Does Training Design Matter? Increasing Moral Competence with E-based Business Ethics Training: A Theory-guided Randomized Lab Intervention

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List of Abbreviations

approx.	Approximately
cf.	*conferatur*
Chi^2	Pearson Chi-square-statistic
CMD	Cognitive moral development
Dev	Deviation
DIT	Defining issues test
DSGVO	Datenschutzgrundverordnung [General Data Protection Regulation]
e.g.	*exempli gratia*
ed.	Edition
Ed.	Editor
Eds.	Editors
et al.	*et alii*
etc.	*et cetera*
EW	Erziehungswissenschaften [Pedagogy]
F	F-statistics
GDPR	General Data Protection Regulation
$H_{0/1}$	Statistical $hypothesis_{0/1}$
H	Kruskal-Wallis statistics
HR	Human ressources
HRD	Human resources development
i.e.	*id est*
ibid.	*ibidem*
KMDD	Konstanz method of dilemma discussion
LES	Law, economics and social sciences
lit.	*littera*
M	Mean
MCT	Moral competence test
min.	Minute/s
MJI	Moral judgment interview
MJT	Moral judgment test

MKT	Moralischer Kompetenztest [Moral competence test]
Mr.	Mister
n/N	Sample size
n.d.	No date
P	Fisher's Exact test-statistics
p.	Page
p	P-value
p.η^2	Partial eta-squared
para.	Paragraph
PE	Pedagogy
PH	Philosophy / Philosophie
r	Match coefficient (reliability)
S.	Seite [page]
SD	Standard deviation
Sig	Statistical significance
ST	Staatswissenschaften [faculty of law, economics and social sciences]
Std.	Standard
T	Treatment
usw.	Und so weiter [and so on]
v. Verf.	Vom Verfasser [by author]
vgl.	Vergleiche [cf.]
vs.	Versus
z.B.	Zum Beispiel [for example]
€	Euro

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Abstract

"Ethics training is an instrument of HRD [human resource development] that includes all educational and developmental methods aimed to implement and promote ethical behavior within organizations (Kreismann & Talaulicar, 2021, p. 11)." Thus, such training in a business context should not only support ethical behavior in the workplace, but also prevent corporate scandals by strengthening ethical competences (Kreismann & Talaulicar, 2021; Schwartz, 2017; Thomas et al., 2004). Additionally, the use of e-based training to strengthen flexible and location-independent access is increasingly of interest as an HRD measure (Li, 2013), though the current state of research in the included empirical literature review shows that it has been the subject of few studies to date. Therefore, e-based business ethics training is examined in this investigation.

This study applied a laboratory experimental design to investigate the efficacy of different approaches to designing ethics training – with active, interactive, and passive designs derived from the theoretical foundations in the field of constructivist learning. The theory of the development of moral competence and its measurement is based on the well-established ideas of Kohlberg (1969) and Lind (2016a).

Following random assignment to groups of 200 students, the treatment groups (n=50 each) received active, interactive, or passive ethics training, while the control group (n= 50) received none. The four groups were tested for both their moral competence, using Lind's moral competence test (MCT), and their subjectively perceived learning effects and reaction to training, using a self-report questionnaire.

Statistical analyses found no significant differences between the four groups in moral competence after the treatment, but the participants' self-reports of the active and interactive treatment showed the most positive feedback for self-perceived learning effects and enjoyment of the program. The results of the

self-report also reveal that, regardless of the design, all ethical treatments seem to provide a stimulus that sensitizes participants to reflect on ethically relevant problems and to consider a change of perspective and an in-depth examination of various arguments to justify decisions in an ethically challenging business situation.

Keywords: Constructivism, E-based business ethics training, Konstanz Method of Dilemma Discussion, Laboratory experiment, Leadership education, Moral competence

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1 Introduction

1.1 Ethics Training: Relevance and Aims of the Study

In view of incidences of corporate misconduct, such as the recently reported accounting fraud of Wirecard, there is a clear need for methods of preventing unethical behavior in business. Many companies have implemented ethics training programs to develop ethical competences among their managers and employees (Kreismann & Talaulicar, 2021). “Ethics training is an instrument of HRD [*Human Resource Development*] that includes all educational and developmental methods intended to implement and promote ethical behavior within organizations” (Kreismann & Talaulicar, 2021, p. 11; Ruiz et al., 2015; Treviño, 1992; Weber, 2015) by strengthening the ethical competence of organizational members.

Ethics training is necessary for business practice for various reasons: it helps to implement business ethics in the organization (Ardichvili & Jondle, 2009; de Colle & Werhane, 2008; Foote & Ruona, 2008; Kreismann & Talaulicar, 2021; Warren et al., 2014; Weber, 2015); to promote ethical behavior in the workplace (Sims, 1992); and to avoid corporate scandals, crises, loss of reputation, and financial damage that may result from unethical behavior, such as fraud and embezzlement (Kreismann & Talaulicar, 2021; Schwartz, 2017; Thomas et al., 2004). Human resources (HR) departments are entrusted with the preparation and implementation of ethics training (Foote & Ruona, 2008; Hsieh, 2004; Valentine et al., 2013; Winstanley & Woodall, 2000). This is in line with the HRD definitions that provide information about the tasks of the HR department. Weinberger (1998) provides a comprehensive overview of HRD definitions. Applying one of these definitions, Swanson (1995) sees HRD as a process for the development of practitioners’ know-how through organizational and personnel development and training in the interests of enhancing their job performance.

Nevertheless, knowledge about the efficacy and optimal design of ethics training is still vague. For this reason, I present an empirical literature review in Chapter 2 to explore the current state of research and identify research gaps to address in my own study. This review reveals that, while there are many studies dealing with the effects of ethics training, information on the design of the training remains sparse and the question of whether different designs influence the effect of the training has not yet been adequately addressed. The optimal design therefore remains unknown. Likewise, research on e-based training is in the minority, despite web-based technology becoming increasingly prominent in HRD training (Li, 2013).

I address this by first preparing an overview of possible design categories for ethics training, developing an e-based ethics training program, and then empirically testing the effect of different training variations. Thus, the aim of my study is to develop and examine the effect on ethical competence of different e-based training designs.

The need to investigate the effectiveness of ethics training is particularly evident due to the costs incurred by HRD training (payment of trainers, time spent by participants, travel expenses, etc.); thus, it is important to know whether this investment is worthwhile and whether participants enjoy valuable learning effects that strengthen their ethical competence in the workplace. The design plays a major role here, thus the question of an optimal design is vital. It is important to know which designs are suitable and whether necessary costs can be saved by, for example, not holding face-to-face events (e.g., travel expenses for participants and trainers) and whether e-based formats not only reduce costs but also provide more flexibility in their implementation.

In this context, the definition of ethical competence is also important. There is no uniform definition of ethical competence: some researchers use the term “competence” in the plural (e.g., Lilja & Osbeck, 2019) and some in the singular (e.g.,

Kavathatzopoulos, 2003). Lilja and Osbeck (2019) use the plural form, as they see different abilities as different ethical competences, while other researchers see only one ability with ethical relevance and thus prefer the singular form.

Additionally, although it is debatable whether "ethical" and "moral" mean the same thing, they are used interchangeably in the business ethics literature (Flanigan, 2018; Nguyen et al., 2008; Perreault, 1997; Pohling et al., 2016) because there seem to be no definitions that are "universally agreed upon" (Perreault, 1997; p. 79; cf. Rest & Narvarez, 1994). This results in numerous definitions and understandings of ethical and moral competence. These competences are intended to contribute to ethical behavior. In this study, a definition of the competence to be examined is required. Accordingly, I use the terms "ethical" and "moral" synonymously, as seen in previous literature. The ethical competence most frequently discussed in the literature is moral judgment (Kreismann & Talaulicar, 2021). Therefore, my own empirical study focuses on this competence. As stated by Lind (2016a), this moral judgment competence is the ability to evaluate pro and con arguments for actions in ethically relevant situations according to their moral quality. A detailed elaboration of what this involves and the measurement possibilities is given in the training development and method section.

1.2 Overview of the Structure

Following this introduction to the subject and to the special relevance of ethics training design, I provide the state of the art of the existing literature by conducting an empirical literature review in Chapter 2. The identified research gaps provide the starting point for my own empirical investigation. Then, I develop an e-based training program intended to strengthen moral competence. The development is theory-guided and the program is oriented on the – thus far, only face-to-face tested – "Konstanz method of dilemma discussion" (KMDD). The program include various treatments, and I derive hypotheses about the impact of these (Chapter 3). After

that, I present an evaluation of the ethical training variations and provide my results (Chapter 4). I finish my work by discussing my results, offering ideas for further research (Chapter 5), and summarizing my conclusions on the study (Chapter 6).

2 Overview of Existing Literature and Research Gaps: An Empirical Literature Review[1]

Ethics training is widely considered as appropriate means of strengthening business ethics, but debate remains around its efficacy. Thus, a comprehensive review of related studies is vital for investigating the state of knowledge about the impact of ethics training on ethical competences. Systematic reviews are key methods of consolidating existing knowledge by synthesizing evidence-based results (Briner et al., 2009; Kunisch et al., 2018). Thus, oriented on well-established practices in compiling empirical literature reviews (Fisch & Block, 2018; Torraco, 2005; Van Wee & Banister, 2016), this chapter provides (a) a developed framework of training design categories, (b) empirical insights from 92 studies about the effectiveness of business ethics training, and (c) details of the identified research gaps and a brief research agenda to guide my own empirical study.

First, I will clarify the research and selection procedure, explaining how relevant studies were identified for inclusion in the review. I will then give an introduction to the evaluation model and develop the theoretical framework of training design categories that will guide the analyses.

An overview of the studies, the results drawn from our analyses, and a critical discussion of these results leads us then to the remaining research gaps and a short agenda.

2.1 Research and Selection of Studies

2.1.1 Procedure for Identifying Relevant Empirical Studies

I used the search engines EBSCO, PsychARTICLES, and Web of Science databases to compile a comprehensive review that updated

[1] The contents of this chapter build on the corresponding contents of Kreismann and Talaulicar (2021). The authors' distribution of tasks is outlined in the attached statement at the end of this dissertation.

and went beyond previous reviews. Additionally, there were searches of the individual publisher databases of Emerald, Sage, SpringerLink, Taylor & Francis, and Wiley. The search process was concluded with an additional manual search of the major journals within the field of business ethics and HRD, including *Advances in Developing Human Resources, Business and Society*, *Business Ethics: A European Review*, *Business Ethics Quarterly*, *European Journal of Training and Development, Human Resource Development International, Human Resource Development Quarterly, Human Resource Development Review, International Journal of Training and Development,* and *Journal of Business Ethics*. Previous reviews (e.g., Craft, 2013; O'Fallon & Butterfield, 2005) and various rankings of top journals in business ethics (e.g., Albrecht et al., 2010) and HRD (e.g., Seo et al., 2019; Wang et al., 2012) supported this selection of search engines, databases, and journals.

The systematic search, which also included the papers' cited references, yielded more than 200 studies that were potentially relevant to the review.

2.1.2 Procedure for Selecting Studies for Inclusion in the Review

There are various terms in ethics education instruments to describe *ethics training*, including *pervasive* and *standalone business and society courses* (Wynd & Mager, 1989), *ethics courses* (Sorensen et al., 2017), *ethics instruction* (Waples et al., 2009), and *ethics interventions* (LaGrone et al., 1996). For the purposes of this study, these educational and developmental courses, instructions, and interventions are all subsumed under the term "ethics training."

The four criteria employed to select the studies for inclusion in the review are as follows:

- The focus is empirical studies because the subject is an empirical investigation of the effectiveness of ethics training. Thus, purely theoretical, conceptual, and prescriptive papers are not relevant.

- Empirical studies without reference to the business sector, such as those on medical ethics training, are not relevant.
- Empirical studies of ethics education for adolescents and children are not relevant because this paper concerns the business ethics training of adult participants such as practitioners and mature university students.
- The study focuses on the impact of standalone business ethics training. Thus, studies about pervasive approaches – including holistic ethics programs and empirical investigations of the effect of overall business education – are not relevant. These widespread approaches make it more difficult to clearly determine the factors and components that cause the observed effects. For this reason, this study examines only standalone training.

Based on these criteria, we selected 92 studies for the final sample. This sample size surpasses that of previous empirical reviews and meta-analyses of ethics training (Craft, 2013: 2 relevant studies on ethics training; O'Fallon & Butterfield, 2005: 3 studies; Waples et al., 2009: 25 studies; Weber, 1990: 4 studies), due to the longer period under consideration and wider breadth of the studies included.

2.2 Evaluation Model

To investigate the effects of training programs in the studies, we needed a model for evaluating training programs. Such a model must enable a structured evaluation. Kirkpatrick's model was deemed suitable because it is well-established in research on training and development evaluation (Alvarez et al., 2004; Blanchard et al., 2000; Grohmann & Kauffeld, 2013; Kennedy et al., 2013; Kong & Jacobs, 2012; Phillips & Phillips, 2001; Rodriguez & Armellini, 2013). It is also the most widely used for evaluating training programs in organizations (Kennedy et al., 2013; Kong & Jacobs, 2012). The model is simple and easy to use (Alliger & Janak, 1989; Alvarez et al., 2004; Grohmann & Kauffeld, 2013; Khasawneh & Al-Zawahreh, 2015; Liebermann &

Hoffmann, 2008), and it includes evaluation clues for measuring the learning effects of training programs. Additionally, the model is comprehensive because it considers participants' subjective satisfaction after the training, the transfer of learning into daily business, and the benefits of this transfer for the organization (Galloway, 2007). Kirkpatrick defines four levels of evaluation: reaction, learning, behavior, and results. These are briefly described in the following (Kirkpatrick & Kirkpatrick, 2006):

- "Reaction" concerns participant satisfaction, which is important because positive reactions support participants' motivation to learn. The use of questionnaires to assess whether participants enjoyed the training is common.
- "Learning" concerns the extent to which learners have improved their knowledge and strengthened their competences through the training. A pretest–posttest–control group design is favorable to measure learning effects through training.
- "Behavior" concerns the change in participants' behavior after the training. This is about the transfer of enhanced knowledge and competences into day-to-day business practice. After a reasonable time for transfer, one can measure the extent of the training-induced behavioral change through surveys and observations of training participants, customers, colleagues, and supervisors. A comparison of observations before and after the treatment, as well as the use of a control group, is useful in experimental designs for examining changes in behavior.
- "Results" are outcomes for the organization, such as increased productivity and decreased costs, which occur as a result of the training participation. This evaluation step is challenging because it is difficult to trace outcomes directly to the training program, as there are so many other relevant factors that can influence these outcomes (Kirkpatrick & Kirkpatrick, 2006; Stokking, 1996).

2.3 Dimensions to Analyze Studies on Effectiveness of Ethics Training

In line with Kirkpatrick's model, I analyzed the impact and design of the training programs to identify whether the effects depended on the specific design. The theoretical bases of the studies were also highlighted to identify the underlying mechanisms that could lead to specific outcomes.

Based on the findings of prior research and conceptual considerations, the following dimensions were identified to guide the analysis of the empirical studies included in this review: "conceptual substantiation," "impact of training," "dependent variable and measurement," and "design of ethics training."

Conceptual substantiation: the review examined whether the authors had presented a theoretical framework and formulated their hypotheses based on their theory, provided at least a theoretical reference (referred to theory without explicit explanation of how they had used the theory for the development of their hypotheses), or relied only upon prior empirical research results to substantiate their study.

