



Become the best coach you can be: the role of coach training and coaching experience in workplace coaching quality and quality control

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Become the best coach you can be: the role of coach training and coaching experience in workplace coaching quality and quality control

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Abstract This paper explores whether coach training or coaching experience leads to better coaching quality and quality control. In two large studies, both coaches (N1 = 2267) and personnel managers who book coaches for their company (N2 = 754) answered questions about coaching quality and quality control. The results show that more coach training leads to not only a better self-perceived coaching quality (Study 1) but also a better other-perceived coaching-quality (Study 2); moreover, more coach training positively affects quality control. It is remarkable that coaching experience showed no significant relation regarding other-perceived coaching quality and quality control. Study 2 further revealed that references lead to more recommendations but not to a better coaching quality or quality control. Thus, coach training is an essential factor when selecting organizational coaches. Further re-

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search is needed to understand the impact of different approaches to coach trainings on coaching outcomes.

Keywords Coaching quality · Coach training · Coaching experience · Quality control · Coaching outcome

Coache so gut du kannst: Die Rolle von Coachausbildung und Coachingerfahrung bei Coachingqualität und Qualitätskontrolle

Zusammenfassung Dieser Beitrag untersucht den Zusammenhang von Coachausbildung oder Coachingerfahrung und Qualität sowie Qualitätskontrolle des Coachings. In zwei großen Studien wurden Coaches ($N_1 = 2267$) und Personalmanager, die Coaches auswählen ($N_2 = 754$), zur Qualität und Qualitätskontrolle der Coachings befragt. Die Ergebnisse zeigen eine bessere Coachingqualität und mehr Qualitätskontrolle bei länger ausgebildeten Coaches. Es ist bemerkenswert, dass mehr Coachingerfahrung nicht zu mehr von außen wahrgenommener Coachingqualität und Qualitätskontrolle führten. Des Weiteren zeigte Studie 2, dass Referenzen zwar die Weiterempfehlung positiv beeinflussen, jedoch ebenso nicht die Coachingqualität und Qualitätskontrolle vorhersagten. Daher ist eine fundierte Coachausbildung ein wichtiger Faktor bei der Auswahl von Coaches. Dennoch benötigt es zukünftige Forschung, um verschiedene Coachausbildungen zu vergleichen.

Schlüsselwörter Coachingqualität · Coachausbildung · Coachingerfahrung · Qualitätskontrolle · Coaching Outcome

1 Introduction

Coaching is an expensive personnel development format that is expected to help the client in his/her development. Moreover, it can be a highly lucrative profession, as the demand for coaching has increased over the past two decades (International Coaching Federation (ICF) 2016; Juchniewicz 2017) and fee rates are high, up to 1000 Euros per hour (Passmore et al. 2017). Yet, coaching is an unregulated profession with a wide diversity of individuals drawn to the sector (Lenoble 2013; Meindl 2016; Stephan and Gross 2013). As the profession of “coaching” is unregulated and lacks a clear definition, barriers to entry are low: Anyone can call themselves a coach and use the term ‘coaching’ to describe what their practice, however their practise may be closer to training or mentoring than to coaching (Meindl 2016). This unregulated coaching market has led to the challenge of *intangibility*, *inseparability*, and *heterogeneity*: Coaching is difficult to grasp as a service, difficult to separate from other services, and differs reflecting the coach’s individual background (Greif 2017, 2018).

Two criteria that personnel managers rely on with regard to coaching quality are coach training (how intensive was the coach training) and coaching experience (how many years has the coach worked as a coach or how many hours of coach practise have they collected) (ICF 2016). When it comes to experience, it might seem intu-

itively to credit quality to an experienced coach and his/her work. However, taking a closer look at related domains, such as psychotherapy, experience is not directly correlated with improving effectiveness and can even be less beneficial for client outcomes (Goldberg et al. 2016). The question however has not been investigated within coaching research. This article investigates whether coach training or coaching experience is more reliable when it comes to coaching quality and how this is monitored. This research further contributes to assessing coaching quality for both practice and research.

1.1 Coaching quality

Coaching quality is of importance for the clients, who rely on good coaching quality and a trustworthy coach (Alvey and Barclay 2007). Quality in terms of a service can be defined as ‘the extent to which the service delivered meets the customer’s expectations’ (Ghobadian et al. 1994, p. 49). Previous research on services has used exact measures to measure service quality (see research with the SERVQUAL measure developed by Parasuraman et al. 1988). Although coaching is a service and should therefore have quality measures (Nerdinger 2018), coaching quality is difficult to measure, as coaching involves complex interactions with many individual aspects (Greif 2018; Looss 2014). ‘Coaches themselves disagree over why they’re hired, what they do, and how to measure success’ (Coutu and Kauffman 2009, p. 26).

The quality of human resource development formats such as training are often assessed with outcome measures that involve satisfaction and well-being as well as improving the behavior or performance (Felstead et al. 2010; Passmore and Velez 2013). Similar to training, such coaching outcome measures include career or life satisfaction (Bozer and Sarros 2012; Leonard-Cross 2010; Richardson 2010), well-being (Grant et al. 2009, 2010; O’Connor and Cavanagh 2013), and situation improvements, such as goal attainment (Grant 2014; Grant et al. 2010; Ianiro et al. 2013; O’Connor and Cavanagh 2013), self-awareness (Bozer and Sarros 2012; Grant 2014; Leonard-Cross 2010), and job performance (Bowles et al. 2007; Bozer and Sarros 2012; Bright and Crockett 2012). However, these “diversified outcomes addressed in coaching make coaching objectives inherently incomparable as an outcome measure” (Grover and Furnham 2016, p. 5). One of these outcome measures stands out, as it is highly correlated with perceived quality: Satisfaction has been found to be a more affective measure for product quality (Bitner and Hubbert 1994; Churchill and Surprenant 1982; Ghobadian et al. 1994; Olsen 2002). Thus, one way to assess coaching quality may be by measuring coaching satisfaction.

1.2 Coaching quality control

When it comes to coaching quality, it is important to measure and therefore control for good coaching quality. Quality control is the process of assessing the intended standard of the service (Cambridge University Press 2020).

