



# Food and nutrition literacy in day-care centres

## An analysis of the formal qualification of pedagogical staff

Julia Hirsch, Rhea Dankers, Helmut Heseke

### Abstract

The study “*Ernährungsbezogene Bildungsarbeit in Kitas und Schulen*” (Nutrition-related educational work in day-care centres and schools) examined the curricula and examination regulations for the training of pedagogical staff in day-care centres. The extent to which food and nutrition literacy is anchored, depends on the vocational qualification or qualification pathways. In the childcare assistant and social assistant apprenticeship extensive and multifarious nutrition-related skills are to be acquired. However, in the educator apprenticeship or in the course of study for pedagogic in childhood, nutrition-related contents are not always taken into account. Thus, a comprehensive qualification in the field of food and nutrition literacy is not guaranteed. It is known that the competences of the pedagogical staff are a significant factor influencing the quality of nutrition-related educational offers in day-care centres. Therefore, it is urgently necessary that the field of food and nutrition literacy is integrated in the curricula of all training programs which qualify for the working area of day-care centres.

**Keywords:** day-care centres, food and nutrition literacy, curricula, qualification, pedagogical staff, education

### Introduction

The aim of food and nutrition literacy is to enable people to democratically develop and shape their own nutrition in a politically and socially responsible way under complex social conditions. Moreover, food and nutrition literacy always contains eating culture education, aesthetic-cultural as well as culinary educational elements and contributes to the development of the culture of living together [1]. Food and nutrition literacy thus represents a basic education for everyday life and is a prerequisite for participation in society [2]. It is a life-accompanying process that already begins before birth. This process is significantly influenced by the socio-cultural environment such as family and friends, but increasingly also by public educational institutions such as day-care centres [1]. The importance of day-care centres as an instance of socialisation is clearly illustrated by the quota of child care: In 2018, 93% of children aged three to under six years in Germany attended a day-care centre [3]. This makes the day-care centre as a place of learning and education, that is formative for most children early in life. In addition, almost all children in this age group can be reached via day-care centres, regardless of their cultural background or socioeconomic status. Hence, there is an institutional responsibility of the day-care centres to deal with questions and tasks of food and nutrition literacy.

The quality of nutrition-related educational processes in day-care centres is also influenced by the professional competence of the pedagogical staff [4]. In order to be able to initiate and arrange nutrition education processes professionally, they need knowledge, social skills and methodological abilities. Motivation and their stance towards food and nutrition literacy also play a crucial role [5].

There are many opportunities of qualification at different levels for the working area day-

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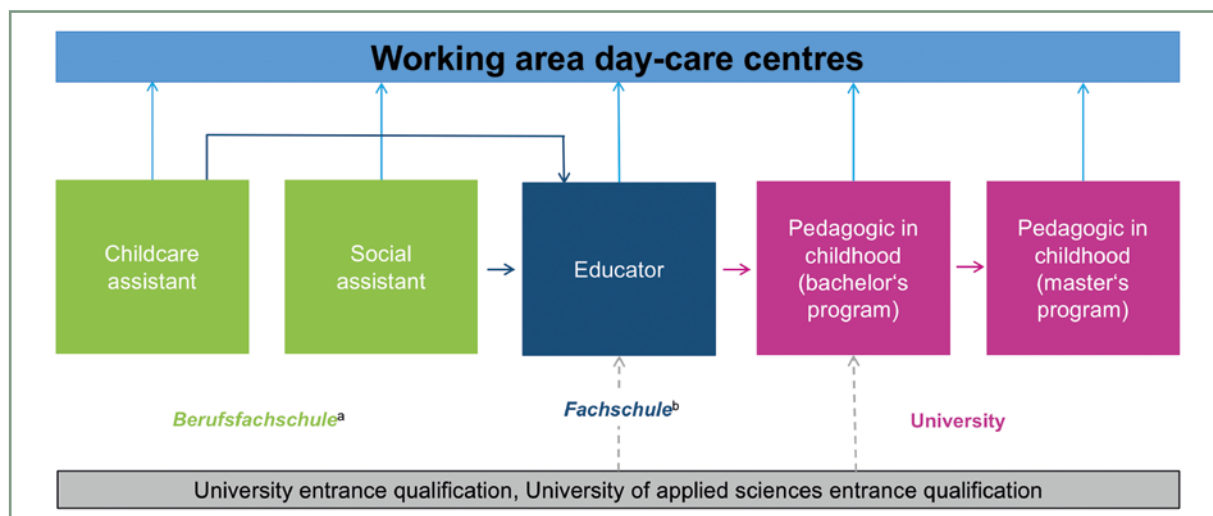