Impact of training: this concerns the results, specifically whether the studies indicated no effect or a positive, mixed, or negative impact of ethics training on ethical behavior or associated variables (such as perceptions of the ethical climate within the organization).

Dependent variable and measurement: ethics training programs should promote ethical behavior among the participants. As the dependent variable in the studies of ethics training effectiveness, ethical behavior can be captured broadly or narrowly and be measured in different ways. Ethical behavior comprises ethical competences (skills). Ethical competence is not uniformly defined. There are different conceptions of ethical competence and various sets of ethical competences, such as the ability to perceive ethical problems and make moral judgments. Supported by well-established review articles (Craft, 2013; O'Fallon & Butterfield,

2005; Treviño et al., 2006), the framework of the four components of ethical behavior proposed by Rest (1979) was employed to guide the analysis of the empirical studies. According to Rest (1979), ethical behavior consists of the four components (or processes) of awareness, judgment, intention, and action. Moral awareness is the ability to perceive ethical problems; judgment is the ability to justify which action is the ethically "right" in the given situation; intention is about developing the motivation to choose the right moral action; and action concerns the endurance and ego-strength needed to act in accordance with the previous decision on the ethically correct course of action. Thus, I assessed the empirical studies for these components and the measurement instruments.

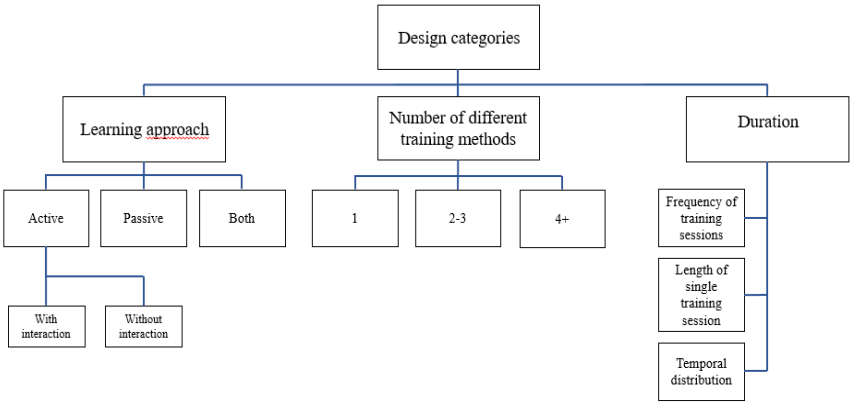
The second level of the Kirkpatrick evaluation model captures *ethical awareness*, *judgment*, and *intent*, while *ethical actions* are on the third level, concerning the application of the contents in daily practice (transfer).

Information about the training design: I developed a framework of three essential training design categories: (a) the learning approach, (b) the number of different training methods, and (c) the duration of the training (see Figure 1). I then coded the information in the empirical studies according to this framework.[2] Theoretical frameworks and studies helped to derive these categories. The categories were expected to influence how participants engage with and respond to the training programs. The development of this framework is explained in detail as follows.

Figure 1

Categories of Ethics Training Designs

[2] The framework was developed taking into account concrete feedback from Till Talaulicar and anonymous reviewers.



Note. From *Business Ethics Training in Human Resource Development: A Literature Review*, by D. Kreismann and T. Talaulicar, 2020, p. 7. Unpublished manuscript, accepted for publication in Human Resource Development Review. Copyright 2020 by D. Kreismann & T. Talaulicar.

Learning approach: ethics training can utilize different learning approaches. The approach determines whether the learning process calls for the active or passive involvement of the participants. The learning approach can be active with or without interaction, passive, or a combination of active and passive.

An active learning approach includes training methods that require the active involvement of participants, such as developing arguments and solutions to ethical case studies. For example, learners must make decisions about ethical matters and substantiate their decisions. Social interaction, as a subcategory of the active learning approach, concerns whether the training method requires the exchange of ideas, arguments, and so on, between the learners or between the learners and instructors. Group discussions reflect an active learning approach, with interaction between the participants, while developing options for action in ethical case studies involves activity by the learner, but not necessarily any interaction, as each person can develop the options by themselves. A passive learning approach does not require any active engagement by the participants, such as listening to a lecture.

The first design category is derived from constructivist and socio-constructivist learning theory, as well as theoretical thoughts of developmental psychologists such as Piaget (1970) and Blatt and Kohlberg (1975). The basic assumption of constructivist learning theories is that learners actively construct knowledge by interpreting new information based on their prior knowledge (Loyens & Gijbels, 2008). Learning is not only the acquisition of new information, but also an active construction. Information becomes knowledge only by interpreting and putting it into context (Bada, 2015; Oliver, 2000). The second basic assumption is that cooperative learning with social interaction supports learning (Loyens & Gijbels, 2008). Vygotsky (1987) endorses this assumption with his sociocultural theory of cognitive development, postulating that learners benefit from social interaction and exchange in their learning process because information is context and culture-dependent. The most effective way of gaining, interpreting, and constructing new information is exchange between individuals. Piaget (1970) also highlighted the active role of learners. Knowledge and competences cannot be built through a passive process of copying information. The learners must "displace, connect, combine, take apart and reassemble" to increase their knowledge (Piaget, 1970, p. 704). Blatt and Kohlberg (1975) and Lind (2016a) also recommend interaction through group discussions to promote ethical competence.

In addition, empirical results from the field of learning and education indicate that learning situations in which cooperative learning through social interaction with peers takes place tend to be more successful than individual learning (Hattie, 2009). The instruction-design research field also emphasizes the important role of social interaction in supporting learning by ensuring a collaborative learning environment (Gagné et al., 2005). Prior research in the field of HRD indicates that interaction between learners can support learning and the development of competences, as well as changing the attitudes of organizational members, while

passive learning situations are more suitable for presenting noncomplex facts to support knowledge acquisition (Carter, 2002; Heneman et al., 1989).

Number of different training methods: ethics training can include different methods, such as watching a video, listening to a presentation or lecture, and discussing ethical scenarios in a group. Well-established and commonly employed training methods in HRD involve lectures, case studies, team training, and roleplays (Martin et al., 2014). A training method is the didactic preparation of content to facilitate and support successful learning (Meyer & Thielsch, 2017). The variety of training methods can be assigned to the social form (with whom?) and to the task form (such as discussion and role play) (Meyer, 2011; see also Cole, 1981; for a similar classification of training methods). The social form includes classroom teaching and individual, partner, and group work. Task forms involves activities such as engaging in discussions, listening to lectures, watching video, and giving presentations. Training methods can involve various forms in combination; for instance, group work that includes a task to be completed together, such as collecting information together before engaging in a group discussion. The collection of information and the group discussion that follows are different tasks and represent different training methods, but they share the same social form (group work). Therefore, various training methods can be applied to impart knowledge to learners, to encourage learners to think about new information, and to support the learning process. Thus, we can distinguish between ethics training programs that consist of only one training method (e.g., discussing ethical case studies) and those that incorporate a variety of developmental methods (e.g., watching videos, listening to lectures, discussing ethical case studies, and engaging in roleplays).

In this second design category, the learning style models provide the underlying theoretical framework. Learning style models highlight that individuals learn best in different ways, and

these are their individual learning styles. Riding and Rayner (1998) and Willingham et al. (2015), for instance, differentiate between visual and verbal learners, while Kolb (1984) provides a model of four basic learning styles (Hawk & Shah, 2007, present an overview of other models). Learning style models rest on two basic ideas: first, that a preferred learning style is a characteristic that remains consistent for the individual in different situations, and second, that the use of one's preferred learning style makes learning more successful (Willingham et al., 2015). These models recommend using different training methods to reach learners with different learning styles. In line with the recommendation of Weber (2007), ethics training should incorporate multiple training methods to ensure it is able to reach as many participants as possible.

Duration: the duration of the ethics training can vary in terms of the frequency of the training sessions (e.g., a single session or several); the length of the sessions (e.g., 30 minutes or two hours); and, if multiple training sessions are held, their temporal distribution (e.g., multiple training sessions could be spread over 10 weeks or a year).

The well-established learning principles in the instruction design literature (Gagné et al., 2005; Magliaro et al., 2005; Reigeluth & Carr-Chellman, 2009) provide the theoretical foundation for this design category. Gagné et al. (2005) propose the instruction principle of "repetition," suggesting that repeated practice is necessary for leaners to improve their skills and become more confident in applying their competences. Lind (2015) describes ethics training as comparable to muscle-training in that both require time, patience, and regular repetition to build and maintain muscle. Additionally, empirical results from the learning and education field (Hattie, 2009) show that temporal distribution and repetition of training sessions in which participants take intermittent breaks and rest within and between different sessions (Donovan & Radosevich, 1999), in a practice of "spaced practice" (e.g., training once a week over a period of 12 weeks; Goldstein &

Ford, 2002; Kauffeld & Lehmann-Willenbrock, 2010), tends to be more effective than "massed practice," in which the training is concentrated in a single training session and participants perform a task continuously without interruption, such as block seminar. In general, spaced practice seems to provide greater improvement in knowledge and competences (Demptster, 1988; Hattie, 2009). The optimal length depends on how complex and demanding the tasks are. Learners may gain advantages from spacing time when tasks are highly complex and demanding (Hattie, 2009).

2.4 Results of the Review

2.4.1 Overview of Major Findings

Table 1 provides a summary of the major findings from the review of 92 studies on the effectiveness of business ethics training.

Table 1

Summary of Major Findings

Dimension	Major Findings
Impact of ethics training	▪ Most of the studies show a positive impact (71%)
Dependent variable and measurement	▪ The most frequently investigated dependent variable is "ethical judgment" ▪ The most commonly used measurements are (partly) self-developed tests and the Rest (1979) defining issues test (DIT)
Information about the training design	▪ 61% of the studies provide information about training design ▪ Studies that identify positive effects provide information about training design more often than those that identify no impact, mixed effects, or negative effects. ▪ Many studies focus on training programs that combine active and passive learning approaches or apply an active approach. Numerous studies focus on active methods, interaction, and dilemma discussions and combine different training methods (2–6 methods)
Conceptual substantiation	▪ The studies employ 41 different theories ▪ The variety of theories increases over time (1980s–2010s) ▪ The most commonly used theory is Kohlberg's (1969) theory of cognitive moral development (CMD)

Note. Adapted from *Business Ethics Training in Human Resource Development: A Literature Review*, by D. Kreismann and T. Talaulicar, 2020, p. 12. Unpublished manuscript, accepted for publication in Human Resource Development Review.

2.4.2 Conceptual Substantiation

For their hypotheses formulation, 54% of the studies (50 studies) used a theoretical framework, 17% (16) provide at least a theoretical reference; 26% (24) mention no underlying theoretical framework, but do provide an empirical literature review as the basis for the study; and in 2% (2), no information about the foundation is given. The studies that include a theoretical framework (for hypotheses formulation or reference; 66 studies) together employed 41 different theories and thus provide a diversity of theoretical substantiation. Twenty studies used more than one theory and combined them with others.

Kohlberg's (1969) theory of cognitive moral development (CMD theory, or "moral stage theory"), based on the Piaget (1950) work on cognitive development, is the most commonly used, with 45 studies employing this framework. Thirty studies combined CMD with another theory.

Despite 41 different theoretical foundations, only a small number of other theories were applied in more than one study. These are Rest's (1979) four-component model of ethical behavior (employed in 23 studies), Gilligan's (1982) ethics of care (9 studies), Treviño's (1986) person-situation interactionist model (7 studies), Piaget's (1950) theory on cognitive development (5 studies), Jones's (1991) issue-contingent model (4 studies), Bandura's (1976) social learning theory (3 studies), Ajzen's (1991) theory of planned behavior (2 studies), and Wotruba's (1993) ethical decision action process (2 studies).

2.4.3 Impact of Ethics Training

Table 2 lists the results of the reviewed studies, indicating whether each found ethics training to have positive, mixed, negative, or no effects on ethical behavior.

Table 2

Extant Evidence on the Impact of Ethics Training on Ethical Behavior

Positive impact	Mixed results	No impact	Negative impact
1970s			
∑: 1 study	*0 studies*	*0 studies*	*0 studies*
Purcell (1977)	N/A	N/A	N/A
1980s			
∑: 5 studies	*1 studies*	*2 studies*	*0 studies*
Boyd (1981)	Jones (1989)	Martin (1981)	N/A
Arlow & Ulrich (1985)		Wynd & Mager (1989)	
Penn et al. (1985)			
Stead & Miller (1988)			
Cohen & Cornwell (1989)			
1990s			
∑: 21 studies	*5 studies*	*5 studies*	*1 study*
Penn (1990)	Hoffmann et al. (1991)	Davis & Welton (1991)	Sparks & Hunt (1998)
Burton et al. (1991)	Kumar et al. (1991)	Ponemon (1993)	
Harris & Guffey (1991)	McCabe et al. (1994)	Cole & Smith (1995)	
Hiltebeitel & Jones (1991)	Honeycutt et al. (1995)	Lampe (1996)	
Delaney & Sockell (1992)	Okleshen & Hoyt (1996)	Geiger & O'Connell (1998)	
Glenn (1992)			
Hiltebeitel & Jones (1992)			
Armstrong (1993)			
Kavathatzopoulos (1994)			
Murphy & Boatwright (1994)			
Shaub (1994)			
Welton et al. (1994)			
LaGrone et al. (1996)			
Eynon et al. (1997)			
Green & Weber (1997)			
Key (1997)			
Lee (1997)			
Carlson & Burke (1998)			
Duizend & McCann (1998)			
Gautschi & Jones (1998)			
Richards (1999)			
2000s			
∑: 23 studies	*8 studies*	*3 studies*	*0 studies*
Abolmohammadi & Reeves (2000)	Marnburg (2003)	Izzo (2000)	N/A
LeClair & Ferrell (2000)	Rau & Weber (2003)	Peppas & Diskin (2000)	
Loe & Weeks (2000)	Fraedrich et al. (2005)	Herington & Weaven (2008)	
Weber & Glyptis (2000)	Mujtaba & Sims (2006)		

Jones & Ottoway (2001)	Ritter (2006)		
Lyttle (2001)	Desplaces et al. (2007)		
Lowry (2003)	Awasthi (2008)		
Wu (2003)	Graham (2009)		
Early & Kelly (2004)			
James & Cohen (2004)			
Valentine & Fleischmann (2004)			
Halbesleben et al. (2005)			
Anderson et al. (2006)			
Cagle & Baucus (2006)			
Dellaportas (2006)			
French (2006)			
Izzo et al. (2006)			
Bodkin & Stevenson (2007)			
Frisque & Kolb (2008)			
Rogers & Smith (2008)			
Tang & Chen (2008)			
Jones (2009)			
O'Leary (2009)			
2010s			
∑*: 15 studies*	*1 study*	*1 study*	*0 studies*
Lau (2010)	Nagle et al. (2012)	Arfaoui et al. (2016)	N/A
Jazani & Ayoobzadeh (2012)			
Raile (2013)			
Susong (2013)			
Taylor (2013)			
Warren et al. (2014)			
Fischbach (2015)			
Ruiz et al. (2015)			
Verma et al. (2016)			
Atan et al. (2017)			
Ermasova et al. (2017)			
Huang & Ho (2017)			
Lalevic-Filipovic & Drobnjak (2017)			
Salvador (2017)			
Sorensen et al. (2017)			

Note. N/A = not applicable

Note. From *Business Ethics Training in Human Resource Development: A literature review*, by D. Kreismann and T. Talaulicar, 2020, p. 13. Unpublished manuscript, accepted for publication in Human Resource Development Review. Copyright 2020 by D. Kreismann and T. Talaulicar.