Self-reflection One way to control for good coaching quality is via self-reflective practice—by the coach reflecting on the coaching process through supervision, or

by coach and client evaluating the coaching process. Self-reflection can help to gain insights and identify improvement (Grant et al. 2002; Gray 2004). This self-reflective practice is best with an external partner, as this allows for exploring alternative interpretations and perspectives (Dunning et al. 2004).

Supervision One form of self-reflective practice using an external partner is supervision. Supervision can help develop fresh insights through an exploratory process (Passmore and McGoldrick 2009). Supervision is now widely accepted as “a fundamental aspect of continuing personal and professional development for coaches” (p. 381), in which the coach can explore and better understand the coach-client system with the help of a supervisor (Hawkins 2010). In group supervision, new perspectives may be acquired through the supervisor’s questions and the groups’ input (Kotte 2018). Thus, coaching supervision is a relevant instrument for coaches to use in order to enhance the quality of their coaching (Bluckert 2004; Hawkins 2010; Kotte 2017, 2018; Valentino et al. 2016).

Evaluation Nevertheless, coaching quality control should not only rely on the coach’s self-assessment with regard to self-reflection and supervision (Greif 2018). It may be argued that coaching as an expensive service should be evaluated just like any other premium services (Nerdinger 2018). Evaluation in this context means to collect relevant and judgmental information on personal development activity (Goldstein and Ford 2002). Coaching evaluation can further help to provide the clients’ experience, input from the clients’ work environment, as well as by measures of the coaching impact on a broader business or team performance through meta-data (Passmore and Velez 2013). However, coaching initiatives are hardly evaluated (Bolch 2001; Hay Group 2002; McDermott et al. 2007).

To summarize, coaching quality can be ensured via self-reflection, supervision, and evaluation. Yet, it is unclear whether such quality control processes are more commonly used by more highly trained or more experienced coaches.

1.3 The present research on coaching quality: coach training versus coaching experience

By being aware of quality measures and especially on how to control for them, a higher coaching quality can be reached (Greif 2018). One way of learning to ensure quality is through an *in-depth education* (Thorndike 1912)—in other words, an in-depth *coach training*. Coach training can help to promote self-reflection as a means of personal development (Möller and Drexler 2011; Stiftung Warentest 2013). Moreover, this increase in *self-reflection* is an expected outcome of the coach training process. It can be further enhanced through supervision or exercises with feedback and evaluation (Rauen 2017), which may serve as a mechanism for the adjustment and development of a new self-identity (Moore and Koning 2015). Thus, a coach training programme should include opportunities to develop self-awareness, receive feedback, and engage in supervision (Klenner and Bischofberger 2014). In coach training, the participants should also spend time in tutor observed practice, on

which such feedback and reflective practice is based (e.g., Braumandl and Dirscherl¹ 2005). Thus, a coach training programme may help coaches to learn not only certain coaching skills and diverse approaches but also self-reflection competencies (Men-nicken 2011; Preston and Hammond 2003; Lippmann 2016; Rauen 2017; Moore and Koning 2015). These competencies might, in turn, have a mediating role in making sense of one's identity, since they offer a balance between acting and thinking. Elements of the coach training that permit individuals to relate to themselves directly or indirectly relating to others might also contribute to this process of identity work (Moore and Koning 2015). In addition, people with coach training feel more self-regulated than people with no coach training (Schiemann et al. 2018).

Besides coach training, coaching experience, being the number of years a person has worked as a coach, or coaching hours, is often used for assessing coaching quality (ICF 2016). Some have argued (McCleary 2006) that experience is more important to coaching quality than coach training. However, experience alone cannot help with one's blind spots and individual bias filtered of one's own experience leads to distortions (Frey 1986, 2006); in other words, the coach may adopt specific rationales to explain their behavior due to social, economic, organizational, or political influences (Louis and Fatien Diochon 2018). External feedback, used in coach training, allows for such blind spots to be exposed and explored (Frey 1986; Luft and Ingham 1955).

Consequently, we propose that coach training plays a central role in coaching quality. In other words, an evidence-based coach training, with observed practice, supervision and self-reflection is needed to enhance quality and supports the development of a professional identity (Cavanagh 2013; Grant and Cavanagh 2004; Kampa-Kokesch and Anderson 2001; Moore and Koning 2015). More concisely, we had the following two hypotheses:

Hypothesis 1 (H1) More coach training (but not more coaching experience) leads to higher coaching quality.

Hypothesis 2 (H2) More coach training (but not more coaching experience) leads to better controlling for this quality (self-reflection, supervision, evaluation).

To test our assumption, we conducted two studies, asking 2267 coaches (Study 1; self-assessment) and 754 personnel managers engaged in coach commissioning (Study 2; other-assessment) about the coaches' coach training, coaching experience, coaching quality, and quality control. The two studies were conducted to provide alternative perspectives with data from both the customer and the service-provider. These two studies were conducted separately: Coaches reported on quality control measures regarding self-reflection, supervision, and own evaluation techniques. Personnel managers (commissioners of coaching) gave insight into how coaches are selected, evaluated, and recommended.

¹ Braumandl, I., & Dirscherl, B. (2005). *Coach training concept for career coaching*. Unpublished coach training documents.

2 Study 1

In Study 1, we asked *coaches* about their coaching quality and quality control. We hypothesized that the more coach training (but not coaching experience), the higher the coaches would rate their own coaching quality (H1) and the more often the coaches will use quality control measures (self-reflection, supervision, self-evaluation) (H2).

2.1 Method

Participants In Study 1, we looked at an international sample of 2267 coaches from more than 40 European countries². This sample consisted of 1441 female (64%) and 819 male (36%) coaches (seven missing), who were principally between 30 and 64 years old (53 coaches were 18–29 years old; 1080 coaches were in the 30–49-year-old age bracket; 1016 coaches were aged 50–64; while only 107 coaches were over 65). Further information on the coaches' backgrounds can be found in the reports by Passmore et al. (2017, 2018).

