if	30% "Exceed"	(System Improvement)
... okay, if "Meet" between	30% and 60%	(System Improvement)
... not accurate, if	90% or more "Meet"/"Exceed"	(System Improvement)
... too poor, if	30% or more "Does not Meet" (DnM)	(Content Improvement)
... too poor, if	10% or less "Exceed"	(Content Improvement)

Notes / Conclusion	**Date**	**21.03.22**	**Who**	**Ehrenthal, Telesko**	**Defined Actions**	**implement by:**	**Person responsible:**
Traits 1.1a,c are snapshots (i.e. more questions in the exam where measured but not reported here). When taking into account these similar questions, the results of the AoL measurement even out, so no need for action. Quantification, however, is becoming increasingly difficult for students. Therefore, the guided self-study will be expanded accordingly. This is in line with students readily using the rich Moodle content and acknowledging its usefulness as per the evaluation. Note that the overall exam was harder than for the last measurement (cf. anchor questions).					Improve self-study for quantitative questions (e.g. Moodle calculated)	Fall 2021	Ehrenthal, Joachim

Figure 3: Example assessment for module LSCM in the WI program

For M2 (again part-time class) the understanding of quantitative methods was improved. For a better separation of the students into the three categories EE, ME, DnM it was agreed to refine the exam grading in future exams (SI).

3.4.2 Module CFC (WI)

For M1 (full-time class), it turned out that the material in the module was adequate with regards to quality and quantity provided. Additionally, in the conducted lecturer assessment there were no complaints regarding the topics addressed in the traits. It was decided that the one trait with bad results will be focused again in M2. For M2 (part-time class), the results

were similar or even better than for the full-time class. Therefore, no CI or SI were necessary. The only action taken - based on discussions with the program heads - was to conduct intermediate tests for "stimulating" the performance of the students. With regards to one particular trait, it was agreed to the raise the "level of ambition" in future exams.

3.4.3 Module ToBIT (WI and BIT)

ToBIT is a seminar where students write a report about a well-defined research topic and thus learn how to deal appropriately with research questions, concepts, and models. This module serves as a preparation for the more complex Bachelor Thesis at the end of the study.

In M1 (part-time class) it turned out that that there exist some severe deficiencies, especially regarding models, research questions and a critical appraisal of future work. M1 for the full-time class was similar, slightly better. It seemed that the technical terms are not understood, and concrete examples were also missing. From the next ToBIT on it was agreed to provide the students with a clear definition of the technical terms and some easy-to-understand examples for theoretical and more practical ToBIT topics (CI).

In M2 (full-time and part-time classes) the only trait which remained insufficient was "critical appraisal of future work". The main reason for this is that students have a limited overview about the research area and its future development and fear to create incorrect judgements. For improvement, it was agreed that the lecturers discuss this topic in an in-depth manner during kick-off. Either this topic is irrelevant (for practically oriented topics) or the lecturer gives concrete hints (references etc.).

4. AoL implementations at other universities

This section describes various approaches related to AoL at other universities. The insights gained will help to enhance the maturity of our implementation and better understand the complexity of AoL and diversity of its success factors.

Baker et al. (2012) describe experiences with the AoL process at the College of Business and Public Administration (CBPA) at California State University, San Bernardino. They focus on a module entitled "Ethical Reasoning", a module which also exists in a similar form at the WI / BIT program (entitled Ethics and Law). The Public Administration Department (PAD) is responsible of managing and further developing this module. The AoL Assessment Cycle is quite similar to what we defined at the FHNW (PDCA cycle – plan, do, check, act). It consists of five assessment phases (Baker et al., 2012, p. 22):

1. Delineation of learning goals: Discussing and formulating learning goals with faculty from the business majors.
2. Curriculum alignment: Developing and aligning student course material and expected learning outcomes and reviewing with PAD and business majors' faculty.
3. Assessment measurement: Constructing pre and post module assessment instruments and reviewing them with faculty. No specific insight is given about the AoL IT-infrastructure (user interface, databases etc.).
4. Data collection and analysis: Administering the assessment instruments and reviewing results with the CBPA's AoL committee.
5. Assessment documentation and use for continuous improvement: Reviewing results and determining necessary improvements.