In summary, 71% of the studies identify a positive effect, while 16% show mixed results, 12% observe no statistically

significant impact, and only one study (1%) found that ethics training had had a negative impact.

2.4.4 Dependent Variable and Measurement

Almost all the studies (99%) measured the effect of ethical training on a component of ethical behavior, and only one study chose perceptions of the ethical climate within the organization as the dependent variable. Interpreting and comparing the effects are restricted because the studies examined different components of ethical behavior and used different methods of measurement. Ethical judgment was the most frequently examined component of ethical behavior (58%), followed by ethical awareness (25%), ethical intent (20%) and ethical action (14%). This is not surprising because the leading theories of moral development focus on ethical judgment (see more in results section about the conceptual substantiation). As reflected in the percentages, some studies (n=17) examined not only one but also two components of ethical behavior most in combination with ethical judgment (n=14).

Most of the studies (98%) provide information about the measurement methods employed. The defining issues test (DIT) (Rest, 1979; Rest et al., 1986) was the most common, applied in 27% of the studies. This is not surprising because moral judgment was the most frequently studied variable, and the DIT measures this component. Just 2% of the studies employed a new or revised test instrument based on the DIT, while 32% involved entirely self-developed test instruments, and 36% used partially self-developed methods that were revised or supplemented versions of existing instruments. Thus, self-developed instruments were the most common. Other applied instruments were Clark's (1966) personal business ethics score, Harris's (1990-1991) questionnaire on ethical beliefs regarding questionable business practices, and Rokeach's (1973) value list, but these did not appear very frequently. It is not possible to map the different findings to the application of different test instruments because various measurement methods were employed. Unfortunately, the authors of the self-developed

instruments provided only limited or no information about the development and validity of these methods.

2.4.5 Information about the Training Design

Unfortunately, 39% (36) of the reviewed studies provide no information about training design, the remaining 61% (56) do. However, this information is sometimes very limited, such as including details about the duration of the training, but not about the other design categories. Forty-five percent of the studies that measured no impact – and the one study that measured negative effects – provide no information about the training design, while 65% of the studies that record positive impact and 60% of those that detail mixed effects provide this information.

The dimensions in Figure 1 were applied to analyze the studies that provide information about training design. This analysis found that 91% of the studies (51) give information about the learning approach. An active learning approach was used in roughly 33% (17) of the studies, 65% (33) employed an active-passive combination, and 2% (only one study; Green & Weber, 1997) used a strictly passive learning approach. Only those with a combined learning approach report no impact of the training, while those studies of active learning approaches each found positive or mixed effects. The most common activity was the discussion of moral dilemmas or ethical case studies, with many studies (41) emphasizing active training methods. Thus, it is not surprising that training programs used social interaction among participants in 43 of the studies. This is in line with the recommendation of Blatt and Kohlberg (1975), based on Kohlberg's CMD theory, that dilemma discussion and an interactive approach in training programs improve the moral development of participants.

A total of 53 studies provide details of the number of training methods used in the programs. Of these, 17% used one method, 49% used two or three, and 34% used more than four. Combinations of methods can address several learning styles (Weber, 2007), but with regard to the effect of the training, it

cannot be deduced from the results whether and which combination of training methods most effectively strengthens ethical behavior.

An evaluation of the statements about program duration is difficult because the statements vary widely. There were both long and short programs that provided positive, mixed, or no effects, with half-day sessions and other courses ranging from 5 to 17 weeks in length. This variety of statements – and the limited information about program duration – mean that it is not possible to determine the most effective form in this category.

2.5 Discussion of Review Results

2.5.1 Overview of Research Gaps and Criticism

Table 3 provides a summary of all identified research gaps and criticisms from the review of 92 studies on the effectiveness of business ethics training.

Table 3

Overview of Gaps and Criticisms

Dimension	Gaps and criticisms
Conceptual substantiation	▪ Almost one-third of the studies do not disclose an explicit theoretical foundation for hypotheses formulation. ▪ There is a need for more investigations based on learning and instruction design theories.
Assessment of ethics training effectiveness and design	▪ Many studies do not provide information about the training design, notably all those unable to prove an effect. ▪ There is a need for more information about training design, and the design should be matched with the dependent variable. ▪ Only three studies examined e-based training. The effects are promising, but there is a need for more investigation. ▪ The optimal duration of ethics training cannot be substantiated on the extant evidence because the information varies and is limited or missing. ▪ The findings on the need for a combination of training methods and the best combination for improving components of ethical behavior are inconclusive. ▪ There is a need for more studies that examine not only the short-term but

	also the long-term effects of ethics training.
Dependent variable, measurement, and methodological rigor	▪ Comparisons of the reported effects on the dependent variable are challenging because of the different components of ethical behavior and the variety of measurements. ▪ To understand the effect, it is necessary to measure the dependent variable before and after the treatment. Therefore, there is a need for pretest–posttest designs with a control group. Many studies do not utilize this design.

Note. Adapted from *Business Ethics Training in Human Resource Development: A Literature Review*, by D. Kreismann and T. Talaulicar, 2020, p. 18. Unpublished manuscript, accepted for publication in Human Resource Development Review.

2.5.2 Conceptual Substantiation

Many studies provide no explicit theoretical foundation for their hypotheses' formulation. In those that do disclose a theoretical base, Kohlberg's stage theory is the most commonly applied, and well established to conduct studies about ethics training effectiveness. Kohlberg (1969) said that individuals develop moral judgment over time and pass sequentially through a maximum of six stages, which show that moral judgments are becoming increasingly justice-oriented (stage six is the maximum of justice orientation). Statements about the "right" decision in a moral dilemma are more justice-oriented, and the ability to judge ethically increase the higher the position of the individual within the stages is. Individuals will ideally become more aware of universal values of justice, moving away from the orientations toward punishment, reward on the lower stages (Dellaportas, 2006; Kohlberg, 1967). This theory has been criticized for its narrow focus on cognitive processes, such as thinking and judging, and its exclusion of affective aspects, such as emotional and intuitive decisions. A corresponding critical issue is the conception of justice that explains the development of morality only through an orientation toward principles of justice, excluding decisions that are oriented

on social relationships, feelings, and so on (Pritchard, 1984; Gilligan, 1982).

The theories proposed since the emergence of CMD have involved a broader view and more variables, including non-cognitive variables such as emotions that can influence ethical behavior (e.g., Reynolds, 2006; Schwartz, 2016; Schwartz, 2017), but they are only rarely reported in the reviewed empirical studies. However, although they have not been widely used in the past, they do seem to be on the rise due to the decreased use of stage theory.

A comparison of older and newer studies shows that 88% of those conducted in 1970-1999 and 56% of those in 2000-2017 applied CMD theory. More recent theories include more factors that may influence ethical behavior and challenge the traditional concept of cognitive development. For example, the approach of Schwartz (2016) integrated rationalist-based (CMD theories) and non-rationalist-based theories and combined cognitive, individual, situational context and mental (e.g., intuition and emotion) factors.

2.5.3 Impact and Design of Ethics Training

The results show that few studies found negative effects (only one study), mixed effects, or no impact of ethics training, and the majority report positive effects of ethics training. Different results regarding the impact of ethics training could be attributed to the different measurement instruments and research designs applied. Furthermore, 45% of the studies that report no effects provide no information about the training designs. In contrast, the studies that report positive or mixed results provide this information in 65% and 60% of cases, respectively.

It is important to emphasize the concept of ethical competence, or rather the definitions of different components of ethical behavior, as different training designs may be appropriate depending on which dependent variable should be strengthened. The competing effects in some studies may be explained by the fact that these studies examined several components of ethical behavior (Honeycutt et al., 1995; Kumar et al., 1991; Marnburg, 2003). For

example, ethical judgment may require other training methods than ethical awareness, thus the training design should be matched to the component that is supposed to be improved. Presenting ethical cases to participants to encourage awareness of these problems in real-life situations could strengthen ethical awareness, but it would not stimulate ethical judgment because presentations alone do not ask participants to choose between possible courses of action and to discuss and evaluate the arguments for and against the alternatives. There is a need to tailor the elements of the training design to the ethical component to be strengthened. In addition, one must consider interrelations between the components and other frameworks to identify the designs that allow either simultaneous stimulation of several components of ethical behavior or a focus on one specific component. A training design will presumably be more time-consuming and complex if it addresses several components, rather than focusing on one component of ethical behavior.

In the context of corporate training in HRD, in addition to the desired positive effects on ethical skills, we must also consider the costs of the training. Unfortunately, previous studies have only dealt with the impact of the training, and no study has considered costs. This is particularly relevant in professional practice where budgets for HRD measures are limited. It is also important to know whether different training designs may have similar effects and different costs. Companies are likely to be interested in lower cost variants that deliver comparable effects.

In this context, e-based training, as a training trend, could help to reduce costs and increase flexibility (Cascio, 2019). Martin et al. (2014) also emphasize the relevance of e-based training. The results of studies examining e-based training programs are encouraging, but these include only three studies in this review. Bodkin and Stevenson (2007) and Sorensen et al. (2017) found positive effects, while Lau (2010) reports positive effects only in combination with other learning activities. While Antes et al. (2009) express concern that online training makes it difficult to

integrate social interaction, Sorensen et al. (2017) discuss a training program that includes no face-to-face activities, but incorporates social interaction in online discussion threads. Additionally, they provide recorded lectures and participants are asked to write reflection papers. Videoconferences may enable exchange and video-based recorded lectures support on-demand instruction. There is a need for more studies and in-depth investigations to reveal how researchers and practitioners can use e-based training methods to strengthen ethical behavior in the workplace. Bodkin and Stevenson (2007) conclude that participants who were given more time to reflect on the training content achieved stronger and more positive changes in their ethical perceptions than a comparison group who had not been given more time to reflect. This provides support for the conclusion of Lind (2015) that improvement in ethical competence needs time and regular confrontation with ethical problems. In this context, it is important to interpret the positive effects of the empirical studies critically, as they were often measured directly after the treatment, thus it is not possible to ascertain whether the observed effects would persist in the long-term, as noted by Arlow and Ulrich (1985), Richards (1999), and Weber (1990). If these effects do not persist, then regular repetition of training sessions would be advisable. Owing to the variety of statements about duration, it is not possible to identify the optimal duration or repetition, but it seems reasonable to deduce that the sustainable development of ethical competences requires time and does not happen quickly. In the view of lifelong learning, participants should benefit from regular repetition during their steady development of ethical competences.

2.5.4 Dependent Variable, Measurement, and Methodological Rigor

The results of the analyses concern a variety of different examined dependent variables and measurement methods. Thus, a general interpretation of these results is difficult. Further research would benefit from a rigorous use of well-established and validated

measurement instruments. Less time-intensive procedures were developed (such as the DIT and self-developed test instruments) because Kohlberg's (1969) moral judgment interview (MJI) is very time-consuming. There are also various criticisms of these alternative measurement instruments; for example, the DIT with checkboxes is not sufficient as a measurement tool because of the assumption that moral judgments need open answers and the respondent's own formulation and can therefore only be measured through interviews (Kohlberg, 1979; Rest et al., 1999). Antes et al. (2009) also suggest that the DIT may not be able to capture all nuances of moral judgment. Other comprehensive tools, such as an assessment center to measure ethical competences (Eigenstetter et al., 2012), could provide more information about the development of the competence as a result of ethics training, but this would be very time-consuming and thus impractical.

With regard to the methodical rigor of empirical research designs, many of the pretest–posttest studies lack a control group. Widely used in behavioral research, longitudinal studies are able to compare the level of ethical behavior (specific components, skills/competences) before and after the ethics training (pretest–posttest design) to measure changes driven by the treatments. To trace the change back to the treatment, it is necessary to compare the change in a treatment group with that of a control group because other factors than the treatment could have caused the changes (Dimitrov & Rumrill, 2003). Just 32 of the studies used a pretest–posttest–control group design. Additionally, further research should consider the long-term effects of the training by measuring effects not only shortly after the training, but also after a longer period.

2.6 Summary of Research Gaps and Agenda

As shown in the above discussion, there is a wide range of findings on the impact of ethics training, with many research gaps and much potential for discussion around research design. Table 4

summarizes the identified research gaps and criticisms that I address with my own study.

Table 4

Research Gaps and Plan for Own Study

Concerned Dimension	Research Gaps and Criticism	What I will address
Concept of Competence & its Measurement	▪ Ethical competence is often not defined and measured at all or is defined and measured in very different ways (no uniformity)	▪ Making transparent the underlying concept of competence and using a suitable, well-established, and validated test instrument for its measurement
Theory	▪ One-third of the examined studies do not make explicit their theoretical foundation; studies based on learning and instructional theories are necessary	▪ Theoretical foundation of ethics training design, using ethical decision-making literature, well-established methods, and learning theory (constructivism)
Design of Training	▪ Many studies do not provide any information on the design of the training or indicate whether the training was tailored to the respective variable (ethical competence) ▪ Despite possible advantages in terms of flexibility and cost savings, only three studies examined e-based ethics training; results are promising, but require further investigation	▪ Tailoring the training to a focus on business ethics and the underlying concept of competence ▪ Conception of variations of an ethics training program, using theoretical foundations ▪ Developing an ethics training in an e-based version.

Empirical Design of the Study	▪ Various design elements of the training methods have not been tested individually (only in the overall package, thus the effect cannot be traced back to a particular factor and only indicates whether the training works) ▪ To measure an effect, it is necessary to measure competence before and after the training, with a control group comparison (many studies did not use this design)	▪ Individual testing (keeping other factors constant) and comparison of design variations (contents remain the same) ▪ Using a pretest–posttest design with control group

Note. Own compiled table, based on the content of Chapter 2.

With reference to these gaps, this work will provide a short exemplary guideline for conducting studies of ethics training effectiveness that empirically test different training design elements. This guided the current study in its development and evaluation of an ethics training program.

2.6.1 Issue 1 – Concept of Competence and the Choice of the Measuring Instrument

There is no uniform definition of ethical competence. Owing to the different definitions and components, as well as the missing definitions of ethical competence, it may be challenging to develop and measure this competence and compare the effects reported in prior studies. It is important to clarify and embed the term “ethical competence” as the target variable to be strengthened by the training program. Researchers and practitioners in ethical education must use these different definitions, components, and elements to identify the ethical competence they wish to

investigate. They might adopt an existing definition or choose to develop their own. Examples of the existing definitions include the following.

Kohlberg's definition of moral competence is "the capacity to make decisions and judgments, which are moral (i.e., based on internal principles), and to act in accordance with such judgments" (Kohlberg, 1964, p. 425). Lind (2016a) defines moral competence as the "ability to resolve problems and conflicts on the basis of inner moral principles through deliberation and discussion, instead of violence and deceit" (Lind, 2016a, p. 13).

The competence concept can influence the choice of training methods, learning tasks, and measurement instrument. Defining this term is thus the first major step because, for example, if ethical competence were defined as factual knowledge about ethical theories, appropriate training would be conceptualized around memorization of these facts and a knowledge quiz could constitute an appropriate instrument for measuring the impact of such training. In this case, for example, it would not be reasonable to use an instrument that measures discussion skills in ethical situations because the instrument is not aligned with the competence concept.