Procedure The survey was developed through international collaboration, involving 50 research groups, each from a different country. The questionnaire was translated into 35 languages using a team in each country, consisting of two expert coaches, a parallel translation was used, and the final translation agreed. In the questionnaire, the coaches were asked about their age, former experience and education.³

Measures Besides questions about demographic data, the coaches were also asked about their coach training, coaching experience, and details about their coaching practice, including their fee rates for individual and organizational coaching (per hour), how they rated themselves compared to colleagues and the extent they used supervision, self-reflection, and forms of personal development. Most of these measures were ordinal scaled, as was expected coaches had difficulty in estimating the exact amount of hours in coach training, coaching experience, and self-reflective practice; thus, we wanted to provide categories that they can help them estimate their amount. A table with means, standard deviations, and correlations for the dependent variables can be found in Appendix B.

Coach training: The coaches were asked about their coach training with the question “*What is your highest coaching qualification*” with answers on an ordinal scale ranging from 1 to 10, where 1 was “less than 2h of training”, 2 was “2–6h of training”, 3 was “7–16h of training”, learned 4 was “17–49h of training”, 5 was “50–99h of training”, 6 was “100–199h of training”, 7 was “200–400h of training”, 8 was “400 or more hours of training”, 9 was “under-graduate coaching

² From 2267 coaches, we excluded 685 participants, who did either not describe themselves as coaches, reported doing 0% coaching, or were not working as business or life coaches (e.g., driving instructors, who saw themselves as driving coaches).

³ For clarity, we will only explain the measures used for this study. An overview of all measures and the statistics can be found in the report by Passmore et al. (2018).

degree (3 years full-time)", and 10 was "post-graduate coaching degree (1-year full time/2 years part-time)".

Coaching experience: The coaches were asked about their years of experience with the question "*How many years have you practiced as a coach*" with answers on an ordinal scale ranging from 1 to 7, where 1 was "less than 12 months", 2 was "1–3 years", 3 was "4–7 years", 4 was "8–12 years", 5 was "13–15 years", 6 was "16–20 years", and 7 was "more than 20 years".

Coaching quality: The coaches were asked to rate their coaching quality with the following question "*How would you rate the quality of your coaching when compared with other coaches*" on a Likert scale ranging from 1 (low) to 10 (best).

Coaching quality control: Regarding *self-reflection*, the coaches were asked "*How much time do you spend per week on reflective practice?*" with answers on an ordinal scale ranging from 1 (<60 min.), 2 (60–90 min.), 3 (90–120 min.), 4 (120–240 min.) to 5 (>240 min.). Regarding *supervision*, the coaches were asked "*How often do you receive formal coaching supervision?*" with answers on an ordinal scale was also ordinal and ranged from 1 (I do not receive supervision), 2 (1 h of supervision for more than 100h of coaching with clients), 3 (for every 51–100h), 4 (for every 26–50h) to 5 (1 h of supervision for every 25 h or less of coaching with clients). Regarding *self-evaluation*, the coaches were asked "*How do you evaluate the impact of your coaching?*" with answers on an ordinal scale, ranging from 0 (no self-evaluation), 1 (self-evaluation at times), 2 (self-evaluation after every coaching process) to 3 (after every session).

Statistics IBM SPSS Statistics 24.0 (IBM Corporations 2016) was used for the computations described in the results section. For our two hypotheses, we conducted a multiple linear regression with 95% bias-corrected confidence interval and 1000 bootstrap with both coach training and coaching experience as the two predictors. As the ordinal regressions showed similar results, we decided to report the normal regression.

2.2 Results

H1: Coach training leads to better coaching quality As expected, the more trained and the more experienced coaches were, the higher they rated their coaching quality, $R^2=0.24$, $F(2,2217)=342.37$, $p<0.001$ (see Table 1). However, also coaching experience positively affected the belief to be better in coaching quality.

H2: Coach training leads to more coaching quality control Regarding *self-reflection*, coach training but not coaching experience positively predicted self-reflection, $R^2=0.04$, $F(2,2239)=50.32$, $p<0.001$. Regarding *supervision*, the more coach training they had but not the more experienced the coaches were, the more the coaches used supervision, $R^2=0.01$, $F(2,2225)=11.91$, $p<0.001$. These results support the hypothesis that coach training leads to more coaching quality control. Regarding *evaluation*, however, coach training did not relate to evaluation, but coaching experience had a negative effect on evaluation, $R^2=0.00$, $F(2,2165)=2.38$, $p=0.093$. The findings on quality control are displayed in Table 1.

Table 1 The influence of coach training and coaching experience on the dependent variables

	Coach training				Coaching experience			
	St. β	<i>p</i>	SE	95% CI	St. β	<i>p</i>	SE	95% CI
<i>Perceived own coaching quality</i>	<i>0.16***</i>	<0.001	0.02	[0.11; 0.17]	<i>0.40***</i>	<0.001	0.02	[0.34; 0.41]
<i>Quality measures</i>								
Self-reflection	<i>0.21***</i>	<0.001	0.01	[0.16; 0.26]	0.00	0.999	0.01	[-0.04; 0.04]
Supervision	<i>0.09***</i>	<0.001	0.02	[0.05; 0.14]	0.02	0.322	0.02	[-0.02; 0.07]
Evaluation	0.03	0.164	0.01	[-0.01; 0.08]	-0.05*	0.038	0.01	[-0.09; 0.00]

Significant predictions, as well as significant differences between the coefficients (computed from the CI), are marked in italic

st. β standardized beta, SE standard error, CI (*z-values*) Confidence interval with z-standardized values of all variables (for comparing the standardized coefficient of coach training with the one of coaching experience)

*** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$

2.3 Discussion

In line with our two hypotheses, the better trained the coaches were, the higher the coaches perceived their coaching quality and the more they practiced self-reflection using supervision and self-reflective methods. Although more experienced coaches also perceive themselves as better in their coaching quality, more experienced coaches do not reflect more on their process—indeed, they evaluate less. This result could mean that more experienced coaches perceive themselves as very high-quality coaches but may not be aware of their actual coaching quality due to a lack of quality control: People without this awareness hold an inherent self-belief in the quality of their work (Kruger and Dunning 1999). As these findings rely on the coaches' self-perception, we wanted to investigate the clients' perspective through a second study.