Fig. 1: Qualification pathways for the working area day-care centres (based on [6])  
<sup>a</sup> vocational school; <sup>b</sup> specialized vocational school

care centres (♦ Figure 1). In addition to the central training as an educator, there are apprenticeships as a childcare assistant and as a social assistant. In addition, since 2004 there are new degree programs for pedagogic in childhood, which specifically qualify for the field of early education.

The childcare assistant and social assistant apprenticeships are fully qualifying courses of education offered at *Berufsfachschulen* (vocational schools). They lead to a school-based vocational qualification according to state law [7]. They can be considered as the first stage of the educational system. After completing their apprenticeships, childcare assistants and social assistants can either start working directly in the field of day-care centres as supplementary and assistant staff [8] or they can remain in the educational system and further qualify as educator at the *Fachschule für Sozialpädagogik* (specialized vocational school for social pedagogy) [9]. According to the *Kultusministerkonferenz* (Conference of Ministers of Education and Cultural Affairs) [10], educator apprenticeship is regarded as further vocational training which is based on initial vocational training as well as work experience and leads to a state post-secondary vocational qualification according to state law. The entry requirement is an intermediate school-leaving certificate or an equivalent vocational qualification as well as a completed relevant vocational training [10]. In addition, however, qualifications recognised as equivalent are also admitted in almost all federal states, such as a university (of applied sciences) entrance qualification.

Within the nationwide study “*Ernährungsbezogene Bildungsarbeit in Kitas und Schulen*” (Nutrition-related educational work in day-care centres and schools), the formal qualification of the pedagogical staff of day-care centres was examined [11]. The objective was to determine the extent to which the areas of food and nutrition literacy are anchored in the curricula (CR) or examination regulations (ER) in the various training programs or degree programs of pedagogical staff.

## Methodology

Within a document analysis, the CR and ER for the training of pedagogical staff in day-care centres were investigated. For this purpose, the CR for the apprenticeships as childcare assistant, social assistant and educator of all federal states were researched on the websites of the respective responsible state ministries for school in November 2016. In addition, the degree program database of the “*Weiterbildungsinitiative Frühpädagogische Fachkräfte*” (Continuing education initiative early childhood education professionals) as well as the university database → [www.hochschulkompass.de](http://www.hochschulkompass.de) were used to identify universities with a degree program in pedagogic in childhood or related programs. Subsequently, the current ER were researched via the website of the respective university.

In the next step, the documents found were investigated with regard to anchoring of the educational field of food and nutrition literacy using the structuring qualitative content analysis according to Mayring [12]. Therefore, an analysis grid was developed inductively from the CR and ER and comprises the following four topic areas:

1. food and nutrition literacy: aspects of teaching
2. eating habits, cultural and social influences
3. nutrition and health
4. health-promoting nutrition in the day-care centre/catering in the day-care centre.

The corresponding contents of the topic areas can be taken from the result tables (♦ Table 1 and ♦ Table 2 in the online supplement → [www.ernaehrungs-umschau.de](http://www.ernaehrungs-umschau.de)).



In the analysis of the CR for the childcare assistant, social assistant and educator apprenticeship, only the occupation-related learning areas or subjects were included. The cross-occupational learning area was not analysed, because in this case the general education is continued, which does not specifically qualify for work in the day-care centre. A distinction was made between compulsory competences/learning objectives or learning content that should be acquired and optional competences/learning objectives or learning content that can be acquired. Furthermore, in the social assistant apprenticeship only nutrition-related content was considered that relates to the work in day-care centres or is relevant to work with children.

## Results

In the CR and ER for the training of pedagogical staff, food and nutrition literacy is anchored to varying extent depending on the level of qualification (♦ Table 1 and ♦ Table 2 in the online supplement → [www.ernaehrungs-umschau.de](http://www.ernaehrungs-umschau.de)).