Of particular interest are the lessons learned in the contribution (Baker et al., 2012, p. 24f). With regards to faculty involvement and coordination the authors stress that the whole AoL design and implementation should be an open process considering relevant stakeholders (especially faculty and students) and enabling enough flexibility for individual instructors to achieve the same learning goal. According to the authors it is a clear advantage to have AoL learning goals defined prior to structuring and implementing a module. This goes in line with the experiences at the FHNW where it turned out that reaching an evolving learning goal requires in most cases multiple updates to the module content and increases dissatisfaction of participating faculty members. Furthermore, the authors believe that a single, isolated module is very likely not changing the behavior of students. Therefore, they propose to ensure that "critical" - according to our understanding of AACSB all - AoL goals are integrated across multiple modules. We fully agree with that and made sure that in our curriculum map the level of immersion of a module for assessing a goal is at least "E" and that various modules across the module groups can be used for assessments. Finally, the authors are convinced that both feedback from an overall curricula perspective and individual course assessments are necessary to guarantee sustainable continuous improvement. We share this view of holistic data acquisition and offer for that purpose various events and stakeholder groups for the assessments. An event can be a measurement, a student assessment, a program evaluation, a meeting, and the like. As stakeholders we defined alumni, teachers, students, the curriculum committee, employers, advisory and sounding board. With these instruments we are optimally prepared to get a multi-dimensional insight into the WI / BIT programs, from assessing a single module to a global survey of employers concerning the future digital skills.

The paper of Kohli (2018) is of particular interest because it is comparing students' performance with and without the AoL model for a capstone course in the finance program. The class size was approximately 20 students. Two scenarios were compared, one with and one without AoL. Without AoL, the students undergo a group work, resulting in an overall performance of approximately 85% passing the module. With AoL, an exam is used for assessing students. The percentage of students passing the exam decreases to only 59%, resulting in a total performance of 82%, when counting exam and group work together. Thus, this research stresses the importance of AoL measurements by focusing on poor learning outcomes of students in the exam compared to the group work.

Taib & Ahmad (2017) discuss the application of the Six Sigma method in an AoL environment. University Utara Malaysia (UUM) awarded the AACSB accreditation in 2016. This paper explores the usage of Six Sigma in measuring course learning outcomes. Additionally, it aims at predicting process variation, productivity and process capability of three assessment methods (quiz, assignment and the final examination) for a first-year undergraduate Quality Management System course at School of Technology Management and Logistics with a total of 50 students involved.

Adeinat et al. (2022) describe an approach for using Six Sigma combined with Lean Management (LSS) to manage AoL in the domain of higher education. Their experiences were that Six Sigma can bring a clear added value with regards to AoL effectiveness and efficiency and highlighted three success factors for LSS: clear responsibility of the stakeholders, a common language for LSS within the cross-disciplinary team to foster collaboration and definition of quantifiable priorities.

We now investigate in detail how Six Sigma and LSS can bring forward the AoL initiative at the FHNW. First, Six Sigma can be regarded as a quality improvement methodology that

applies statistics to reduce variation in processes and products. The term "Sigma" is regarded as the amount of process variation contained within the customer specification limits LSL and USL. Six Sigma was originally invented for optimizing processes in the product and service sector with a fact-based approach and is widely regarded as one of the most effective process improvement methodologies. It is now widely accepted and implemented also for learning processes.

The main idea is clearly to increase the "Sigma" which is the key metrics for measuring quality. How can Six Sigma be used to measure learning outcomes within AoL? Figure 4 shows a Six Sigma process for normally distributed data. Six Sigma on each side of the Gaussian distribution correspond to 3.4 defects per million opportunities, this is the area left to LSL and right to USL.