Thus, there are different options for measuring the impact of ethics training. When the goal of the training is the acquisition of facts and professional competence, a knowledge quiz or an oral exam could be a suitable measuring instrument (depending on the ethical competence concept). When the ethical competence is moral judgment, appropriate test instruments might include Lind's MCT (2016), Kohlberg's MJI (1958), or Rest's DIT (1979). Ethical judgment tests are often based on scenarios that pose an ethical dilemma. An example for an instrument measuring ethical awareness is Jordan's ethical awareness test (2009). A broad selection of test instruments for the measurement of ethical awareness is provided by Miller et al. (2014). Researchers can also develop their own test instruments for specific competences.

However, this is very costly, as extensive validity studies are necessary. In summary, the competence concept is key to choosing the right measuring instrument.

2.6.2 Issue 2 – Theoretical Foundation

A theoretical foundation is required to derive hypotheses about competence development, depending on the training design. The streams of learning theory can may guide the development of various training programs and methods include behaviorism, cognitivism, and constructivism.

Behaviorism states that learning is behavioral change that occurs in response to environmental stimuli. Investigations in behaviorism concern the connection between the stimuli and the responses (stimulus-response model), while intrapsychic processes are not taken into account ("black box" model) (Rey, 2009; Sackney & Mergel, 2007). Behaviorists believe that new behavioral patterns become automatic through repetition (Nagowah & Nagowah, 2009). They also argue that knowledge is given and absolute (Ertmer & Newby, 2013; Marton & Booth, 1997; Nagowah & Nagowah, 2009).

In education, the teacher plays the key role. They have objectively correct knowledge that they present to learners in the simplest possible way. Thus, learners are passive and absorbing recipients of knowledge (Böhm, 2006). This underpins the pedagogical conviction that people are formed through external stimuli (Erpenbeck & Sauter, 2019). The principles of behaviorism can be found in many learning programs in which factual knowledge is learned and tested (e.g., vocabulary training, driver's license test) (Batinic & Appel, 2008; Böhm, 2006). Behaviorism is generally suitable for supporting learning that involves recalling facts, describing and illustrating concepts, automatically performing specific procedure, and so on (Ertmer & Newby, 2013). Thus, behaviorism could be appropriate for examining the effects of training based on factual knowledge and expertise. This may be applicable where educators provide compliance training in which

facts and values on a specific topic with ethical relevance are conveyed (for further information about compliance training, see Sample, 2015). However, the development of higher-level competences or skills that require more in-depth processing, such as language development and critical thinking, cannot be explained by behaviorism (Ertmer & Newby, 2013; Schunk, 1991).

Cognitivists are interested in the cognitive processes that occur between the stimuli and responses (stimulus-organism-response model) and which relate to information processing (Loyens & Gijbels, 2008; Nagowah & Nagowah, 2009). The cognitivists are also convinced that knowledge is given and absolute (Ertmer & Newby, 2013; Nagowah & Nagowah, 2009), but the learner is not passive. Rather, the learners are active and extend their knowledge (knowledge acquisition) through internal cognitive processes, such as receiving, organizing, and connecting new information with prior knowledge (Böhm, 2006). Cognitivists stress the importance of memory, stating that, “Learning results when information is stored in memory in an organized, meaningful manner” (Ertmer & Newby, 2013, p. 52). They believe teachers must support learners in organizing information. Cognitivism is suitable for explaining complex forms of learning, such as problem-solving (Ertmer & Newby, 2013)

The philosophical assumptions of the behaviorist and cognitivist learning approaches are objectivistic, indicating that “the world is real [and] external to the learner” (Ertmer & Newby, 2013, p. 54). The goals of teaching, from a behaviorist and cognitivist perspective, are the communication of knowledge to the learner in the most efficient way possible and, from a philosophical perspective, the transfer of the real world into the mind of the learner (Ertmer & Newby, 2013). However, while teachers in a behavioristic tradition arrange stimuli so that learners respond correctly to them, cognitivist teachers help learners to structure and relate new information to their prior knowledge, as stored in their memories (Ertmer & Newby, 2013).

Some cognitivists have questioned the objective assumption, and the constructivist approach to learning developed as a result (Ertmer & Newby, 2013; Jonasson, 1991b). Constructivism suggests that learners play an active role, constructing knowledge on their own and based on their own experiences of collaborative environments (Loyens & Gijbels, 2008). Knowledge is not given and absolute, but rather the construction of each learner, formed by interpreting and reflecting on new information gathered from their prior experiences (Cooper, 1993; Ertmer & Newby, 2013). This approach is particularly suitable for responding to problems that arise during the more advanced stages of knowledge acquisition, when knowledge must be questioned, reflected upon, negotiated, and possibly rejected (Ertmer & Newby, 2013; Jonasson, 1991a). This is especially relevant when complex problems emerge. Jonasson (1991a) describes this as “advanced knowledge”, while the acquisition of basic knowledge (introductory knowledge) can be better explained and supported by behavioristic or cognitivist approaches (as both are objectivistic).

Constructivist approaches may be suitable for explaining learning of soft skills, such as communication and discussion (an active learner in a collaborative environment). Hard skills concern factual knowledge and expertise, while soft skills are interpersonal abilities and personal attributes associated with communication and social skills (Robles, 2012).

To compare these streams, behaviorism and cognitivism see reality as external to the learner and the mind as the processor of the input of reality. While the cognitivists are interested in these processes, constructivism says that each learner builds their own reality in their mind, based on their experiences of the world and their existing knowledge (Cooper, 1993; Nagowah & Nagowah, 2009).

Nevertheless, although these learning approaches are sufficiently different that they can be presented as three separate

streams, there are certainly overlaps between them, such as the fact that both the cognitivists and the constructivists see the learner in an active role (Ertmer & Newby, 2013). To identify the theory most suitable for explaining learning and development, each study must consider whether the training is intended to strengthen hard or soft skills. Researchers and trainers must consider their competence concept to find a theoretical foundation that appropriately guides the training design.

2.6.3 Issue 3 – Developing Ethics Training

The training program design should reflect the underlying competence concept in the choice of appropriate methods. For example, a group discussion of an ethical dilemma could be suitable for strengthening moral judgment, but it is not necessarily the best way to convey factual knowledge.

A variety of training methods – such as group discussions, presentations by learners, and learning diary tasks – can meet different learning needs. Well-known training methods include the Blatt and Kohlberg dilemma discussion (1975) and Lind's KMDD (2016a). Confronting participants with ethical dilemma stories is a well-established method of developing moral judgment; though, for this, it is important to consider the authors' own definitions of "moral judgment."

Different training designs should be derived theoretically, for which the learning theories (see issue 2) and design categories from section 2.3 can be used. In addition, the content of the training may vary. This may also depend on whether the training is intended for a specific target group and to address specific topics. The content could be general, without reference to any professional domain, and it could include various topics, such as ethical theories. Conversely, the content might be specific and tailored to a professional domain. Topics with business reference might include data protection or rules intended to prevent money laundering.

The training contents should be defined accordingly. This could, for example, target a specific professional group that needs

training for a particular corporate position or in response to an ongoing problem (reputation loss, a scandal, etc.), such as training for auditors to raise awareness to prevent accounting fraud, and so on.

2.6.4 Issue 4 – Study the Impact of Ethics Training

To measure the impact of ethics training, it is important to use a pretest–posttest–design with a control group. Only a comparison of test results before and after the final results of the training can show learning progress. For example, there could be a natural increase of a competence even without a training program (perhaps through maturation, etc.). To accurately measure the effectiveness of the training, this evaluation requires a control group who receives no training. Additionally, a large number of participants is needed for a reasonable sample size. To examine and compare the effects of different training designs to identify the best design, researchers must develop different designs and investigate each separately. It is recommended that researchers vary the training designs in one design category and keep constant the others, as this allows them to trace any impact to this design category (Creswell & Creswell, 2018). It is not impossible to test variations of different design categories, but it is then only possible to test the effect of the entire intervention and not to attribute this to a specific design category.

Artelt (2000) agrees with this, noting that it is difficult in training studies to identify the elements of a training design that contribute to the positive impacts. A systematic separation of individual elements and comparison with different control groups would be necessary to prove the effectiveness of individual training elements. Since the combination of different elements can also be a strength, it makes the examination more extensive due to an almost infinite number of design combinations.

Since it is necessary to trace the effects to the design of the training (treatment variation), a laboratory experiment is appropriate. Laboratory experiments have a high internal validity

and can be used for causality tests (Bonate, 2000; Cook, 2003; Oakes & Feldman, 2001; Rossi et al., 1999). Internal validity indicates whether the experimental situation actually measures that which it was intended to measure (Brosius et al., 2008); thus, internal validity indicates that the change in a variable can be traced to the independent variable (Harris, 2002). This is true for laboratory experiments because they provide a controlled situation in which all subjects have the same conditions (e.g., equipment, room temperature) other than the experimental variation intended by the researcher (Brosius et al., 2008). In this way, confounding variables can be controlled. Such variables might include the characteristics of the situation, subjects, or experiment supervisors. Situational characteristics – such as room temperature – can be easily controlled in the laboratory. To control the characteristics of the subjects (e.g., age), the randomization of participants is necessary, such as the random assignment of subjects into experimental and control groups (Kubbe, 2018). A sufficiently large sample is also important, because a larger number of subjects means a greater likelihood that the experimental and control groups will have an equal distribution of all characteristics (i.e., possible confounding variables). This should prevent the systematic bias of the results due to deviating cases. A sample of 30-40 people per group is recommended (Kubbe, 2018; Behnke et al., 2006; Gerrig & Zimbardo, 2016). Therefore, the availability of subjects (e.g., students are more easily recruited than professionals), as well as the time, financial, and spatial constraints of the research project must also be taken into account (Kelcey & Shen, 2020; Raudenbush, 1997). To control for the influence of the expectations of the subjects or the supervisor of the experiment, a double-blind procedure is useful. In a double-blind experiment, neither the subjects nor the experiment supervisor know at the time of data collection whether a specific participant is to be included in the experimental or control group (Kubbe, 2018). Furthermore, by delivering instructions in writing, the experiment supervisor can

reduce their influence on the participants. It is also recommended that the same supervisor works with all groups in the experiment. To avoid exhaustion of participants, the duration of the experiment should be considered critically. Due to these controlled conditions, laboratory experiments are particularly suitable for the investigation of causal relationships (Brosius et al., 2008; Keuschnigg & Wolbring, 2015).

Nevertheless, the results of such experiments can only be transferred to real-world situations to a limited extent, as their external validity is low due to the artificial conditions of the laboratory (Bortz & Schuster, 2006). External validity concerns the extent to which the results of an experiment can be generalized to reality – in effect, whether they are likely to occur similarly outside the laboratory (Bracht & Glass, 1968; Brosius et al., 2008).

Reflecting the considerations cited above, this study addresses the criticisms and the remaining research gaps in the following manner:

- providing transparency on the applied concept of ethical competence, using an appropriate measuring instrument to assess moral judgment competence
- developing business ethics training in an e-based learning situation, aligned with the concept of ethical competence and theoretical foundation
- systematically deriving hypotheses with a foundation in the field of learning theory to support variations in the ethics training design
- using an experimental pretest–posttest–control group design to measure the effect of the ethics training.

3 Theoretical Foundation and Development of the Ethics Training Program

3.1 Basics of Moral Competence

To examine the impact of variations in the design of ethical-competence training programs, I need a clear definition of "ethical competence." This includes the concept of competence itself and a

suitable instrument for measurement that is validated, accessible, and economically feasible, as a measurement of competence is essential for a study of effectiveness. Furthermore, I must determine how to develop a training program suitable for the chosen competence concept. In the literature on the development of moral competence, it is well established to confront learners with moral dilemmas (Blatt & Kohlberg, 1975; Feichtinger, 2019; Lind, 2016a).

In accordance with my research agenda, I begin this chapter by defining a competence concept with a suitable measurement instrument for this study. The detailed description of the measurement instrument is presented in the methods section of the following chapter.

Providing the basis for the development of my own training program was an existing method – the confrontation of learners with dilemma situations, and counterarguments, using the Lind (2016a) KMDD. The KMDD was chosen because it builds on the established literature on the development of moral competences and offers an empirically proven training method aligned to the competence concept (for which I also identified a suitable measurement tool). I used the KMDD as a starting point to develop my own ethics training program and the variations I wanted to investigate. Of course, the KMDD can only serve as a basis, as adjustments must be made to ensure the training is e-based, has a business ethics focus, and has various theory-guided training designs, which are not included in the KMDD.

3.1.1 Concept of Moral Competence

I applied the Lind (2016a) concept of moral competence. He defines moral competence as the "ability to solve problems and conflicts on the basis of one's own moral principles [moral orientation] through thinking and discussion rather than through violence, deceit and power" (Lind, 2016a, p. 13). It is measurable using Lind's (2016a) moral competence test (MCT; formerly the "moral judgment test" (MJT)). The MCT measures "how they

[participants] solve the task of dealing with arguments, and especially with arguments that contradict their own point of view" (Lind, 2015, p. 58). The pattern of individual responses in the MCT must indicate "that the participant is capable of judging the given arguments according to their moral quality rather than whether the arguments agree with or contradict his own opinion on the case described" (ibid., p. 59) – in relation to moral dilemmas. Here, it should be considered that the MCT does not measure the use of violence, deceit, or power to solve problems, as stated in the competence definition, but measures the ability to think about and discuss arguments of different moral quality, even when the arguments support contrary positions. The moral quality of arguments is based on Kohlberg's stage theory, which is introduced in the following section. Detailed information about the MCT is given in the methods section (see 4.1.3.1).

The concept of moral competence emerges from the dual aspects model (Lind, 2016a). This states that moral behavior consists of two aspects: the moral orientations, as the affective aspect, and moral competence, as the cognitive aspect. Lind (2016a) explains that moral orientations and moral competence are not components, because although they are distinguishable, they cannot be separated from behavior. Rather, they are different aspects (i.e., characteristics of behavior). As an example, he cites that the weight and roundness of a ball can be distinguished from the ball, but cannot be separated from it.

Moral orientations include moral principles, such as humanity, justice, freedom, and human rights. A moral orientation is a criterion by which individuals orient themselves to resolve conflicts and problems (Lind, 2016a). Lind (2016a) states that these orientations are innate and that all people want "the good." However, individuals need moral competence to apply their moral principles in their decision-making processes in conflict situations (Lind, 2016a; Schillinger, 2006). Moral competence is not innate and must be learned and trained (Lind, 2000; Hemmerling, 2014).

Empirical results also indicate that moral competence may also regress if it is not stimulated (Hemmerling, 2014). Consequently, regularly repeated training is required to strengthen moral competence (Gasterstedt, 2015; Lind, 2015).

3.1.2 The Konstanz Method of Dilemma Discussion (KMDD) and its Theoretical Foundation

Lind developed the KMDD to foster moral competence, as previously defined. The KMDD has been used for 25 years and its positive effect on the moral competence of participants has been empirically proven (Lind, 2010; Lind, 2015; Hemmerling, 2014; Lerkiatbundit et al., 2006). The method takes little time (90 minutes) and is applied to people of all ages (from about eight years) and in different countries (e.g., Germany, Brazil, Chile, China, Poland, Switzerland, Turkey, Colombia) (Lind, 2016b).