3 Study 2

In the second study, we asked *personnel managers* on their recruited coaches' coaching quality and their quality control in terms of coaching evaluation. We hypothesized that the higher the level of coach training (but not coaching experience), the higher the others perceived coaches' coaching quality (H1) and the higher the level of coaching evaluation (H2).

3.1 Method

Participants In cooperation with the business network platform XING Coaches + Trainer, we asked 754 personnel managers (commissioners of coaching) from the three German-speaking countries about their experiences with coaching. The 489

Table 2 The influence of coach training, coaching experience, and references on the dependent variables

	Coach training				Coaching experience				References			
	St.β	p	SE	95% CI	St.β	p	SE	95% CI	St.β	p	SE	95% CI
Recommendation	<i>0.11*</i>	0.018	0.06	<i>[0.01; 0.19]</i>	0.02	0.662	0.07	<i>[-0.07; 0.11]</i>	<i>0.14**</i>	0.002	0.15	<i>[0.06; 0.26]</i>
Coaching quality	<i>0.14**</i>	0.001	0.05	<i>[0.06; 0.22]</i>	0.01	0.791	0.07	<i>[-0.08; 0.10]</i>	0.06	0.186	0.14	<i>[-0.04; 0.17]</i>
Coaching evaluation	<i>0.09*</i>	0.032	0.03	<i>[0.01; 0.13]</i>	<i>0.18***</i>	<0.001	0.04	<i>[0.09; 0.26]</i>	<i>0.12*</i>	0.005	0.09	<i>[0.07; 0.42]</i>

Significant predictions, as well as significant differences between the coefficients (computed from the CI), are marked in italic. CI z-scored references significantly differ from CI z-scored coaching experience
 St.β standardized beta, SE standard error, CI (z-values) Confidence interval with z-standardized values of all variables (for comparing the standardized coefficient of coach training with the one of coaching experience)
 *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$

female and 265 male participants were aged between 21 to 81 years old ($M=42.08$, $SD=11.10$) and worked in 23 different business sectors, primarily in industry and engineering (15%), consumer goods and commerce (9%), and staffing services (8%) (see Appendix A). Their company sizes varied between “less than 10 employees” (2%) to “over 5000 employees” (17%) (see Appendix A). Regarding the present use of coaching, only 504 personnel managers stated that their company offers coaching, with five of them saying that they book zero coaches per year, meaning that whilst they offer to coach the offer is not used in their company. The remaining 499 participants (321 female, 178 male) were between 21 to 81 years old ($M=42.70$, $SD=11.08$).

Procedure The participants were contacted via XING Coaches+Trainer with a link for an online survey. The online survey started by seeking the personnel managers’ informed consent and questions concerning their business demographics before proceeding to questions on the topic of coaching.

Measures Participants were asked about their coach selection with regard to coach training and coaching experience, their coaches’ coaching quality, and their coaching evaluation.⁴ Similar to Study 1, most of these measures were ordinal scaled to provide orientation for the personnel managers for estimating coach training, coaching experience, and coaching evaluation. Again, a table with means, standard deviations, and correlations for the dependent variables can be found in Appendix B.

Coach training and coaching experience: The personnel managers were asked about the criteria that a coach needs to fulfill in order to be selected (multiple answers possible). With regard to *coach training*, we looked at whether coaches were selected due to the quality of coach training (0 = not required, 1 = important but not how many years, 2 = at least 150h, 3 = recognized coach training of at least 150h). With regard to *coaching experience*, we looked at and the amount of experience (0 = not required, 1 = at least 1 year of either coaching or field experience, 2 = solid experience in field or coaching—or at least 1 year of experience in both areas, 3 = solid experience in one area and at least 1 year of experience in the other area, 4 = solid experience in both areas). As personal references were named as the most essential factor, we added references as a covariate to coach training and coaching experience for predicting coaching quality.

Coaching quality: Coaching quality was measured via coaching satisfaction. For this, we asked the personnel managers on an 11-point Likert scale on how satisfied the clients were with the coaching in their opinion (0 = not at all; 10 = fully). We further asked on coach recommendation, as recommendation is not measuring coaching quality but is sometimes perceived as a coaching quality statement; however coaching quality and recommendation can differ (e.g., even if the coaching was of poor quality, the coachee may still recommend the coach as the coach had been recommended to them). A correlation analysis showed that they were positively linked but this linkage left sufficient variance to suggest that this is not the same

⁴ We also asked questions on other coaching topics, like the perceived relevance of coaching, the benefits of having external vs. internal coaches, or the most common coaching clients.

($r=0.72$, $p<0.001$) (see Appendix B). Recommendation was also measured on an 11-point Likert scale (0%= not at all; 100%= fully).

Coaching quality control: After the coach selection questions, we asked about what measures were used to evaluate the coaching intervention (multiple answers possible; options include: a self-created satisfaction questionnaire, an objective with a reliable and valid means of measurement, objective goal attainment measure for the coachee, return-on-investment (ROI) measure for the coach's performance, return-on-investment (ROI) measure in terms of a 360° feedback, and/or return-on-investment (ROI) cost-benefit analysis). For the regression, we counted the numbers of different measures used. 26% of the personnel managers indicated they did not evaluate the coaching interventions at all.

Statistics IBM SPSS Statistics 24.0 (IBM Corporations 2016) was used for computations. For our hypothesis, we conducted a multiple linear regression with 95% bias-corrected confidence interval and 1000 bootstrap with coach training and coaching experience as the two predictors. As the ordinal regressions showed similar results, we decided to report the normal regression.

3.2 Results

H1: Coach training leads to better coaching quality The two average means suggest that coaches are usually perceived as recommendable ($M=8.77$, $SD=1.52$) and coaching is usually perceived as qualitatively high ($M=8.06$, $SD=1.35$). As stated in the method section, coaching quality differs from coach recommendation. Regarding *recommendation*, we found that both coach references and coach training predicted the likelihood of coach recommendation, whereas coaching experience showed no influence, $R^2=0.03$, $F(3,500)=5.09$, $p=0.002$. However, when it came to *coaching quality*, the higher the level of coaches training, the more they were perceived as successful, whilst references and experience did not matter, $R^2=0.02$, $F(3,500)=4.13$, $p=0.007$ (see Table 2).