### Childcare assistant and social assistant apprenticeship

A training as a childcare assistant is offered in six and as a social assistant in twelve federal states. In all CR there is a nutritional reference (♦ Table 1 in the online supplement).

In the CR for childcare assistant apprenticeship, the range of nutrition-related topics and competences is wide. In all six federal states, competences from the four defined topic areas are to be acquired. For example, graduates of childcare assistant training should always have knowledge of dietary recommendations for healthy eating in general, as well as for infants and nutrition in the case of nutrition-related diseases, such as food intolerances and allergies or feeding the sick child. In addition, five CR state that graduates should know the dietary recommendations for children. The category "food/nutrients and their functions" is found in five CR as well. In addition, graduates of childcare assistant training should have the skill to composite menu plans for day-care centres or to create menus in general as well as to prepare food. Furthermore, the issue "safety and hygiene in the kitchen" is addressed in five CR. In the area of "food and nutrition literacy: aspects of teaching", competences for the pedagogical organisation of meals or for food and nutrition literacy in general are mainly anchored in the CR.

Also all twelve CR for social assistant apprenticeship include content from the topic areas "nutrition and health" and "health-promoting nutrition in the day-care centre/catering in the day-care centre". The topic area "eating habits, cultural and social influences" and "food and nutrition literacy: aspects of teaching" can be found in five respective four of the twelve CR. In all twelve federal states, graduates should acquire knowledge about dietary recommendations. However, in most cases this is kept very general and not specified for the target group of children or infants. According to the CR, the ability to prepare food is taught in ten of the twelve federal states and the aspect "safety and hygiene in the kitchen" is explicitly mentioned in eight CR. In another eight federal states social assistants should have the ability to create menus, three of

which explicitly refer to the menu composition for day-care centres.

### Educator apprenticeship

In 14 of the 16 CR for educator apprenticeship, the area of food and nutrition literacy is anchored. Two federal states do not consider the area of food and nutrition directly. In addition, the analysis of the 14 CR with an explicit reference to nutrition shows that in one CR nutrition is only anchored in the cross-disciplinary area of foreign languages. Thus, in total 13 federal states have anchored nutrition-related competences in the occupational field (♦ Table 1 in the online supplement). In addition, almost all federal states provide for an elective area that can be individually designed by the vocational schools. Here – depending on the profile and framework conditions of the school – also nutrition-related competences could be optionally acquired.

Of the 13 CR with an explicit nutritional reference in the occupation-related area, eleven CR consider contents of the topic area "food and nutrition literacy: aspects of teaching". The focus is primarily on the aspect "design of pedagogical activities on food and nutrition literacy". The following sentence can often be read in the CR: *"Selbstbildungs- und Bildungsprozesse in den Bildungsbereichen [...] Gesundheit und Ernährung [...] anregen, unterstützen und fördern."* (Stimulating, supporting and promoting self-education and educational processes in the educational fields [...] of health and nutrition.) Besides this, in one CR the role and stance of the pedagogical staff should also be addressed. The topic area "nutrition and health" is addressed in a total of six CR. The students should primarily acquire knowledge about dietary recommendations (n = 6) or about nutrition-related diseases (n = 2) or eating disorders (n = 2). The topic areas "eating habits, cultural and social influences" and "health-promoting nutrition in the day-care centre/catering in the day-care centre" are addressed by two CR for the educator apprenticeship. However, only the contents "eating habits" and "criteria for practical choice of food" are mentioned.

### Course of study for pedagogic in childhood

For the field of pedagogic in childhood, a total of 78 study programs were found at 60 university locations in Germany (62 of which are bachelor's programs and 16 are master's programs). Of the 78 study programs, in 20



78 Study programs pedagogic in childhood					
20 examination regulations/module descriptions with content on eating and food and nutrition literacy		26 examination regulations/module descriptions with content on health promotion or health education		32 examination regulations/module descriptions without content on eating and food and nutrition literacy or on health promotion or health education	
19 bachelor's programs	1 master's programs	23 bachelor's programs	3 master's programs	20 bachelor's programs	12 master's programs

Abb. 2: Number of study programs with content on food and nutrition literacy and health promotion, health education

ER (including 19 bachelor's programs and one master's program) content of food and nutrition literacy was identified (♦ Figure 2). Aspects of health promotion or health education are found in further 26 ER (including 23 bachelor's programs and three master's programs). However, a relation between health promotion and nutrition is not directly shown. Thus, in almost one third of the bachelor's programs and three quarters of the master's programs, neither content on food and nutrition literacy nor on health promotion or health education is anchored in the ER.