The KMDD evolved from the Blatt-Kohlberg method (Blatt & Kohlberg, 1975; see also Hemmerling, 2014). Kohlberg states that moral development and the basic mental structure expressed in moral stages are the results of individuals' interactions with their environment. Therefore, to support this progression, individuals need an environment that stimulates their moral judgment. Previous literature shows that formal education and moral education programs are suitable stimuli for the development of moral reasoning (Colby & Kohlberg, 1987; Dellaportas, 2006; Treviño, 1992). Based on the results of their empirical studies, Blatt and Kohlberg (1975) recommend educational programs that include small group discussions and reflection as stimuli for moral development. That is an important starting point, in regard to the nature and design of ethics training for improvement of ethical competences. Furthermore, empirical studies have demonstrated a positive relationship between moral reasoning and moral behavior (Blasi, 1980; Rest & Thoma, 1985). Thus, improvement in moral reasoning through educational and developmental methods such as an ethics training could be an appropriate mean of preventing unethical behavior in business.

The Blatt-Kohlberg method uses dilemma stories to strengthen the moral judgment competence (the following summary of the Blatt-Kohlberg method is based on the literature Blatt & Kohlberg, 1975; Hemmerling, 2014). This is intended to stimulate the moral judgment of the participants. In the Blatt-Kohlberg method, the trainer presents 3-4 short stories and leads participants in a discussion about the moral dilemmas within them. The discussion about the stories takes 45 minutes in total.

One criticism here is that 45 minutes is a very short time to deal with 3-4 different stories, to understand the moral dilemmas, and to discuss them fully. It may be even more challenging for the trainer, as they must apply the "plus-1 convention" in this short time. This means that the trainer must confront learners with arguments one stage above their own. This has also been criticized for its lack of practicability (Oser & Althof, 2001). For this rule, the trainer must know the moral development stage of each individual learner (and must have measured this properly beforehand, using the MJI), and they must be able to formulate higher-stage arguments for each individual learner in the discussion and for each story. The measurement of the respective moral stage of the learner is very time-consuming, the overview with several participants is rather challenging for the trainer, and the formulation of arguments for each individual participant tailored for the next moral stage is laborious.

Another criticism is that the moral learning process should take place within the participants, rather than being enforced by external authorities. The teacher, as an authority, has a very strong influence, since they are the only party to give the learner a stimulus to reflect on "better arguments" through the plus-1 convention. While studies report positive effects of the Blatt-Kohlberg method (Lind, 2002), an alternative method was needed because even trained teachers prefer not to use the Blatt-Kohlberg method (Lind, 2016a). Hence, Lind developed the KMDD, which does not include the plus-1 convention. This decision was

influenced by the results of an experiment by Walker (1983), who showed that engaging with counterarguments yields the same positive effects on moral development as the plus-1 convention (see also: Lind, 2010). Walker concludes that moral discussions provide most benefits where there are major conflicts between opinions and moral argumentation. The development of the KMDD was also inspired by the Habermas (1983) ideal of communicative community and the Oser (1986) discourse method. Habermas (1983) states that moral behavior usually takes place in social situations, and a regulated discourse with other people allows participants to exchange views on moral issues. The discourse consists of communicative actions, which are cooperative social interactions among participants (Habermas, 1983). Oser (1986, p. 919) identifies the discourse as a “common denominator” that strengthens moral competence. He stresses the importance of every participant in the discourse participating equally, with the avoidance of indoctrination. Participants should learn to develop their own point of view, while also considering other perspectives, even when there is disagreement. For this reason, learners should be confronted with moral conflicts, absent an authority who presents the only “right“ solution. All learners must be able to engage in an open and fair exchange of arguments and points of view (Oser, 1986).

In KMDD, the trainer recounts a short fictional story to the students. The story contains a moral dilemma for a fictive protagonist (Lind, 2018). A moral dilemma describes situations in which each alternative action feels wrong or in which no clear "right" or "wrong" can be stated (Lind, 2016a). The trainer must lead the students to a plenary discussion about this dilemma and the decision of the protagonist in the story (Hemmerling, 2014). The protagonist has already decided and acts accordingly. There is also a second variant of such stories, where the protagonist is still facing the decision (Lind, 2018; Eichert, 2020). Prior to the discussion, the

students must complete some other tasks. Table 5 presents details of the KMDD procedure.

Table 5

Procedure of a Konstanz Method of Dilemma Discussion (KMDD) Session

1.	Introduction to the dilemma story (verbal by KMDD teacher)
2.	Independent reading of the dilemma story and notes in individual work
3.	Dilemma clarification with first voting (classification pro and con group)
4.	Strengthening one's own decision in group work
5.	Dilemma discussion in the plenum
6.	Nomination of the best counterarguments (best argument of the opposite site)
7.	Second voting
8.	Reflection and observations (exchange within the whole group)
9.	Closing the session

Note. Own compilation, based on Lind (2018).

The KMDD refers to the trainer as the "KMDD teacher." This paper uses the terms "trainer" and "teacher" interchangeably.

The following facts and explanations about the KMDD are taken from Lind (2016a, 2018) and Hemmerling (2014). (1) First, the KMDD teacher introduces the story to the participants. (2) The participants then have the opportunity to read the story by themselves (print) and can take notes about the problem in the story (individual work). The story must be easy to understand and should activate "medium arousal" opposing moral feelings. In this regard, the story should be a semi-real, hypothetical story. It should include a fictive protagonist and not a real person, to avoid moral feelings that are either too strong or too weak, as this could otherwise leave participants feeling uncomfortable and too emotionally affected or bored, which could repress the learning process. "Semi-real" means that the story should seem real, but be hypothetical. Briefly, if learners are not sufficiently emotionally activated, they may become bored, and if the story triggers excessive emotion, it could overwhelm the learners. Medium arousal is therefore necessary and recommended. (3) In the next phase, the participants exchange their

thoughts on the case and discuss whether they see a moral problem in the story. Anyone who does not see a problem in the story is given the task of the observer for the upcoming discussion. The participants then vote either for or against the decision of the protagonist in the story. If this vote outcome is balanced and the pro and the con sides are sufficiently represented, the group is divided into small groups of 3-4 people who share a perspective (pro or con). (4) In the next phase, the participants exchange ideas and generate more arguments in favor of their own camp (pro or con) within their group. (5) The discussion in the plenum follows, with the participants of the pro and con camps exchanging arguments and everyone should learn how to deal with counterarguments. The following two rules apply to the plenary discussion:

Rule 1: every argument is allowed. Everything may be said, but no participant (or any other person, including those in the story) may be attacked or evaluated – positively or negatively. This rule ensures that the discussion is oriented toward the matter under discussion: in effect, the decision of the protagonist and not any personal issues. It is important that there is free discourse between the participants, which provides equal dignity and mutual respect (for free speech and for the discourse).

Rule 2: the ping-pong rule must be applied. When one participant has spoken, they determine who from the opposing group will speak next. Everyone allows the others to finish their statements and only ever gives one argument, then permitting the next person to speak. In this way, the moderation of the discussion is group-monitored.

All arguments are written down (e.g., on the blackboard or in a digital medium by another person, such as the assistant or teacher). The plenary discussion should last at least 30 minutes. In the KMDD, the teachers do not give their opinions on the dilemma and do not discuss this with the participants. They only present the story and the rules about the session. They entrust the session to the

learners according to the rules and do not act in an authoritarian manner. The trainers only take a “referee position” for emergencies (e.g., insults) and they should indicate to the learners when KMDD rules are not being followed. These exceptions aside, the trainer does not give feedback to the participants. (6) After the plenary discussion, there is an opportunity to nominate the best counterargument. The pro and con camps are then allowed to vote for the best argument made by the opposing camp. For this task, everyone is allowed to decide for themselves – everyone has the right to their own opinion. To provide an easy overview, the arguments are collected during the discussion (on the blackboard or in a PowerPoint slide). The participants should learn that arguments can have different moral qualities and that one’s opponents can make good arguments. They learn to appreciate good arguments, even when they come from the opposite camp. (7) There is then a second vote on whether participants are for or against the behavior of the protagonist in the story. (8) In the reflection phase, the trainer asks how the discussion was perceived, whether the participants enjoyed it, and even if nobody has changed his opinion, whether the discussion was useful. The participants exchange thoughts about the meaning, enjoyment, and learning effect of this session. The observers (if there are any) also share their experiences (using a given sheet of paper). The teacher makes no value judgments and gives no praise to avoid being perceived as an authority. The reward for the participants should be the discussion and the learning effect itself. (9) The trainer thanks the participants for the session and closes it.

“The Konstanz method of dilemma discussion” (KMDD) is a protected trademark (German Patent & Trademark Office). The training and certification of the KMDD teacher involves a structured program on dilemma-story writing and testing in training groups, as well as learning in tandem through supervision and collegial exchange with experienced KMDD teachers (Lind, 2018).

Since the terms “morality,” “moral competence,” and “dilemma discussion” are not always used in positive ways, and participants often cannot imagine what they mean, the KMDD has also been offered since 2017 under the name of “discussion theatre – talk and listen“ (Lind, 2019). The method is suitable for various subjects, including ethics, social studies and politics, religion, biology, business, and law; and it is used in universities in psychology, educational science, medicine, economics (business ethics), and biology (see e.g., Lind, 2010, 2016a). The method is not intended to convey or indoctrinate values or moral orientations; nor is it intended to leave all participants with the same opinion (including that of the teacher). The point is for participants to learn to find arguments and justifications for their own points of view, to communicate these, and to discuss them in exchanges with others. Participants also have the opportunity to think about other perspectives. These other arguments may not leave the participants with different opinions at the end of the discussion, but they should encourage people to appreciate and understand other arguments, even when they contradict their own opinion (Lind, 2018). The method also provides practice in enduring differences of opinion. Moral democratic learning is *promoted* with the help of the method, not forced. Based on the constructivist learning theory (Lind, 2016a), KMDD assumes that learning is a process that needs active construction from the learner. It is not possible to push knowledge into a passive learner from the outside (Siebert, 2003). The learners must actively construct their own knowledge and competences using their prior knowledge and through interaction and exchange with others (see e.g., Gogus, 2012; Woolfolk, 2008). Lind (2018) states that this can be promoted by phases of support and challenge in the KMDD. In some phases, the participants receive support for the tasks – such as the small group work, where they exchange arguments with like-minded people (in their own camp) and enjoy sufficient time for their own thinking process; while some phases

are challenging for the participants – such as listening to their opponents and dealing with the counterarguments.

Following this short presentation of the KMDD (Lind, 2016a, 2018) and the Blatt-Kohlberg method (1975), Table 6 provides a final overview of the characteristics of the methods.

Table 6

Comparison of the Konstanz Method of Dilemma Discussion (KMDD) and the Blatt-Kohlberg Method

Feature	Blatt-Kohlberg method	Konstanz Method of Dilemma Discussion (KMDD)
Underlying concept of moral competence	Moral judgment competence "is the capacity to make decisions and judgments, which are moral (i.e., based on internal principles), and to act in accordance with such judgments" (Kohlberg, 1964: 425).	Moral competence is the "ability to solve problems and conflicts on the basis of one's own moral principles [moral orientation] through thinking and discussion rather than through violence, deceit and power" (Lind, 2016a: 13). Moral competence is a moral judgment competence that means that "the participant is capable of judging (…) arguments according to their moral quality rather than whether the arguments agree with or contradict his own opinion on the case described" (Lind, 2015: 59).
Instrument for effect measurement	MJI	MCT
Use of hypothetical moral dilemmas?	Yes	Yes
Number of dilemmas in one session	One or several	One only
Length of session	45 minutes	90 minutes

Focus on particular stage of moral orientation (plus-1 convention)?	Yes	No
The teacher presents arguments and asks for comments?	Yes (plus-1 argument)	No (only the teacher asks questions about clarification and voting and presents the story and rules)
Focus on counterarguments of other students?	No/Yes	Yes
Time for collecting different perceptions of the dilemma?	No	Yes (dilemma clarification)
Rules for the discussion between participants are given?	No	Yes, two rules: 1. Free speech and respect for everyone (discourse principle) 2. "Ping-pong rule" for group-monitored self-moderation by students
Phases of support and challenge?	No	Yes
Intermittent small-group discussions?	No	Yes
Forcing participants to recognize the perspectives of the others?	No	Yes
Meta-cognition?	No	Yes (self-evaluation what the participant has learned)

Note. Adapted from *Morality Behind Bars. An Intervention Study on Fostering Moral Competence of Prisoners as a New Approach to Social Rehabilitation*, by K. Hemmerling, 2014, p. 48.

In summary, the KMDD was used in this study because it not only provides a competence concept with a suitable, validated, and economically feasible measurement instrument, but also

addresses the key criticism of the Blatt-Kohlberg method. Kohlberg's measuring instrument, the MJI, is too time-consuming and costly in its implementation and evaluation. The plus-1 convention in the Blatt-Kohlberg method is also difficult to implement. As a result, even trained teachers avoid using the Blatt-Kohlberg method (Lind, 2016a). Kohlberg and his followers have accordingly declared the method “dead” (Althof, 2015). With the KMDD, Lind offers a training method that is suitable for orientating for this study, albeit with some adjustments, which are detailed in this chapter.

3.2 Theoretical Foundation for the Development of Training Design Variations

3.2.1 Relevant Design Category: Learning Approach

To develop different designs of ethics training and investigate their effects, it was first necessary to identify the relevant training designs. The Kreismann and Talaulicar (2021) model of relevant design categories, as described in section 2.3, includes (a) learning approach, (b) number of different training methods, and (c) duration of the training. This was used here as a basis. As only one category can be chosen for an experiment to trace the effect back to a design variation, the “learning approach” category was chosen. This concerns the extent to which the participants must work actively in the training method, either actively completing tasks or passively receiving prepared training content and being assigned no active tasks. Social interaction – meaning exchanges between training participants or between participants and trainer – is a subcategory of the active learning approach (thus, an approach may be active, with or without interaction). Training designed with an active learning approach and without interaction includes individual tasks for participants, such as developing solutions for ethical dilemma situations on their own. Training with an active learning approach and with interaction could include group work with an exchange of arguments. Passive training does not include the active involvement of participants,

and tasks may include “only” listening to a lecture. Passive training is also known as “traditional classroom teaching” or “lecture teaching style” (Michel et al., 2009; Minhas et al., 2012)

Providing the basis for my own training, the KMDD has its theoretical foundation in constructivist learning psychology (Lind, 2016a), which was also the basis for the design category. In e-based forms of learning in particular, it is debatable whether participants can actually be actively involved (with or without interaction) and whether this is useful, compared to a passive training design.

It is necessary to develop variations of the training. All treatments should include the same dilemma story, but the important confrontations and discussion of the arguments – especially the counterarguments – should be designed differently. The training design variations concern the confrontation of the participants with the arguments, as this allowed a comparison of active and passive training methods, which is an important topic in training and education. There are ongoing discussions about which design is more advantageous (Bosio & Origo, 2020; Cui, 2013; Fairweather, 2005; Green et al., 2018; McCarthy & Anderson, 2000; Michel et al., 2009). Active training methods are often promoted as better than passive methods (Drafke et al., 1996; Michel et al., 2009; Benek-Rivera & Matthews, 2004). The KMDD also includes an active-interactive orientation. Lind (2016a) states that arguments about a moral conflict must be exchanged in a discourse to strengthen moral competence. It would be useful to examine whether interactive training in an e-based written form – without audio or video – works as efficiently as the face-to-face KMDD sessions, despite the reduction of communication signals. A passive design would have to enable a presentation of the arguments (list), without the participants having to collect arguments themselves or exchange them with others. An active design without interaction would involve the task of collecting arguments by oneself, with no opportunity for exchange.