H2: Coach training leads to more quality control By conducting the multiple linear regression, we found that coach training ($\beta=0.09$, $p=0.032$), as well as the experience of the coaches ($\beta=0.18$, $p<0.001$) and the amount of the coaches' references ($\beta=0.12$, $p=0.005$) explain a significant amount of the variance in coaching quality control in terms of coaching evaluation ($F(1, 497)=33.50$, $R^2=0.06$).

3.3 Discussion

For personnel managers coaching experience and coach training were important factors in coach selection, alongside references. The results, however, showed that only coach training positively affected coaching quality. Although coaches with good references may have been recommended more often, that did not translate to increased coaching quality: Only a higher level of coach training was linked to better coaching quality. This false hope of recommendation by peers can also be observed in other purchase areas, such as advertising products, and the value placed on word of

mouth recommendation, where the recommendation does not represent the quality of the product (Ye et al. 2012). With regard to quality control, higher selection criteria led to more coaching evaluation, independently of how coaches were selected. In other words, personnel managers who are more carefully in selecting coaches were also be more careful when evaluating them.

4 General discussion

The aim of this research was to find out whether coach training or coaching experience is more reliable as a predictor of coaching quality and quality control. For this, we conducted two studies to investigate this research question from both the coaches' (Study 1) and the personnel managers' (Study 2) point of view. Study 1 showed that coaches with a higher level of coach training perceive their coaching quality to be higher than others and acted to control coaching quality more. Although coaches with more coaching experience perceived their coaching quality to be higher than others, they display less coaching quality control. In other words, experienced coaches rated their coaching as qualitatively high, although there was less action to manage or control the quality of their service. On the one hand, this result could mean that experience without training can lead to blind spots (Frey 1986, 2006). On the other hand, the results could mean that coaches, similar to psychotherapists (Macdonald and Mellor 2015), do not become aware of a blind spot in their work but overestimate themselves in general (for a review see Dunning et al. 2004). This leads to the assumption that a self-serving bias, i.e. the bias to perceive own abilities and success in a self-favoring manner (Heider 1958), might play a role without quality control. To have a more reliable measure on coaching quality, we asked the customers about their coaches' coaching quality and quality control (Study 2). The results showed that personnel developers with higher selection criteria (training, experience, references) also had higher evaluation standards. However, while coach training was positively related to coaching quality, coaching experience as well as references did not predict a better coaching quality. In sum, the findings of both studies underline our assumption that a higher level of coach training can predict the coaching quality and quality control as measured by engagement in self-reflection, supervision, and evaluation.

4.1 Practical implications for personnel managers

The findings show the importance selecting coaches based on their coach training. Coach training is an important factor and commonly applied surrogate of quality assessment of intangible services (Meffert and Bruhn 2012). Furthermore, coach training is expected not only to help the coach in terms of self-development (Preston and Hammond 2003) and credibility (ICF 2016) but also in creating a mindset which encourages the coach to regularly consider their own performance and how they can continue to improve it, thus leading to better coaching quality. The results further depict that neither coaching experience nor good coach references are related to the personnel managers' perceived coaching quality: While references

were linked to recommendations, they were not linked to coaching quality in our research. Nevertheless, references are still used as the most prominent coaching selection measure (our study; Stephan and Gross 2013). To avoid the vicious circle of repeatedly recommending coaches with low quality, we would advise personnel departments to rely less on references and more on the level and hours of high-quality coach training.

Although a good selection of coaches is essential, the coaching quality should still be controlled for by offering services of self-reflection (further coach training, supervision, self-reflection tools) and evaluating the coaching. As noted previously, coaching evaluation is complex (Nerdinger 2018). This explains our findings that nearly 25% of the companies do not evaluate at all and that most of them use self-made questionnaires. However, a failure to adequately evaluating coaching increases the risk of paying for poor quality service (Nerdinger 2018). Similarly, self-made questionnaires do not match quality criteria like objectivity, reliability, or validity (Huizinga and Elliot 1986). Thus, Greif (2018) and Passmore and Velez (2012) developed a coaching evaluation framework with a multi-lens perspective by gathering data over time to track the added value of the intervention. For instance, Greif (2018) proposes that evaluation should (1) take place before, during, and after the coaching, (2) extend beyond the use of self-report measures, and (3) include antecedents, process factors, proximal outcomes, and distal outcomes.

4.2 Practical implications for coaches

Our research further highlights the importance of coach training for coaches in terms of engaging in self-reflection, supervision, and evaluation. This is echoed by professional coaching bodies, for example the ICF (2019), who note, a ‘continued personal, professional and ethical development’ is part of good coaching practice. As experience does not shield the coach from their blind spots, we suggest further coaching training, self-reflection training, supervision, and learning evaluation techniques. Quality control is crucial for assuring quality in coaching, as subjective perception is replaced by more valid forms of quality control (for an overview of evaluation methods in coaching see Schreyögg 2011).

4.3 Theoretical implications

Although coach training matters, it is unclear whether coach trainings differ with regard to coaching quality and quality control. Coach training can vary widely: Rauen (2017) found that there are over 300,000 different coach training formats that are offered from various providers and with different amounts of coach training hours. A comparison of coach training programs (popular top 50 on the internet of U.S., UK, and Germany) shows significant differences in the preferred training approaches between the countries and a wide variety of approaches within these countries (Greif 2014). Thus, further research is needed to better understand the impact of different coach training formats. In other words, a professionalization and evaluation of coach training formats are needed to ensure the quality of coach training itself (Bluckert 2004). To evaluate the quality of coaching training, Rauen (2017)

created a construct-validated questionnaire instrument measuring quality criteria of coach training.

Additionally, the R^2 of the regression model were pretty low. Although even a small amount of variance is important (Grace-Martin 2008), more variance needs to be explained, meaning that other factors besides coach training still have to be found. Thus, further research on other factors besides coach training is needed. Drawing parallels from other professional social interactions like psychotherapy, contextual variables as goal consensus, or empathy (Wampold and Imel 2015), might have an important effect on coaching quality. Further research is needed to explore the impact of diverse variables like specific coaching skills and theoretical backgrounds, the use of certain methods or exercises, but also the impact of coach variables like personality factors, social competencies, or motivational states. Gaining a more valid understanding of coaching quality, can also provide valuable implications on what makes coaching work and how clients can profit from it.

