

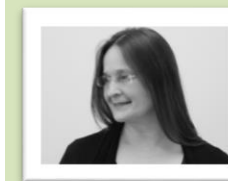
## Sustainable Management in the Food Trade – Additional qualification for apprentices in bakery and confectionery trade

### Motivation

The bakery and confectionery trade faces great challenges in the course of developments in vocational training and changes in food and consumer behavior, combined with new supplier structures (e.g. low-priced products in the supermarkets, discounters and bakery shops). These challenges result in the need to change demands on employees and to adopt to changing market structures as well as nutritional and consumer behavior in order to secure the existence of the company in a sustainable way. The developed additional qualification is intended to support apprentices in this process.

### Objective

One of the central characteristic is the consideration of the individual work and business processes of the participating companies into the design of the additional qualification as well as the reflection and evaluation of the contents in the respective company. This interrelation ends up in a project work which represents the final exam of the participants. This project work enables changes in the company in a sustainable way by making an economic use out of social and environmentally activity.



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#### Research Areas

- Epistemic beliefs and learning styles
- Vocational training and education for sustainable development
- Learning task, competence diagnostic

#### Regular courses

- **Bachelor:** pb023, pb024, pb025, pb026, pb027, pb029, prx105, prx104, wir170, wir181, wir182, bam
- **Master:** prx550, wir731, prx555, biw111, mam



Figure 1: Material for acquisition

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### Realization

The five competence-oriented modules on **M1 sustainable management**, **M2 work in the food trade**, **M3 consumption & nutrition**, **M4 food losses**, **M5 developing innovative products** are closely coordinated in the *conception and development phase* by the participating companies and other external experts in terms of content and methodology. The participating companies act as trial partners, among others, by letting their apprentices participate in the additional qualification. The intended Advisory Board advises and provides feedback regarding the modules developed. It also provides competences and networks for trans-regional transfer/consolidation.



Figure 2: Participation companies

### Evaluation and Transfer

Making use of a *design-based research approach*, the additional qualification can be evaluated quantitatively and qualitatively. *Concept maps* developed by the apprentices during the additional qualification in the end of each module form an important basis for this. Their analysis shows [1] how much knowledge is imparted and [2] how the participants link and structure this knowledge. The results provide a basis for differentiation and further development of domain-specific competencies for sustainable management in the bakery and confectionery trade.

The phase of *Transfer and continuation* includes the development and implementation of a train-the-trainer concept involving the participating companies, as well as the associated continuation.

	C	R1	R2	R3	R4	R5	R6	Range	Interconnectedness	Structure	Content
T1	34	0	0	13	10	4	11	72	2,24	160,94	146
T2	26	5	0	8	10	1	4	54	2,15	116,31	96
T3	27	1	0	9	12	4	3	56	2,15	120,30	106
T4	33	3	0	10	14	3	6	69	2,18	150,55	131
T5	41	18	0	13	8	0	0	80	1,90	152,20	109
T6	39	2	0	16	12	3	9	81	2,15	174,46	154
T7	28	1	0	9	12	3	2	55	1,93	106,07	100
T8	48	7	1	20	10	9	3	98	2,08	204,17	166
T9	38	0	3	14	8	9	4	76	2,00	152,00	139

Figure 3: Analysis results of the concept maps from the first trial

#### Literature

Beckmann, M. & Schaltegger, S. (2014). Unternehmerische Nachhaltigkeit. In H. Heinrichs & G. Michelsen (Hrsg.), Nachhaltigkeitswissenschaften (S. 321–367). Berlin.  
 Kettschau, I. & Mattausch, N. (Hrsg.). (2014). Nachhaltigkeit im Berufsfeld Ernährung und Hauswirtschaft am Beispiel der Gemeinschaftsverpflegung. Hamburg.  
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