3.2.2 Theoretical Foundation of Learning: Individual Constructivism and Socio-Constructivism

Following the short summary given in section 2.6, the underlying theoretical framework of constructivism in learning is presented here in more detail to support the derivation of the hypotheses on the effects of the developed ethics training variations. Constructivism is an epistemological position that assumes people construct a model of the world for themselves. Knowledge and meaning are the results of interpreting objects and events by using experiences and mental structures (Gogus, 2012). In the field of learning psychology, this includes various theoretical foundations about how people learn. They all share the basic assumption that knowledge is actively constructed by learners and cannot passively "implanted" by the trainer (Gogus, 2012; Woolfolk, 2008). Learners actively construct knowledge based on their prior knowledge and experiences, rather than simply having it delivered from the trainer as an authoritative information provider (Seel, 2012, Wang, 2009). Thus, the role of the learners is to be active constructors of knowledge, "rather than passive information receivers" (Wang, 2009, p. 2; cf. Jonassen, 1991b; Merrill, 1991;). Trainers become mere coaches (Seel, 2012). The learners accept new information and ideas, fitting them into their prior views of the world (Gogus, 2012). For learning, we need confusion and novelty to become active and thinking (Sackney & Mergel, 2007).

Constructivist learning theories have their roots for example, in the research of Piaget (1970) and Vygotski (1987) (Narayan et al., 2013). In the constructivist views of learning, we distinguish between individual constructivism (also "cognitive constructivism") and social constructivism (Nückles & Wittwer, 2014; Woolfolk, 2008).

Individual constructivism postulates that learners construct meaning by individually interpreting new information in the context of their existing knowledge base. The focus is the inner life of the learner, with internal information processing that involves

sorting external information and linking it to one's previous knowledge to construct and extend one's knowledge base. It is "a process of internalization and reconstruction of external" (Wang, 2009, p. 2) information. Piaget (1970) does not consider this to be merely a matter of information processing, rather he suggests that there are stages of development in thought processes. At each level, thought processes are reorganized and modified, becoming increasingly less connected to concrete events, so that a knowledge base with schemata is created. Every experience triggers inner perceptual processes in which the new information is processed and evaluated by individual interpretation. Schemata are abstract knowledge structures that, through repeated examination of an experience, hide irrelevant details and focus on recurring regularities (Anderson, 2007; Nückler & Wittwer, 2014). When learners incorporate new information in their existing schema because it is aligned to their prior knowledge, this is *assimilation*; and if they must change their schemata to fit the new reality, this is *accommodation* (Wang, 2015). This form of constructivism is also known as "early constructivism" or "solo constructivism" because it concerns the attribution of meaning to experiences within the individual person (De Corte et al., 1996; Woolfolk, 2008). This includes an active role for the learner, but it does not stress the necessity of social interaction.

Vygotsky (1987) writes in support of social constructivism and postulates that social interaction influences learning. By participating in exchanges with others, learners assimilate the results of the joint activity and learn from one another (Nückles & Wittwer, 2014). This can also involve entirely new information and knowledge, as the exchange may lead to new links in existing knowledge. Knowledge is understood as the result of collaborative construction through discourse, while "learning is a social process in which learners collaboratively construct knowledge through interactive processes of information sharing, negotiation and

modification" (Wang, 2009, p. 2; see also Gunawardena et al., 1997).

Siebert also writes in support of this view. According to Siebert (2003), "learning is a biochemical and electromagnetic activity in our neuronal networks, [a construction of reality]; and it is the tireless attempt of our self to create order in a confusing world through reduction, selection and construction in order to be able to orientate ourselves and act successfully" (Siebert, 2003, p. 22; own translation). Learning is about referring back to earlier experiences; even when reading a text, learners constantly remember similar texts and compare the content with examples from their prior knowledge (Siebert, 2003). These prior experiences are not timelessly valid and are also continually reflected and changed through exchange with others (Siebert, 2003). This change of perspective shows people that experiences are relative and dependent on observation and context (Siebert, 2003).

The understanding that experiences are relative and depend on observation can be promoted by discourse and exchange with others. Constructivist approaches that incorporate the social or cultural context and emphasize learning through exchange with others are counted among "late constructivism" (Woolfolk, 2008).

Sfard (1998) and Nückles and Wittwer (2014) argue for a pluralism of perspectives, or the equal coexistence of the "individual-constructivist" and "socio-constructivist" positions. In summary, the individual constructivist view states that learning is always active inside the learner. The socio-constructivist view extends this. Socio-constructivists state that learning is always active and interactive because the active construction is supplemented by interactive co-construction. In neither view is passive learning possible.

3.2.3 Theoretical Foundation of Didactical Design

Based on constructivist theoretical foundations, a didactical training design can be derived, as the theory has a substantial impact on teaching (Sackney & Mergel, 2007). Didactics includes

the question of how to design learning and educational opportunities to support participants in learning (Reinmann, 2013; von Hippel et al., 2019). The learning approach design category (see sections 2.3 and 3.2.1) can provide the basis for the didactical design.

The theoretical explanations of how learning happens can underpin the training design and, in this case, determine the involvement of the learners. This leads to the question of whether the involvement of the learners (through active, interactive, passive tasks), plays a role in strengthening moral competence. Constructivism recommends the active and interactive involvement of learners (Chandler & Teckchandani, 2015; Collins et al., 2014; Van Daele et al., 2017), as this supports learning that is also active and interactive (based on individual- and socio-constructivism), through construction and co-construction.

Furthermore, social exchange for learning has an essential role in e-based learning environments (Wang, 2009; Moallem, 2003). To promote social knowledge construction, ethics training must provide opportunities for exchange – through discussion fora, for example.

Once again, for the constructivists, learning is always active construction. When the trainer explains something, the learners do not save it passively, but rather receive an idea of reality and individually constructs their own knowledge base. Passive learning is not possible, but passive learning and passive training methods – or rather passively designed tasks – must be distinguished. The learning approach design category includes the involvement of training participants through tasks. A passive training method does not give the learners a task in which they must actively collect arguments by themselves, but it may include the presentation of content captured by the participants and linked to their previous knowledge (Edelmann, 2000; Mohsen, 2002). This passively designed task can contribute to active learning, and it is especially recommended for conveying factual knowledge (Mohsen, 2002).

Siebert (2003) is more critical and claims that, if trainers only instruct, with training designed solely to be passive, without action or interaction, they might suppress the potential competence in the learning group. Adult education should focus on the participants' needs. Indoctrination has negative effects because learners do not want to be lectured and indoctrinated by an authoritarian trainer: they do not want to be seen as passive recipients; rather, they want support in their learning process (Siebert, 2003). Constructivist didactical recommendations state that the training design should promote the exchange of experience (Siebert, 2003). Learning does not mean reproducing the given content, and it is not just a reaction to teaching and training; learning is about the interest in different views to observe, reflect and ascertain why we see the world in this way (Siebert, 2003). Therefore, it is an activity that involves creating one's own view of the content (Siebert, 2003). As adults bring varied knowledge and experiences, the trainer should create conditions for the learning situation but learning itself is less pedagogically plannable and controllable (Siebert, 2003).

In addition, the Reich (1996) constructivist didactic is oriented toward interaction. Different observers contribute their views in a process of constructing reality. Teachers and trainers have no absolute knowledge; they are in exchange with their learners. All participants in the training share their own construction of reality. This is a "time-related construction gain, but it is not a universal truth" (Reich, 1996, p. 89, own translation). In this way, a new concept of truth is created for the learners and trainers, and this helps when continually reflecting on the changes in the constructs (Reich, 1996). This is especially important when confronted by moral dilemmas. A change of perspective is useful for getting to know not only one's own opinion, but also the counterarguments and other points of view.

The objective of the KMDD is to strengthen moral competence, which is in line with the constructivist view. It is not a

matter of providing or indoctrinating the “right“ principles: it is about becoming aware of one’s own principles, exchanging arguments with others, and dealing with counter views to have the opportunity to reflect the meanings, knowledge, and one’s own point of view. Each of us constructs moral judgments. “Constructed,” does not mean that people arbitrarily invent their truth (Lind, n.d.). These constructions must also be regularly co-constructed through shared experience, exchange, and discussion (Lind, n.d.). This can provide an impulse to think about ethically relevant problem situations in different ways.

These explanations provide support for a training design that takes an active and interactive learning approach. Nevertheless, constructivist didactical recommendations do not refute a passive design. It is not disputed that knowledge can also be learned through passive training methods (Siebert, 2003), but this is not preferred. Passive learning seems unlikely. In effect, a passive training design can only be effective if it initiates an active learning process within the learner. A distinction must also be made between the development of competences that are application-oriented and include dealing with the solution of complex problems and those that merely ask for the memorization of factual knowledge. Passive methods can be used to learn factual knowledge, while active and interactive methods are more advantageous for application-oriented and problem-based competences (Mohsen, 2002; Mandl & Kopp, 2003; Siebert, 2003), although the effect of passively designed training is not negated here either.

With regard to participants dealing with different arguments during the training, the following should be noted. On the one hand, it seems that in the case of complex problems such as a moral dilemma in a given story, the aim is not for the learner to know 20 different pros and cons from memory, but rather to think and reflect on arguments on the basis of one’s previous experience (construction) and to co-construct them through exchange with others. It is about a change of perspective and the examination of

arguments according to their moral quality to resolve the moral conflict, not about learning facts. This refers to an active and interactive training design. On the other hand, the confrontation with a prepared list of varied arguments (passive) for a dilemma story can trigger active reflection. These arguments may contain content that the learners do not know, activating them to think about this, even if the task does not instruct them to become active. Thus, it is useful to investigate whether thinking only for oneself, without social interaction, or even just presenting a list of arguments (passive) is as helpful for practicing reflection on arguments regarding an ethical dilemma and strengthening moral competence.

Despite the preference for active and interactive training designs, the derived constructivist didactical recommendations are often criticized because active and problem-solving tasks can overwhelm learners, while guided learning and instruction (passive training design) is better for the learning process (e.g., Mayer, 2004; Rey, 2009). By examining all three designs – namely, active with and without interaction and passive – I can address the controversial question of which training design more effectively promotes moral competence.

3.3 Creation of the Training Program

In this section, I explain the relevant aspects considered in the development of my own training program. The KMDD serves as the basis, having been adapted for training in an e-based form, with a business ethics focus, and with different theory-guided training designs. The training program was tested in a laboratory experiment with a pretest–posttest control group design (as stated in Chapter 2) which is further explained in the Chapter 4. However, this information must already be taken into account at this point, since the adjustments to the training program were also be tailored to the possibilities in the experiment. Section 3.3.5 provides an overview of the necessary adjustments and the reasons for them. Since the planned training is e-based, the delivery form is

introduced here first and then considered during the other development phases. The next sections explain the writing of the dilemma story and the development of the training variations. The development of these variations was theory-guided and they concern the discussion of the arguments around the dilemma story. The developed training variations were then reviewed by experts and pretested with volunteers.

3.3.1 Delivery Form: E-based Training

Digitalization is a global topic, and it has changed the way in which adult training is delivered (Bell et al., 2017; Gegenfurtner et al., 2020). E-based training, also known as "electronic," "web-based," and "online training" or "eTraining" is increasingly important in HRD (Chan & Ngai, 2007; Constant, 2007; de Freitas & Routledge, 2013; Hsieh, 2004; Li, 2013; Sambrook, 2003), because it can promote flexibility and cost reduction through location-independent access. It is "e-based" because the training is carried out at the computer, not face-to-face. It is a delivery form for distance learning, also known as "e-learning" (Lara et al., 2020), with the internet used to provide training (Chamers & Lee, 2004; Chan & Ngai, 2007; Hall, 1997). Many organizations invest in information technology to support e-based training in organizational work (Chan & Ngai, 2007; Isakowitz et al., 1998).

E-based training allows organizations to reduce costs, as there are no travel expenses and no loss of working time due to travel (Macpherson et al., 2004). E-based training can also promote geographical flexibility, with employees attending training at work, on the move, or at home (Chan & Ngai, 2007; Macpherson et al., 2004). Furthermore, it can be provided to numerous participants at one time, with little additional costs, in contrast to face-to-face sessions (Macpherson et al., 2004).

The empirical literature review presented in Chapter 2 shows that there is still a need for research in this area; therefore the training was developed in an e-based form and in such a way that, with an internet-enabled computer, it can theoretically be done

from anywhere. It should be noted that the KMDD was designed only for face-to-face sessions and its effects have so far only been measured in this form.

In the training developed for the current work, it is important that no audio or video was used. The training was conducted only in written form on the PC. As a result, speaking was replaced by writing and listening by reading, unlike in face-to-face training (Knatz, 2012; Pracht, 2012). There was also no trainer, and the instructions on how the training was to be conducted and the tasks that the participants would receive were given in written form. This has several advantages. The lack of a trainer prevented that the trainer would be perceived as an authority. This avoided an influence of the trainer on the participants' confrontation with the story and arguments, even indirectly, if, for example, participants had not dared to express their opinions and arguments in front of the trainer. As the experiments were intended to test the effect of the training, it was beneficial to prevent a trainer's voice, appearance, mood, and so on, becoming influencing factors. A lack of audio and video and non-verbal communication signals (mimic, gestures) can make it difficult to interpret what is written. However, this also ensured the anonymity of the participants during the training process, which is likely to have made it more comfortable for them to formulate their arguments and avoid a loss of face when sharing their opinions and arguments (Pracht, 2012). Unprejudiced communication with other participants is also made possible, as personal characteristics (appearance, voice, etc.) are not identifiable and thus do not exert any influence on the training (Pracht, 2012). In addition, conscious writing and reading could encourage more thought (Pracht, 2012) and reduce "simple chatter."

The procedure required precisely written instructions about the training and discussion rules, as there would be no opportunity to ask a teacher for clarification (as there is no face-to-face introduction) or to engage in trainer-moderated discussion. Training

participants must be familiar with the technology, and it is assumed that most people today are able to use a computer and a web browser. The web-based layout is simple to allow the introductory instructions for the participants to be kept to a minimum. If written instructions are too long and complicated, this can have a negative effect on the training. For this reason, the comprehensibility of the instructions and the technical usability were checked in a pretest with volunteers (see section 3.3.4).

3.3.2 Writing a Dilemma Story

Since learners should be confronted with a dilemma story, a story was created for the training. For this, a topic was first chosen from the field of business ethics. As business ethics is a broad field, further concretization was necessary. It was also considered whether certain occupational groups or positions should be taken into account. Especially, leaders are often faced with challenges that involve moral problems and questions of right and wrong (Lawler & Ashman, 2012). Leaders should increase their employees' ability to deal with moral problems in the workplace, providing support in this endeavor by being good role models and providing moral guidance (Babalola et al., 2018; Brown & Treviño, 2006; Treviño & Brown, 2004). As leaders are often faced with ethical considerations (Fleming, 1983), training to prepare them for dealing with ethical problems is recommendable. Business ethics training can include this content and cover ethical conflicts arising in an organizational context (Payne & Pettinggill, 1987). Because of their authority position, leaders' decisions have broader consequences than the everyday choices of other people (Flanigan, 2018). This is particularly relevant in cases were leaders must weigh individual rights against group interests or considerations of conscience against professional duties (Flanigan, 2018). Additionally, no area is immune from an ethical scandal due to questionable business decisions, which is why ethical development is particularly important (Perreault, 1997).