In the 20 ER with an explicit reference to nutrition, priority is given to content from the topic areas "nutrition and health" and "food and nutrition literacy: aspects of teaching". In the topic area of "nutrition and health", the focus is on knowledge about dietary recommendations for healthy eating in general and recommendations specifically for children, as well as nutrition-related diseases. In the topic area "food and nutrition literacy: aspects of teaching" the focus is on the pedagogical organisation of meals and other activities on food and nutrition literacy. Content from the topic areas "eating habits, cultural and social influences" as well as "health-promoting nutrition in the day-care centre/catering in the day-care centre" is anchored in two respective four study programs. Overall, the analysis shows that, insofar as the topic of food and nutrition literacy is anchored, it is often treated as a marginal topic in a module from the areas of "health" and "design of the educational fields". At six university locations, modules were identified in which more nutrition-related content is anchored (♦ Table 2 in the online supplement). These are located in Baden-Württemberg, Bavaria, and North Rhine-Westphalia. With Baden-Württemberg being strongly represented by the universities of education. At one university of education, the compulsory module "Grundlagen der Bedeutung von Bewegung und Ernährung für die frühkindliche Gesundheit" (Basics of the importance of exercise and nutrition for early childhood health) deals with the topics "nutrition and health" and "eating habits, cultural and social influences". In the elective module "Aktuelle Aspekte der Ernährung im Kindesalter" (Current aspects of nutrition in childhood) these can be expanded by topics from the areas of "health-promoting nutrition in the day-care centre/catering in the day-care centre" and food and nutrition literacy. At another university, the compulsory module "Gesundheit und Ernährung" (Health and nutrition) deals with content of the topic areas "eating habits, cultural and social influences", "nutrition and health" as well as "catering in the day-care centre".

In summary, the CR for the childcare assistant and social assistant apprenticeship contain the most and most multifarious nutrition-related content (♦ Table 1 and ♦ Table 2 in the online supplement). In the CR for the educator apprenticeship, there is significant less nutrition-related content. Further on in the degree programs for pedagogic in childhood nutrition-related content is rarely anchored and in addition often only a marginal issue.

## Discussion

The largest and most important occupational group in the working area of day-care centres are educators (67%) [3]. Educators who have previously completed an apprenticeship as a childcare assistant or as a social assistant should formally have basic nutrition-related competences and be able to professionally initiate and design nutrition-related educational processes in day-care centres. However, in practice only a few educators (still) choose the qualification path via the preliminary stage of childcare assistant or social assistant. According to a nationwide survey of 1 154 social pedagogy pupils, only 28% have completed a relevant vocational training such as childcare assistant or as social assistant prior to the educator apprenticeship [13]. The majority (63%) do not have any vocational training. They take the opportunity to start the educator apprenticeship directly with a university (of applied sciences) entrance qualification without having to provide evidence of a prior vocational qualification.

With regard to the implementation of food and nutrition literacy in day-care centres, this must be seen critically. On the one hand, because this means that the fundamental nutrition-related competences from initial training



are lacking. On the other hand, because the acquisition of nutrition-related competences is not guaranteed nationwide in the educator apprenticeship – as this study shows. Accordingly, it can be assumed that educators without prior vocational qualification are neither able to recognise nor make use of the numerous educational opportunities offered by everyday eating and drinking. Consequently, it is questionable whether they are able to fulfil the task of food and nutrition literacy in day-care centres competently. Childcare assistants and social assistants are the second most important occupational group in the working area of day-care centres with an average share of 13% [3]. The fact that this occupational group is formally very comprehensively qualified for tasks in the field of food and nutrition literacy within the training indicates that, from an educational policy point of view, food and nutrition literacy is seen as a task of assistant staff. This assumption is supported by the *Qualifikationsprofil "Frühpädagogik" – Berufsfachschule* (Qualification profile "early education" – vocational school) [8]. It describes the respective tasks of the different occupational groups in the working area of day-care centres and assigns nutrition-related tasks to assistant staff. Whereas in the *Qualifikationsprofil "Frühpädagogik" – Fachschule/Fachakademie* (Qualification profile "early education" – specialized vocational school) [14], eating and nutrition is not named as a task for educators in any of the defined fields of action. It is solely pointed out that health promotion is an area in which educational processes should be supported and promoted.