4.4 Limitations

There are some limitations for our research. As addressed before, we used ordinal scaling for some variables. Although ordinal linear regressions showed the same results, it has to be acknowledged that using ordinal scaling can distort the results. A second limitation is an assessment with retrospective, self-rated questionnaires at only one time point. Further research could use more time-points and objective measures including video-ratings to validate our findings. Additionally, not only personnel managers but also clients themselves should be asked about perceived coaching quality and in how far they contribute to quality control, for example through answering feedback questionnaires. This could shed light on what constitutes a beneficial coach-client interaction.

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Appendix

Appendix A

Table A.1 Personnel managers' industrial sectors (Study 2)

	Frequency	Percentage (in %)
Architecture & Construction	15	2
Auto Industry	39	5
Banking & Financial Services	27	4
Consulting Services	55	7
Energy, Water and Environment	23	3
Education	22	3
Health & Social Services	46	6
Property	7	1
Industrial Engineering	109	15
Internet & Information technology	54	7
Retail	67	9
Art, Culture & Sport	4	1
Marketing, PR & Design	9	1
Media & Publishing	6	1
Personnel Services	63	8
Pharmaceuticals	33	4
Telecommunication	4	1
Tourism & Gastronomy	13	2
Transport & Logistics	19	3
Insurance	13	2
Auditing, Tax and Law	4	3
Public Service Associations and Institutions	59	8
Other	63	8

Table A.2 Personnel managers' company sizes (Study 2)

	Frequency	Percentage (in %)
Less than 10 employees	18	2
10–100 employees	183	24
100–1000 employees	285	38
1000–5000 employees	138	18
More than 5000 employees	130	17

Appendix B

Table B.1 Dependent variables of Study 1

	<i>M</i>	<i>SD</i>	Correlations			
			Self-reflection	Supervision	Evaluation	Perceived own coaching quality
Self-reflection	2.22	1.04	1	<i>0.11***</i>	<i>0.07**</i>	<i>0.18***</i>
Supervision	2.08	1.69	<i>0.11***</i>	1	<i>0.05*</i>	<i>0.06**</i>
Evaluation	2.30	0.67	<i>0.07**</i>	<i>0.05*</i>	1	0.02
Perceived own coaching quality	7.34	1.49	<i>0.18***</i>	<i>0.06**</i>	0.02	1

Significant correlations between variables are marked in italic

*** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$

Table B.2 Dependent variables of Study 2

	<i>M</i>	<i>SD</i>	Correlations		
			Coaching quality	Recommendation	Coaching evaluation
Coaching quality	8.05	1.38	1	<i>0.72***</i>	<i>0.15**</i>
Recommendation	8.77	1.52	<i>0.72***</i>	1	<i>0.15**</i>
Coaching evaluation	0.81	0.94	<i>0.15**</i>	<i>0.15**</i>	1

Significant correlations between variables are marked in italic

*** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$

References

- Alvey, S., & Barclay, K. (2007). The characteristics in dyadic trust in executive coaching. *Journal of Leadership Studies*, 1(1), 18–27.
- Bitner, M. J., & Hubbert, A. R. (1994). Encounter satisfaction versus overall satisfaction versus quality: the customer's voice. In R. T. Rust & R. L. Oliver (Eds.), *Service quality: new directions in theory and practice* (pp. 72–94). Thousand Oaks, CA: SAGE.
- Bluckert, P. (2004). The state of play in corporate coaching: current and future trends. *Industrial and Commercial Training*, 36(2), 53–56.
- Bolch, M. (2001). Proactive coaching despite costs of thousands of dollars a day, executive coaching has emerged as one of the hottest trends in the business world. *Training-New York Then Minneapolis*, 38(5), 58–66.
- Bowles, S., Cunningham, C. J., De La Rosa, G. M., & Picano, J. (2007). Coaching leaders in middle and executive management: Goals, performance, buy-in. *Leadership & Organization Development Journal*, 28(5), 388–408.
- Bozer, G., & Sarros, J. C. (2012). Examining the effectiveness of executive coaching on coachees' performance in the Israeli context. *International Journal of Evidence Based Coaching & Mentoring*, 10(1), 881–897.
- Bright, D., & Crockett, A. (2012). Training combined with coaching can make a significant difference in job performance and satisfaction. *Coaching: An International Journal of Theory, Research and Practice*, 5(1), 4–21.
- Cambridge University Press (2020). Quality control. <https://dictionary.cambridge.org/dictionary/english/quality-control>. Accessed 11 July 2020.
- Cavanagh, M. (2013). The coaching engagement in the twenty-first century: new paradigms for complex times. In D. S. Clutterbuck & D. Megginson (Eds.), *Beyond goals: effective strategies for coaching and mentoring* (pp. 43–46). Farnham, UK: Gower.
- Churchill Jr., G. A., & Surprenant, C. (1982). An investigation into the determinants of customer satisfaction. *Journal of Marketing Research*, 19(4), 491–504.
- Coutu, D., & Kauffman, C. (2009). What can coaches do for you. *Harvard Business Review*, 87(1), 91–97.
- Dunning, D., Heath, C., & Suls, J. M. (2004). Flawed self-assessment. *Psychological Science in the Public Interest*, 5(3), 69–106.
- Felstead, A., Gallie, D., Green, F., & Zhou, Y. (2010). Employee involvement, the quality of training and the learning environment: an individual level analysis. *The International Journal of Human Resource Management*, 21(10), 1667–1688.
- Frey, D. (1986). Recent research on selective exposure to information. *Advances in Experimental Social Psychology*, 4, 41–80.
- Frey, D. (2006). Leadership principles and people management in a changing world. http://www.enterprise-for-health.org/fileadmin/texte/Topic_FutureChallenges/Prof_Frey_Presentation_Guetersloh_2006.pdf. Accessed 10 Apr 2019.
- Ghobadian, A., Speller, S., & Jones, M. (1994). Service quality concepts and models. *International Journal of Quality & Reliability Management*, 11(9), 43–66.
- Goldberg, S. B., Rousmaniere, T., Miller, S. D., Whipple, J., Nielsen, S. L., Hoyt, W. T., & Wampold, B. E. (2016). Do psychotherapists improve with time and experience? A longitudinal analysis of outcomes in a clinical setting. *Journal of Counseling Psychology*, 63(1), 1–11.
- Goldstein, I. L., & Ford, J. K. (2002). *Training in organizations: Needs assessment, development, and evaluation*. Wadsworth: Belmont.
- Grace-Martin, K. (2008). Can a Regression Model with a Small R-squared Be Useful? <https://www.theanalysisfactor.com/small-r-squared/>. Accessed 11 July 2020.
- Grant, A. M. (2014). The efficacy of executive coaching in times of organizational change. *Journal of Change Management*, 14(2), 258–280.
- Grant, A. M., & Cavanagh, M. J. (2004). Toward a profession of coaching: Sixty-five years of progress and challenges for the future. *International Journal of Evidence Based Coaching and Mentoring*, 2(1), 1–16.
- Grant, A. M., Curtayne, L., & Burton, G. (2009). Executive coaching enhances goal attainment, resilience and workplace well-being: a randomized controlled study. *The Journal of Positive Psychology*, 4(5), 396–407.