Furthermore, leaders have the task of motivating their employees, and this is only possible if they treat them fairly and respectfully, as this increases employees' willingness to cooperate and avoid conflict in the workplace (Babalola et al., 2018; Gelfand et al., 2012). There are always divergent interests and values, which can result in moral conflict and create dissatisfaction for all parties. Such situations can hinder employees' willingness to work together respectfully (Babalola et al., 2018; De Wit et al., 2012) and increase staff turnover. It can threaten teamworking practice and thus the success of departments and the entire company. When leaders are overwhelmed with ethical problems, this may not only result in employee dissatisfaction and increased motivation to change jobs, but leaders may also feel insecure and dissatisfied with their own work. Leaders play an important role in ensuring ethical behavior in their organization (Peachment, 1995; Perreault, 1997), thus they must take responsibility for the impact of their behavior. Perreault (1997) observes that leaders in many business scandals abdicated their responsibilities and blamed their subordinates. A leader must bear in mind that they are responsible not only for their own actions, but also those of their subordinates (Perreault, 1997). Leaders must assume responsibility and recognize that they have the influence to make a difference. Thus, leaders need practical support for the day-to-day business problems that have ethical relevance (Kempster & Gregory, 2017). Hackman et al. (1999) confirm the need for ethical education for leaders through tailored training programs. Overall, since leaders are particularly often confronted with moral problems and play an exemplary role in organizations, topics associated with this professional group were considered for the dilemma story. Termination management is an ethically relevant topic for this professional group (Chan et al., 2011). It is also a problematic area in which leaders have a special responsibility, for which they should be prepared by appropriate developmental measures (Pernick, 2001). The ethical core is that employees are not just

"human resources," they are not machines: they are human beings with emotions and families (Roberts, 2014) and their jobs provide the financial basis for their existence. Being dismissed can be a traumatic experience for employees. It is associated with loss of income and self-esteem (Schiller, 1997). A survey among 433 executives in Germany concludes that fairness, honesty, and clear communication are considered the most important elements in the termination process (Kienbaum, 2016). The leaders faced with such a problem can include *inter alia* the employee to be dismissed, the remaining employees, customers, and the reputation of the company in their decision for reflection (Roseneck, n.d.; Heun-Lechner, 2020). Most surveyed executives agreed that professional, well-planned separation management can have a positive influence on the commitment and motivation of the remaining employees, but leaders often feel insufficiently prepared for termination situations and scenarios (Kienbaum, 2016).

Dismissals may not only be unpleasant for employees, but also constitute a challenge for the leader. They may feel like a no-win situation, fraught with negative emotions. A leader may feel uncomfortable, but see no alternative but to dismiss the employee (Zins, 2012). This can occur, for example, if leaders and customers are not satisfied with the employee's work performance, or it may be due to employee misconduct; and sometimes the workforce must be reduced for financial reasons (Heun-Lechner, 2020). Therefore, the topic termination was chosen as this is a substantial problem with ethical relevance for business and leaders (Pernick, 2001).

Based on the KMDD guidelines for writing dilemma stories (Lind, 2016a; Lind, 2018) and with a thematic focus of the moral conflicts faced by leaders, a dilemma story on the topic of termination management was created. The KMDD guidelines for writing dilemma stories and the created dilemma story can be found in appendices 2.1 and 2.2.

In the created dilemma story, a leader is feeling forced to fire a long-time employee because of frequent late arrivals and missed customer appointments. Colleagues and important customers have complained about this on several occasions and now the top management is pressuring him to resolve the problem. At the same time, he knows that the employee is often late because her husband died recently and she must now take care of her two children alone. In addition, the employee is paying her mortgage alone and struggling under this pressure. The leader is not sure what to do and is in a dilemma. Legal problems were deliberately excluded from the story so that the discussion would concern the moral core and not any legal requirements.

The decision of the protagonist remains open. This could support that participants in the training program will not condemn the protagonist for his decision, but remain open to both perspectives, namely pro and con dismissal, and are thus better able to deal with the various arguments. This could also encourage an open attitude among the participants towards counterarguments (Eichert, 2020).

Furthermore, where the term “leader” is used in the dilemma story, the position manager and leader should be considered. Managers have a function of control, which is associated with order, discipline, and bureaucratic work (Czarniawska-Joerges & Wolf, 1991). Leaders have a symbolic function to motivate their followers and “express and embody the wishes of their followers rather than impose those of their own” (Czarniawska-Joerges & Wolf, 1991, p. 535). This is especially important in crisis and change situations. The literature varies in its distinctions between “manager” and “leader.” However, Rost (1995) makes the distinction clearer: a leader has influential relationships with their collaborators and intending changes reflect the shared aims of both in organization, while a manager has authority over their subordinates to coordinate the resources for

producing and selling the goods and services that reflect the organization's aim.

The literature tends to use the term "leader" in relation to topics that require reflection to deal with ethical dilemmas (Dzuranin et al., 2013; Perrin, 2010; Dumitru et al., 2015; Thiel et al., 2012; James, 2000). Depending on the topic, managers may also move into leadership roles (Ludwig & Longenecker, 1993). In the chosen topic, the case includes a reflection and the protagonist is both a manager and a leader. He must take into account the motivation of his employee and team and this is attributed to a leader role rather than to that of a manager. The story refers to the special authority of the protagonist, but also his leading position.

Regarding the theoretical foundation of constructivism and strengthening of one's moral competence, individuals learn and develop in a "world of their own," which influences one's moral judgment. This "world" is based on individual experiences, which include exchanges with other people. This is relevant to the developed dilemma story, as this is particularly so for the moral conflicts of leaders. Fichter (2018) takes the constructivist view to show that leaders have no better access to objective reality than any other members of the organization, thus it is very important for leaders to engage with their employees to learn their beliefs and perspectives and ensure an interactive co-construction. However, it is also advisable for leaders to discuss moral problems among themselves or with others (e.g., consultants) to scrutinize, reflect upon, and expand their own knowledge base. All organizational members can turn to others for help when they encounter moral problems.

Nevertheless, the learners – as the targets of the training – do not necessarily have to be leaders or managers themselves to receive the learning effects of the program. However, it can be assumed that the training content will appeal to learners who perceive its practical relevance, as they are more likely to accept it due to the proximity to the problems, challenges, and tasks they

face in their everyday professional lives. This perceived practical relevance of the training has a strong influence on the reaction of the participants and is an important element of the participants' motivation to transfer training content into their everyday practice (Liebermann & Hoffmann, 2008). Nevertheless, the confrontation with and discussion around the decision to dismiss an employee could also contribute to the strengthening of moral competence among other learners, including organizational members who do not have leadership responsibility.

3.3.3 Theory-guided Development of Training Variations

Based on the theoretical foundation in section 3.2 and prior explanations of different training designs, I developed drafts of three training variations of the design category learning approach to be examined as treatments for the participants. These drafts were then reviewed by experts, as explained in the following section.

The same dilemma story (see Appendix 2.2 for the first draft) was used for all three treatments groups. All treatments were conducted in e-based and written form.

In the first treatment (T1), "active – without interaction," the participants should work individually, collecting arguments for and against the dismissal decision of the protagonist in a table.

In the second treatment (T2) "active – with interaction," the participants should work in groups of five participants, collecting arguments for and against the dismissal decision of the protagonist. The arguments are collected in written form, so the participants can enter each argument in turn on a shared pro and con table (including permanent updating).

To ensure that learners in T1 and T2 deal with both perspectives (pro and con), they should be asked for approximately the same number of arguments for each perspective. In addition, setting a minimum number of arguments to be collected should ensure that learners are sufficiently engaged with the dilemma during the training. This is especially important because there is no moderation or supervision by a trainer as in face-to-face sessions.

These guidelines should be included in the introductory instructions for participants.

In the third treatment (T3), "passive," the participants receive a table with arguments relating to the dilemma story and instructions, that they must familiarize themselves with these arguments. For this purpose, I created a list with 28 arguments (14 pro and 14 con; see Appendix 2.2).

All treatments include a task, in which the participant must choose the best arguments for the pro and the con positions (T1 and T2 participants select from their self-collected arguments, while the T3 participants choose from the prepared argument list).

Each treatment should take 23 minutes (20 minutes to collect the arguments and 3 minutes to choose the best ones), plus approximately 7-10 minutes at the beginning to read the instructions and the story.

3.3.4 Expert Review and Technical Implementation of Training Program

Both the dilemma story and the argument table for T3 (passive) were then reviewed by two independent, certified KMDD teachers with experience in adult education. (The first draft of the dilemma story and the table of arguments can be found in Appendix 2.2.) The feedback was gathered through structured expert interviews. The questions and interview structure were created in accordance with the KMDD training manual guidelines for writing dilemma stories (see Appendix 2.1; the guideline for the structural expert interview can be found in Appendix 2.3.1).

The feedback led to the following adjustments to the dilemma story:

1. The death of the employee's husband would probably trigger too strong emotions; therefore, this should be mitigated. I changed the story so that the employee had "only" been left by her partner.

2. To prevent prejudgment of the employee, I note early in the text that the employee is causing problems due to her current situation, but she had previously been a very good employee.
3. The pressure on the protagonist should be clearly recognizable. For this purpose, I emphasized that complaints were coming from major customers, the complaints had been very recent, and management had imposed a deadline of three days to resolve the problem.
4. Minor changes were made to the wording, and redundant information was removed to keep the story as short as possible (e.g., “house in the countryside” was trimmed to “house”).

The experts confirmed that the dilemma story met the KMDD guidelines.

Furthermore, it was important to consider the number of arguments to present to participants in the passive training, prioritizing the need to avoid over- or underchallenging the learners. In a KMDD session, 20-30 arguments can be collected, so the number should be in this range. The arguments were then checked for redundancies, and the experts provided further ideas. In addition, small changes were made to the wording. To clarify the details of these changes, the appendix contains both the original and revised lists of arguments (see appendices 2.2 and 2.4). The final version of the list comprises 22 expert-reviewed arguments (11 pro and 11 con).

I also received feedback on the T1 and T2 training variations. The question arose of how many arguments I should expect the learners to develop in the active (without interaction) and interactive treatments. Experience of KMDD indicates that it is possible to collect up to 20-30 arguments. To avoid overwhelming the participants, however, it is necessary to ask for a small number of arguments, while indicating that the learners should collect as many as possible and not simply finish when they have collected the minimum. A minimum of six arguments (three each for pro and con) was considered reasonable. In addition, the experts agreed that

learners should collect a balanced number of arguments in favor of the pro and con perspectives. The experts confirmed that the time available to participants for reading and discussing the arguments in all three treatments was appropriate.

I then prepared the introductory instructions for the participants (see Appendix 2.5.7). After the experts' feedback and changes made, the treatments were technically implemented by programming the content into oTree (Chen et al., 2016), a web-based program for experiments, enabling the e-based implementation of the training.

The treatments were pretested (as recommended in the literature, cf. Harris, 2002) and feedback was obtained from 13 participants (volunteers). I then made small changes to the wording of the instructions to strengthen their comprehensibility, and improvements in the technical implementation were made (e.g., stronger highlighting of the headlines and time display).

3.3.5 Overview of Training and Adjustments in Comparison to Konstanz Method of Dilemma Discussion (KMDD)

After a short introduction to the training structure, the developed training includes reading a dilemma story and a confrontation with or discussion of the arguments for the pro and con perspectives. Finally, each participant chooses the best arguments from each perspective. The training is structured as shown in Table 7 below.

Table 7

Treatment Procedure of Ethics Training

Pre-step	Introductory instructions to the training (depends on variation)
First step	Reading the dilemma story (all treatments)
Second step	Confrontation with arguments Variation: ▪ T1: *active without interaction* – collecting arguments in individual work

	▪ T2: *active with interaction* – collecting arguments in group work ▪ T3: *passive* – reading a given list of arguments
Third step	Choosing the best arguments for the pro and con perspectives (all treatments)

Note. Own compiled table.

If I compare this structure to that of the KMDD procedure (see section 3.1.2 and table 5), it is clear that the ethics training is missing some elements and is therefore a "reduced" variant. I briefly describe and explain the differences as follows.

1. Introduction to dilemma story (verbal by KMDD teacher)

There is no verbal introduction to the story; instead, the participants read the story directly. They also receive written instructions beforehand about what to do during the training program, as there is no face-to-face teacher guidance. Furthermore, an audio or video introduction to the story and instructions do not appear to be necessary (see also section 3.3.1). Since the participants in the KMDD also read the story again for themselves, there seems to be no problem in not using a verbal introduction (which would only be possible in an e-based program using audio or video). In addition, the inclusion of a teacher's voice or appearance could be problematic if it inappropriately influenced factors in the experiment.

2. Independent reading of the dilemma story (making notes in an individual task)

All treatments include time for reading the dilemma story. Participants are not given the task of taking notes, because the story and instructions are available throughout the treatment (and always "clickable").

3. Dilemma clarification with first voting (classification pro and con group)

I removed this element. In the KMDD, participants are asked whether they see a dilemma in the story. If a participant does not see a dilemma, he/she leave the training. These participants are given the task of observing the other training participants during the discussion. As a result, the data for measuring training effectiveness is lost, because observers are not participating in training. This becomes more problematic if several (or all) participants state that they do not see a dilemma in the story, because the KMDD session cannot take place at all. Lind (2016a) says that the participants should be given the opportunity to decide for themselves whether they see a dilemma. However, I am confident that, in the story produced for this training, the protagonist has a problem and the experts have confirmed this. Even if the participants do not see a problem for themselves, this does not prove that the fictitious person does not have a dilemma. Thus, to avoid the risk of the training having to be cancelled, the dilemma clarification phase and observer role were removed from the e-based training design.
Furthermore, I omitted the task in which participants vote for either the pro or con perspective to indicate their own opinion. In a KMDD session, this voting leads to two opinion camps, which is not appropriate here due to the variations. In a KMDD session, the training is cancelled if the ratio of opinions is unbalanced, since both camps should have approximately the same number of followers to enable the group work and plenary discussion. This is critical in an experiment that examines the effectiveness of training variants and where the subjects are paid, as I do not produce any data in the case of a sudden cessation. To avoid this risk, there was no voting in the e-based treatments.

Furthermore, without the pressure of having to choose between the pro or con perspectives, the participants may be more likely to remain open to both when confronted with the various arguments (feedback from KMDD teacher Sieglinde Eichert).

4. Strengthening one's own decision in group work

Since there is no voting and no pro and con groups, the small group work was omitted. The involvement of the participants between the variations should not be mixed up' because of the different designs of the e-based ethics training.

5. Dilemma discussion in the plenum

In this phase, the confrontation or exchange of arguments between the pro and con camps takes place. As there are no pro and con groups in this program, the participants deal with both perspectives in all treatments. In this step, the variation in the training emerges. The exchange of arguments takes place only in T2 (social interaction); while in T1, every participants creates their own arguments for the pro and con perspectives (individual reflection); and in T3, the confrontation takes place using a given list of arguments (reading).

6. Nomination of the best counterarguments (best argument of the opposite side)

Since there are no pro and con groups and all participants must deal with both perspectives, each participant must choose the best argument from each side. However the participant positions themselves (pro or con), the best opposite argument is chosen.

7. Second voting

There is no second voting, as explained in relation to point 3 above.

8. Reflection and observations (exchange with the whole group)

An exchange about the group discussion is not necessary because only participants in T2 work in a group. The observer role in face-to-face KMDD does not exist in the e-based training. The participants have the opportunity to report their own observations and give feedback during an evaluation of the training program. This was conducted by questionnaire, as explained in Chapter 4.