So far, childhood pedagogues, who make up about 1% of all pedagogical staff in the working area of day-care centres, have played a small role [3] but they will probably become more important in the future. The study program for pedagogic in childhood mostly represents an alternative way to educate educators [6]. This means that childhood pedagogues usually have no previous vocational training in the field of food and nutrition literacy. This is aggravated by the fact that only a quarter of the study programs include nutrition-related topics. It can therefore be assumed that the majority of childhood pedagogues do not have professional competence in the field of food and nutrition literacy. This is problematic, because childhood pedagogues are primarily qualified for the management of day-care centres. They are thus responsible for the design, management, and coordination of the educational tasks, including food and nutrition literacy in the institution.

Taking into consideration that pedagogical staff is not always adequately qualified for the task of food and nutrition literacy during their training, but food and nutrition literacy is clearly defined as an educational task of day-care centres by the educational plans for early childhood education of the federal states [11], it is probable that especially educators without an initial vocational training as well as childhood pedagogues will fall back on their existing, possibly incomplete or faulty everyday knowledge and use it as a basis for designing nutrition-related educational processes. In addition, it is also possible that they do not consider food and nutrition literacy as their task at all or ascribe only a low priority to it and therefore food and nutrition literacy does not take place or only to a very limited extent. Only if food and nutrition literacy is structurally anchored in all training programs that qualify for the working area of day-care centres, it can be ensured that pedagogical staff recognise and make use of the numerous educational

opportunities surrounding everyday eating and drinking and that all children experience food and nutrition literacy. There is a need for action here.

## Limitations

The present results do not provide any information on real training practice. To what extent pedagogical staff really acquire nutrition-related competences during their training, remains open. The CR and ER allow a wide scope of implementing food and nutrition literacy, therefore less or more nutrition-related competences can be taught. This also depends on the qualification or competence of the teacher as well as on the equipment of the school. These aspects were not examined within the present study. Furthermore, the results of the analysis of the CR and ER say nothing about the actual nutritional competence of pedagogical staff in day-care centres. In consequence of e.g. further training visits, they could also have broader nutrition-related competences than those that are formally taught in the training.

## Conclusions

It is known that the competences of the pedagogical staff are a significant factor influencing the quality of nutrition-related educational offers in day-care centres. Therefore, it is urgently necessary that the CR and ER of all training programs and of all federal states which train for the working area of day-care centres are adapted accordingly and that the field of food and nutrition literacy is being integrated. In addition to nutrition-related knowledge, reflected experiential knowledge and methodological and pedagogical-didactic skills, a professional stance should be acquired, which also includes an awareness of one's own role model function. In addition, it is recommended that a qualification profile "food and nutrition literacy in day-care centres" be drawn up for pedagogical staff. Here, the nutrition-related competences that pedagogical staff must have in order to be able to carry out the task of food and nutrition literacy completely, should be defined.



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#### Conflict of Interest

The authors declare no conflict of interest.