- Grant, A.M., Franklin, J., & Langford, P. (2002). The self-reflection and insight scale: a new measure of private self-consciousness. *Social Behavior and Personality: An International Journal*, 30(8), 821–835.
- Grant, A.M., Green, L.S., & Rynsaardt, J. (2010). Developmental coaching for high school teachers: executive coaching goes to school. *Consulting Psychology Journal: Practice and Research*, 62(3), 151.
- Gray, D.E. (2004). Principles and processes in coaching evaluation. *International Journal of Mentoring and Coaching*, 2(2), 4–14.
- Greif, S. (2014). Coaching und Wissenschaft – Geschichte einer schwierigen Beziehung. *Organisationsberatung, Supervision, Coaching*, 21(3), 295–311.
- Greif, S. (2017). Hard to evaluate: coaching services. In A. Schreyögg & C. Schmidt-Lellek (Eds.), *The professionalization of coaching—a reader for the coach* (pp. 47–68). Wiesbaden: Springer.
- Greif, S. (2018). Researching outcomes of coaching. In T. Bachkirova, G. Spence & D. Drake (Eds.), *The SAGE handbook of coaching* (pp. 571–590). London: SAGE.
- Grover, S., & Furnham, A. (2016). Coaching as a developmental intervention in organizations: a systematic review of its effectiveness and the mechanisms underlying it. *PLOS ONE*, 11(7), 1–41.
- Hawkins, P. (2010). Coaching supervision. In E. Cox, T. Bachkirova & D. Clutterbuck (Eds.), *The complete handbook of coaching* (pp. 381–393). London: SAGE.
- Hay Group (2002). *The future of executive coaching*. London: Hay Group.
- Heider, F. (1958). *The psychology of interpersonal relations*. New York: Wiley.
- Huizinga, D., & Elliott, D.S. (1986). Reassessing the reliability and validity of self-report delinquency measures. *Journal of Quantitative Criminology*, 2(4), 293–327.
- Ianiro, P.M., Schermuly, C. C., & Kauffeld, S. (2013). Why interpersonal dominance and affiliation matter: an interaction analysis of the coach-client relationship. *Coaching: An International Journal of Theory, Research and Practice*, 6(1), 25–46.
- IBM Corporations (2016). *IBM SPSS statistics for windows. Version 24.0*. Armonk, NY: IBM.
- International Coaching Federation (2016). International Coaching Federation global coaching study. <https://coachfederation.org/research/global-coaching-study>. Accessed 11 July 2020.
- International Coaching Federation (2019). Code of ethics. <https://coachfederation.org/code-of-ethics>. Accessed 24 May 2020.
- Juchniewicz, B. (2017). Marburger coaching study (4th Ed.). https://www.uni-marburg.de/de/fb02/professuren/bwl/bwl01/forschung/2018-01_coaching_onlineversion.pdf. Accessed 11 July 2020.
- Kampa-Kokesch, S., & Anderson, M.Z. (2001). Executive coaching: a comprehensive review of the literature. *Consulting Psychology Journal: Practice and Research*, 53(4), 205.
- Klenner, D., & Bischofberger, B. (2014). Übungsformen in Coaching-Weiterbildungen – Ergebnisse einer Online-Befragung. *Organisationsberatung, Supervision, Coaching*, 21, 21–37.
- Kotte, S. (2017). Supervision von Coaching. *Organisationsberatung, Supervision, Coaching*, 24(3), 333–346.
- Kotte, S. (2018). Supervision von Coaching. In S. Greif, H. Möller & W. Scholl (Eds.), *Handbuch Schlüsselkonzepte im Coaching* (pp. 573–581). Heidelberg: Springer.
- Kruger, J., & Dunning, D. (1999). Unskilled and unaware of it: how difficulties in recognizing one's own incompetence lead to inflated self-assessments. *Journal of Personality and Social Psychology*, 77(6), 1121–1134.
- Lenoble, C. (2013). Alles Coach oder was? <http://diepresse.com/home/bildung/weiterbildung/1418941/Alles-Coach-oder-was>. Accessed 23 Nov 2018.
- Leonard-Cross, E. (2010). Developmental coaching: Business benefit—fact or fad? An evaluative study to explore the impact of coaching in the workplace. *International Coaching Psychology Review*, 5(1), 36–47.
- Lippmann, E. (2016). Was macht einen Coach zum Coach? Weiterbildung und Qualifizierung. In C. Triebel, Heller J., B. Hauser & A. Koch (Eds.), *Qualität im Coaching. Denkanstöße und neue Ansätze: Wie Coaching mehr Wirkung und Klientenzufriedenheit bringt* (pp. 11–19). Berlin/Heidelberg: Springer.
- Looss, W. (2014). Coaching als „Dienstleistung“ und die semantischen Stolpersteine in ungewohnten Subkulturen. *Positionen. Beiträge zur Beratung in der Arbeitswelt*, 2(14), 1–8.
- Louis, D., & Fatien Diochon, P. (2018). The coaching space: A production of power relationships in organizational settings. *Organization*, 25(6), 710–731.
- Luft, J., & Ingham, H. (1955). *The Johari window, a graphic model of interpersonal awareness. Proceedings of the western training laboratory in group development*. Los Angeles: University Press.