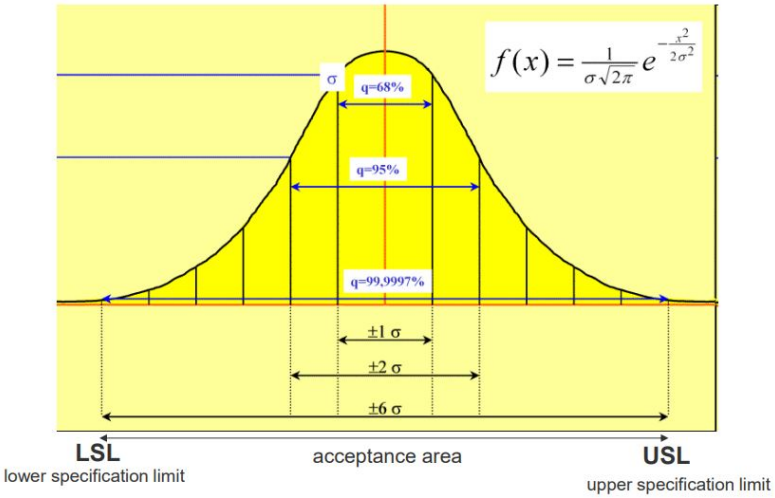


Figure 4: Six Sigma process

The basis for Six Sigma is the DMAIC cycle which is basically a modified PDCA process:

- Define (D): Setting up the project goals and team structure.
- Measure (M): Measurement of the initial process capability. In order to measure the process performance - in our case learning outcomes - LSL (lower specification limit) and USL (upper specification limit) must be defined. In Six Sigma, any performance outside LSL and USL should be an extremely rare event. LSL and USL can be easily defined based on the business rules specified in Table 2. The boundaries defining insufficient performance (e.g. DnM >= 20%) can be customized, if needed.
- Analysis (A): In case of insufficient performance, the teacher and AoL must identify the root cause(s) for the bad performance. This is the key task of Six Sigma, which is the precondition for establishing improvements. For the LSCM module assessment we observed, that the main reason for bad performance of one trait was the insufficient understanding about specific quantitative methods in supply chain management which made a CI necessary.
- Improvement (I): Within AoL, all concrete actions applicable within the CI / SI portfolio can be used, like adding more material, replacing and deleting content, adapting rubrics etc.
- Control (C) Once, actions regarding CI / SI are implemented, one should ensure that the better performance continues as long as possible. For that purpose, direct and indirect measurements can be used in AoL to monitor the current performance by integrating different stakeholders like students, alumni, review boards, employers etc.

One key advantage of using Six Sigma is that the current and targeted process performance is easily made visible via a "number". The DMAIC cycle is very similar to the classical PDCA approach, however, especially for the "M" and "A", a considerable number of proven mathematical and statistical methods are available in the Six Sigma toolbox. As described in the approach of Adeinat et al. (2022), Six Sigma is often extended to Lean Six Sigma (LSS). LSS implies the usage of lean management techniques (i.e. cost cutting, avoiding waste) while guaranteeing a world class performance at the same time. For our AoL process, LSS would be an interesting extension. One could imagine applying lean management by avoiding unnecessary measurements or improvement steps or by collecting and implementing CI / SI appropriate for usage across program boundaries.

5. Summary and Outlook

In 2014, the management of the School of Business at the FHNW decided to set up a strategic project to achieve the AACSB (Association to Advance Collegiate Schools of Business) accreditation to sustainably secure the role among the best business schools.

The aim of this paper is to give an overview of the status of the implementation of the AoL process in the WI / BIT programs. Within the AACSB framework, AoL ensures to meet program learning goals and thus is an integral part to promote quality assurance in teaching. The AoL IT infrastructure at the FHNW essentially consists of linked MS Excel files and MS Power BI for visualization. The AoL process and assessments were illustrated using three WI / BIT modules.

The results achieved within AoL confirm the previous "feelings" of the lecturers and now allow improvement steps via CI / SI in a fact-based manner. The implementation of AoL at other universities shows above all that support from university management, professional project organization and effective stakeholder management are necessary to guarantee a sustainable improvement process. The implementation of AACSB requires "stamina" from the employees, so an accompanying concept for organizational development is essential.

Regarding the further development of AoL at the FHNW, there are mainly two opportunities.

- On the one hand, the existing IT infrastructure must be further developed in order to simplify the creation of assessments and evaluations. The existing MS Excel solution is increasingly reaching its limits here (number of registers, susceptibility to errors in links, etc.).
- On the other hand, it is important to optimize the exchange of improvements across program boundaries. The accompanying Curriculum Committee offers an excellent opportunity for this. IT-based measures could be something in the construction of an AoL-integrated lessons learned database.

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