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#### References

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1. Bartsch S, Büning-Fesel M, Cremer M, et al.: Ernährungsbildung – Standort und Perspektiven. *Ernährungs Umschau* 2013; 60(2): M84–M95.
2. Lührmann, P: Ernährungsbildung ist kulturelle Bildung. In: Rademacher C, Heindl I (eds.): *Ernährungsbildung der Zukunft*. Wiesbaden: Umschau Zeitschriftenverlag 2019.
3. Statistisches Bundesamt (Destatis) (ed.): *Statistiken der Kinder- und Jugendhilfe. Kinder und tätige Personen in Tageseinrichtungen und in öffentlich geförderter Kindertagespflege am 01.03.2018*. [www.destatis.de/DE/Themen/Gesellschaft-Umwelt/Soziales/Kindertagesbetreuung/Publikationen/Downloads-Kindertagesbetreuung/tageseinrichtungen-kindertagespflege-5225402187004.html](http://www.destatis.de/DE/Themen/Gesellschaft-Umwelt/Soziales/Kindertagesbetreuung/Publikationen/Downloads-Kindertagesbetreuung/tageseinrichtungen-kindertagespflege-5225402187004.html) (last accessed on 16 September 2019).
4. Steffensky, M: *Naturwissenschaftliche Bildung in Kindertageseinrichtungen*. WiFF Expertisen, Band 48. München: Weiterbildungsinitiative Frühpädagogische Fachkräfte 2017.
5. Fröhlich-Gildhoff K, Nentwig-Gesemann I, Pietsch S, Köhler L, Koch M: *Kompetenzentwicklung und Kompetenzerfassung in der Frühpädagogik. Konzepte und Methoden*. Freiburg im Breisgau: FEL-Verlag 2014.
6. Autorengruppe Fachkräftebarometer (eds.): *Fachkräftebarometer Frühe Bildung 2017*. Weiterbildungsinitiative Frühpädagogische Fachkräfte. München: 2017.
7. KMK (Kultusministerkonferenz) (ed.): *Rahmenvereinbarung über die Berufsfachschulen (Beschluss der Kultusministerkonferenz vom 17.10.2013)*. [www.kmk.org/fileadmin/Dateien/veroeffentlichungen\\_beschluesse/2013/2013\\_10\\_17-RV-Berufsfachschulen.pdf](http://www.kmk.org/fileadmin/Dateien/veroeffentlichungen_beschluesse/2013/2013_10_17-RV-Berufsfachschulen.pdf) (last accessed on 16 September 2019).
8. Autorengruppe Berufsfachschule (eds.): *Qualifikationsprofil „Frühpädagogik“ – Berufsfachschule*. WiFF Kooperationen, Band 4. München: Weiterbildungsinitiative Frühpädagogische Fachkräfte 2013.
9. Janssen R: *Die Ausbildung frühpädagogischer Fachkräfte an Berufsfachschulen und Fachschulen. Eine Analyse im Ländervergleich*. WiFF Expertisen, Band 1. München: Weiterbildungsinitiative Frühpädagogische Fachkräfte 2010.
10. KMK (Kultusministerkonferenz) (ed): *Rahmenvereinbarungen über Fachschulen (Beschluss der Kultusministerkonferenz vom 07.11.2002 i. d. F. vom 23.02.2018)*. [www.kmk.org/fileadmin/veroeffentlichungen\\_beschluesse/2002/2002\\_11\\_07-RV-Fachschulen.pdf](http://www.kmk.org/fileadmin/veroeffentlichungen_beschluesse/2002/2002_11_07-RV-Fachschulen.pdf) (last accessed on 16 September 2019).
11. Heseke H, Dankers R, Hirsch H: *Ernährungsbezogene Bildungsarbeit in Kitas und Schulen (ErnBildung). Schlussbericht für das Bundesministerium für Ernährung und Landwirtschaft (BMEL) (Förderkennzeichen 2816HS006)*. 2018. [https://sug.uni-paderborn.de/fileadmin/sug/ekg/ernaerungswissenschaft/190717\\_Abschlussbericht\\_ErnBildung.pdf](https://sug.uni-paderborn.de/fileadmin/sug/ekg/ernaerungswissenschaft/190717_Abschlussbericht_ErnBildung.pdf) (last accessed on 16 September 2019).
12. Mayring P: *Qualitative Inhaltsanalyse. Grundlagen und Techniken*. 12th ed., Weinheim Basel: Beltz 2015.
13. Projektgruppe ÜFA (eds.): *Übergang von fachschul- und hochschulausgebildeten pädagogischen Fachkräften in den Arbeitsmarkt. Erste Befunde der Absolventenbefragung 2012*. Dortmund Frankfurt a. M. Landau: 2013.
14. KMK (Kultusministerkonferenz) (ed.): *Kompetenzorientiertes Qualifikationsprofil für die Ausbildung von Erzieherinnen und Erziehern an Fachschulen/Fachakademien (Beschluss der Kultusministerkonferenz vom 01.12.2011 i. d. F. vom 24.11.2017)*. [www.kmk.org/fileadmin/Dateien/veroeffentlichungen\\_beschluesse/2011/2011\\_12\\_01-ErzieherInnen-QualiProfil.pdf](http://www.kmk.org/fileadmin/Dateien/veroeffentlichungen_beschluesse/2011/2011_12_01-ErzieherInnen-QualiProfil.pdf) (last accessed on 16 September 2019).

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