- Macdonald, J., & Mellor, C.J. (2015). Correcting psychotherapists' blindsidedness: formal feedback as a means of overcoming the natural limitations of therapists. *Clinical Psychology & Psychotherapy*, 22(3), 249–257.
- McCleary, D. (2006). Executive coach certification and selection: a contrarian's viewpoint. *Development and Learning in Organizations: An International Journal*, 20(4), 10–11.
- McDermott, M., Levenson, A., & Newton, S. (2007). What coaching can and cannot do for your organization. *Human Resource Planning*, 30, 30–37.
- Meffert, H., & Bruhn, M. (2012). *Dienstleistungsmarketing: Grundlagen – Konzepte – Methoden* (7th edn.). Stuttgart: Gabler.
- Meindl, R. (2016). Coaching in Unternehmen. In D. Spath & E. Westkämper (Eds.), *Handbuch Unternehmensorganisation* (pp. 1–12). Berlin: Springer.
- Mennicken, D. (2011). Warum macht jemand heute eine Coaching-Ausbildung? <http://www.coaching-magazin.de/beruf-coach/coaching-ausbildung>. Accessed 23 Nov 2018.
- Möller H., & Drexler A. (2011). Bildungscontrolling in der Coachinausbildung. In M. Stephan & P. P. Gross (Eds.), *Organisation und Marketing von Coaching* (pp. 114–136). Wiesbaden: VS Verlag für Sozialwissenschaften.
- Moore, L., & Koning, J. (2015). Intersubjective identity work and sensemaking of adult learners on a post-graduate coaching course: finding the balance in a world of dynamic complexity. *Management Learning*, 27(1), 28–44.
- Nerdinger, F. W. (2018). Qualität der Dienstleistung ‚Coaching‘. In S. Greif, H. Möller & W. Scholl (Eds.), *Handbuch Schlüsselkonzepte im Coaching* (pp. 475–483). Heidelberg: Springer.
- Olsen, S. O. (2002). Comparative evaluation and the relationship between quality, satisfaction, and repurchase loyalty. *Journal of the Academy of Marketing Science*, 30(3), 240–249.
- Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1988). SERVQUAL: a multiple-item scale for measuring consumer perceptions of service quality. *Journal of Retailing*, 64(1), 12–40.
- Passmore, J., & McGoldrick, S. (2009). Supervision, extravision, or blind faith? A grounded theory study of the efficacy of coaching supervision. *International Coaching Psychology Review*, 4, 143–159.
- Passmore, J., & Velez, M. J. (2012). SOAP-M: a training evaluation model for HR. *Industrial & Commercial Training*, 44(6), 315–325.
- Passmore, J., & Velez, M. J. (2013). Training evaluation. In K. Kraiger, J. Passmore, N. R. Dos Santos & S. Malvezzi (Eds.), *The Wiley Blackwell handbook of the psychology of training, development and performance improvement* (pp. 136–154). Hoboken: Wiley-Blackwell.
- Passmore, J., Brown, H., Csigas, Z., & The European Coaching and Mentoring Research Consortium (2017). *The state of play in European coaching & mentoring*. Executive Report. Henley-on-Thames: Henley Business School and EMCC International.
- Passmore, J., Brown, H., Greif, S., Rauen, C., & The European Coaching and Mentoring Research Consortium (2018). *Coaching in Germany*. Henley-on-Thames: Henley Business School. https://www.researchgate.net/publication/330116757_Coaching_in_Germany_Coaching_in_Deutschland. Accessed 11 July 2020.
- Preston, J., & Hammond, C. (2003). Practitioner views on the wider benefits of further education. *Journal of Further and Higher Education*, 27(2), 211–222.
- Rauen, C. (2017). *Entwicklung, Evaluation und Förderung von Qualitätsstandards in Coaching-Weiterbildungen*. Dissertation in the Department of Human Sciences of the University of Osnabrück.
- Richardson, T. M. (2010). *Solution-focused brief coaching as an executive coaching intervention: a quasi-experimental study*. Dissertation in the Department of Advanced Studies of the University of Phoenix. <https://pqdtopen.proquest.com/doc/1348160597.html?FMT=ABS>. Accessed on 11 July 2020.
- Schiemann, S. J., Mühlberger, C., & Jonas, E. (2018). Striving for autonomy: the importance of the autonomy need and its support within coaching. *Journal of Evidence-Based Coaching and Mentoring*, 12(Special Issue), 98–110.
- Schreyögg, A. (2011). Möglichkeiten der Evaluation von Coaching. *Organisationsberatung, Supervision, Coaching*, 18, 89–96.
- Stephan, M., & Gross, P. P. (2013). *Ergebnisse der 3. Marburger Coaching-Studie 2013*. Osnabrück, Marburg: Deutscher Bundesverband Coaching e. V./Phillips-Universität Marburg.
- Stiftung Warentest (2013). Coachen Lernen. Was ein guter Lehrgang für Einsteiger bieten sollte. <https://www.test.de/Coachen-lernen-Was-ein-guter-Lehrgang-fuer-Einsteiger-bieten-sollte-4605169-0/>. Accessed 11 July 2020.
- Thorndike, E. L. (1912). *Education, a first book*. New York: Macmillan.
- Valentino, A. L., LeBlanc, L. A., & Sellers, T. P. (2016). The benefits of group supervision and a recommended structure for implementation. *Behavior Analysis in Practice*, 9(4), 320–328.

- Wampold, B.E., & Imel, Z.E. (2015). *The great psychotherapy debate: evidence for what makes psychotherapy work* (2nd edn.). London: Routledge.
- Ye, M., Liu, X., & Lee, W.C. (2012). Exploring social influence for recommendation. In *35th International ACM SIGIR Conference on Research and Development in Information Retrieval*. SIGIR '12, Portland, USA, 12–16 August 2012. New York: ACM.



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