9. Closing the session

The session is closed using a closing slide.

In summary, I removed the following components of the KMDD session in the development of my ethical training variations:

- the verbal introduction by the teacher (participants read the story directly)
- clarification of the dilemma within the group (given by the story; removed to avoid the need to abort)
- voting before and after the confrontation with arguments (removed to avoid the need to abort and to keep participants open to both perspectives)
- small group work in pros and cons groups (not indicated due to the lack of voting; mixing of the learning approach designs is not desired)
- observer role (cannot exist if everyone is required to participate in the training and there is no voting)

Finally, the participants were given the opportunity to provide feedback with a survey after the training, as part of the training evaluation.

3.4 Hypotheses

Following the theory-guided development and expert-review of the ethics training in its various forms (treatments), hypotheses on the effectiveness of the treatments were drawn up in accordance with the theoretical foundation outlined.

The confrontation of the participants with counterarguments on a moral dilemma – and their intensive study of these – should strengthen their moral competence (Lind, 2016a). Since the recommendations of constructivist didactics do not exclude training variants in the domain of the learning approach, the three designs are considered equally in my first hypothesis.

Effectiveness of the Training (General)

(H1) Participants in the e-based ethics training (treatments 1, 2, and 3) will have an increase in moral competence after completing the training, compared to an untrained control group.

The constructivist theoretical foundation of learning states that learning takes place through active construction by the learner and through the social exchange that enables co-construction (Siebert, 2003; Lind, 2016a). Lind (2016a) emphasizes the importance of social exchange, especially during moral dilemma discussion. Accordingly, it would be expected that training that follows the learning approach design of active with interaction would best strengthen moral competence. This is followed by a design that involves active learning but not interaction, because although there is no social exchange, an active study of an ethical problem situation takes place through intensive reflection on one's own. As such, T2 (actively constructed and involving interaction) should accordingly enable the greatest increase in moral competence. T1 involves active engagement with the dilemma story through the independent collection of arguments, but without the possibility of social exchange; thus, a smaller increase in moral competence is expected.

Constructivists do not consider a passive design to be entirely unsuitable (Siebert, 2003), but nevertheless do not consider this the ideal design, since the subjects themselves do not have to become active and no social exchange takes place. Therefore, the smallest increase in moral competence is expected for T3. Despite the literature's support for the interactive training design (Lind, 2016a; Siebert, 2003; Reich, 1996), it is conceivable that thinking

about and collecting arguments for oneself (active without interaction) or grasping presented arguments (passive) could also be effective, since the learner must engage with both perspectives on the protagonist's decision in the given dilemma. Accordingly, the following hypotheses are made.

Differentiation of the Effect of Ethics Training by Design

(H2) Participants in treatment 2 will have a greater increase in moral competence after training than participants in treatments 1 and 3.

(H3) Participants in treatment 1 will have a greater increase in moral competence after training than participants in treatment 3.

4 Evaluation of the Ethics Training Program

4.1 Method

In the following, I will briefly explain again the underlying evaluation model that guides the measurement of ethical competence and introduce the experimental setup and preparations for the experiment (including the control group), as well as the MCT and the self-report questionnaire used in the study as the measurement instruments.

4.1.1 Evaluation Model

The evaluation model from Kirkpatrick (Kirkpatrick & Kirkpatrick, 2006) was used to guide the measurement of the training effects (Kreismann & Talaulicar, 2021). As described in section 2.2, Kirkpatricks's model was chosen because it is a well-established standard in training and development evaluation research (Alvarez et al., 2004; Blanchard et al., 2000; Grohmann & Kauffeld, 2013; Kennedy et al., 2013; Kong & Jacobs, 2012; Phillips & Phillips, 2001; Rodriguez & Armellini, 2013). Level 2 of the model (learning) refers to the learning effect of the training on the competence it is intended to strengthen. Kirkpatrick (Kirkpatrick & Kirkpatrick, 2006) also recommends the use of pretest–posttest procedures with a control group to measure learning effects. Because I wanted to examine the effect of the

ethics training variations on moral competence, I judged this model to be appropriate for the evaluation. Since the participants should also be able to give feedback on the training (Lind, 2016a; Lind, 2018), level 1 (reaction) is additionally interesting for the evaluation. As described in Chapter 2, levels 3 and 4 are addressed less frequently in the literature, as level 3 is time-consuming and difficult to measure and the effects in level 4 are difficult to trace solely to the training program (Kreismann & Talaulicar, 2021; Stokking, 1996). Levels 3 and 4 of the evaluation model were not included in my work because the effects on transfer into practice and impact on the organization were not examined in this study.

In the literature on the effects of active and passive training designs, the reactions of participants in terms of their satisfaction with the training have frequently been measured (Michel et al., 2009; Tan et al., 2003). However, learning effects in terms of the competence to be strengthened must also be addressed. In the current work, this was done experimentally using the MCT (see next sections for details). In addition, the participants were given the opportunity to provide feedback on the training and to formulate their own views on the perceived learning effect (Lind, 2018). Although these evaluation of statements must be done critically, as the statements were subjective and do not represent an objective measurement of the learning effect. Nevertheless, they are able to provide a useful supplement to the results.

The KMDD also provides an opportunity to give feedback (Lind, 2016a, Lind, 2018), not only in a final questionnaire after the session, but also in the exchange at the end of the plenary discussion (this exchange is omitted from my training; see section 3.3.5). Using the final questionnaire developed by Lind (2018), it may be possible to obtain information on how to optimize the training, as the satisfaction of the participants is nevertheless important, even if we cannot connect this with the learning effect measured using the MCT. Kirkpatrick and Kirkpatrick (2006) and Gegenfurtner et al. (2020) also suggest gathering the reactions of

the learners. The possibility for feedback and self-formulation by the participants would support further development and provide new research ideas for future training. It also pays respect to the learners, showing them that their feedback is important.

Thus, in summary, the reactions of the participants to the training were collected using a self-report questionnaire and the learning effects were measured using the MCT. As the questionnaire developed by Lind (2018) for the KMDD evaluation includes statements on subjective perceptions of the learning effects, I was able to supplement the results using participant self-reports integrated into the questionnaire after the training.

4.1.2 Experimental Setting

I chose a between-subjects, laboratory, experimental, pretest–posttest control group design for this study. Kreismann and Talaulicar (2021) state that rigorous studies should be designed as longitudinal studies. The measurement and comparison of the levels of ethical competence before and after the treatment was necessary to provide an objective measure of any changes. To rule out other factors influencing the changes, it was necessary to compare the changes in the treatment groups with a control group who had not received an ethics-treatment (Dimitrov & Rumrill, 2003; Kreismann & Talaulicar, 2021).

The choice of a randomized pretest–posttest–control group design is supported by many researchers, who consider this a powerful evaluation design because it enables a causality test. The causal traceability of the impact of independent variables on dependent variables can be affected by various confounding variables, and these can be controlled by laboratory arrangements (Bonate 2000; Eschweiler et al., 2009; Oakes & Feldman, 2001; Rossi et al., 1999). The setting allows for the manipulation of a stimulus (treatment variation), while simultaneously controlling confounding variables through uniform lab conditions for the subjects. Therefore, the design controls for threats to internal validity, such as maturation and selection (Boruch, 1998; Campbell

& Stanley, 1963; Oakes & Feldman, 2001). Laboratory experiments are seen as the "gold standard" (Cook, 2003, p. 114) for causality tests in intervention studies in psychology. I ensured controlled conditions in my experiment in relation to the following:

- situation (uniform lighting; room temperature and ventilation; equipment in cabin)
- subjects' characteristics (randomized assignment of participants to experimental and control groups)
- expectations of subjects and experiment supervisor (double-blind procedure for assignment to experimental and control groups)
- influence of the supervisor (the same supervisor used throughout; other than a brief welcome, written instructions only)
- the duration of the training was critically considered and kept to a minimum to prevent participants becoming fatigued or overwhelmed (duration was also critically reviewed during the development of the training).

4.1.3 Measuring Instruments

4.1.3.1 Moral Competence Test (MCT).

The MCT[3] was used to measure moral competence (dependent variable) before and after the training to gain information about Kirkpatrick's level "learning." The MCT consists of two fictional stories, the doctor's dilemma and the worker's dilemma, in which each protagonist finds themselves in a difficult moral situation and takes a decision about it. The doctor's dilemma concerns an ill woman who wants to die and asks her doctor to help. He provides her with a medicine to help her die. The worker's dilemma is about two men who provide evidence of the illegal bugging by their employer, but they obtain the evidence illegally by breaking into the employer's office. The test participants are asked to rate whether they find the protagonists'

[3] Note: to publish the MCT is not permitted, but can be requested for research purposes from Georg.Lind@uni-konstanz.de.

actions more right or more wrong (using a seven-point Likert scale, from -3 to +3). They are then given the task of evaluating the pro and con arguments around the respective decisions (on a nine-point Likert scale, from -4 to +4). For each story, there are six pro and six con arguments to rate. These arguments were developed by Lind and other stage theory experts (Lind, 2016a), based on Kohlberg's stage theory of moral development.

As previously introduced, Kohlberg (1969) proposed a stage theory of cognitive moral reasoning and development (CMD). He interviewed subjects about moral dilemmas and gathered their responses and reasoning. This procedure is known as a "moral judgment interview" (MJI). Based on his results and the prior theory of cognitive development (Piaget, 1950), he proposed his moral stage theory. As described in section 2.5.2, Kohlberg (1969) suggests that individuals develop moral judgment over time and through sequentially passing through up to six stages, with moral judgments becoming increasingly justice-oriented. Individuals' answers to moral dilemma stories thus become more justice-oriented as they take higher positions within the stages, indicating a stronger ability to judge ethically. Over time, the individual shifts their orientation away from the lower stage – with its focus on punishment, reward, and people with whom one has close relationships – and they turn to the universal values of justice. The character of the higher stages is obedience to law and order, as well as the universal values of justice (cf. Dellaportas, 2006; Kohlberg, 1967; Kreismann & Talaulicar, 2021).

For an overview of the six stages and examples of verbal explanations, see Table 8 below.

Table 8

Kohlberg's (2014) Stages

Level	Stages	Explanation/ Definition	Characterized by Perreault (1997)
1 - Preconventional	1 Orientation towards	Follow rules to avoid punishment	In the first level the individual's

	punishment and obedience		reasoning is egocentric. Their morality is not about social norms or their own conscience, but about whoever has control of rewards and punishment.
	2 Naive instrumental hedonism	Behave well to receive rewards, return favors, etc.	
2 - Conventional	3 "Good boy" morality; maintaining relationships and seeking the recognition of others	Behave well to avoid the disapproval and dislike of others	In the second level, the person's reasoning is ethnocentric and thus, based on one's own group (e.g., family, nation). Morality is about respect for group values, rather than fear of punishment.
	4 Morality of maintaining authority (respect for law and order)	Behave well to avoid criticism from legitimate authorities and consequent feelings of guilt	
3 – Postconven-tional or principled	5 Morality of keeping contracts, individual rights, and the democratically recognized law/legal system	Comply with the rules (principles) to maintain respect of the impartial spectator who judges in the interest of general welfare	In the third level, universal principles enable people to recognize their own egocentric interest and the norms of their group(s). They are able to critically evaluate situations and judge ethically.
	6 Morality of universal principles (justice-oriented)	Comply with the rules (principles) to avoid self-judgment	

Note. Own compiled table, based on Kohlberg (2014) and Perreault (1997).

Thus, there is one argument on each of the pro and con sides for each moral stage in the MCT. The MCT has a three-factorial, experimental design (6 x 2 x 2). The factors are the moral quality of the arguments (6 types), the opinion agreement of the arguments (2 types), and the dilemma context of the arguments (2 types) (Hemmerling, 2014). A summary of the factors is presented below in Table 9.

Table 9

Factorial Design of the Moral Competence Test (MCT)

Moral quality of the arguments Factor moral quality of the arguments (C-score):	Opinion agreement of the arguments Factor dilemma (dil-score)	Dilemma-context of the arguments Factor pro-con (PC-score)
Six types, based on Kohlberg's stage theory of moral development, results in six orientations **Six types of moral orientation definitions** (Lind, 2016a): **Type 1:** motive – to avoid injury or damage to oneself **Type 2:** motive – to acquire rewards **Type 3:** motive – to obtain recognition from others and avoid disapproval **Type 4:** motive – to respect the law and social order and contribute to maintenance of society **Type 5:** motive –to respect the rules of free, democratic decision-making and the contracts based on them	Two dilemmas: • Doctor's dilemma • Worker's dilemma	Two types: • Pro • Con

Type 6: motive –to respect the dignity of each individual human being and measure their actions against the universal principles of justice, reason, and logic

Note. Own compiled table, based on Lind (2000), Lind (2015), Lind (2016a), and Hemmerling (2014).

For calculating the scores a multivariance analysis is needed. For each of these three factors, the part of variance could be analyzed in relation to the whole pattern of the participants' judgment decisions (Hemmerling, 2014). As I am interested in the change in moral competence, only the factor of the moral quality of the arguments – calculated through the C-score – was important for the study (see also the concept of competence, section 3.1.1). The C-score indicates the participant's ability to judge an argument by the argument's moral quality, rather than conformity with the participant's opinion. The ability to rate the arguments independent of the dilemma and one's own opinion – and according to the moral quality of the arguments – indicates high moral competence. To value arguments according to one's own opinion suggests low moral competence.

The C-score ranges between 0 and 100. A C-score of 100 means that 100% of the variance can be explained by orientation to moral type, so the participant is oriented entirely to the moral quality of the arguments (Hemmerling, 2014). Lind (2003) suggests the following C-score ranking: a score of 1-9 is low, 10-29 medium, 30-49 high, and above 50 very high.

The MCT was suitable for my investigation because it was developed for research (experiments, intervention studies, training evaluation) and is well-accepted in the scientific community (Lind, 2003; Biggs & Colesante, 2015). The MCT has been used nationally and internationally (more than 40,000 subjects) for training evaluation for over 40 years (Lind, 2016a), and it has been

translated and validated in many different languages (Lind, 2003). In addition, it has been used in business ethics studies and published in high-ranking journals, such as the Journal of Business Ethics (Desplaces et al., 2007; Pohling et al., 2016; Hummel et al., 2018). The MCT has been validated in the German language (Lind, 1984) and it takes only a short time to complete the test (8 minutes on average, a maximum of 15 minutes; Lind, 2016a). Furthermore, the MCT cannot be manipulated by the participants, which is vital for the measurement of a competence (Lind, 2016a; Hummel et al., 2018).

The content of the MCT is general and does not have to be tailored to a sector or industry, as the competence is not specific to one sector or industry. One criticism of the MCT is that incorrect use of legal terms in the stories could irritate participants – for example, the MCT uses "company," "firm," and "enterprise" synonymously. However, no study has provided support for this criticism. Furthermore, while there is a pro and con argument for each stage and each dilemma story, there are also many other arguments not included – and which the participants might have agreed to, rather than those arguments offered to them during the test. This can be countered by the fact that the MCT has been validated in this form. Moreover, the arguments were formulated from the interview examples in Kohlberg's MJI evaluation handbook, and experts in Kohlberg's theory have assessed the arguments to ensure they represent the respective moral stages (Lind, 2016a).

In some studies, the moral competence of the participants could not be assessed because they lacked the motivation or desire to complete the test a second time in the short time available for a pretest–posttest procedure. This could lead to findings indicating that the treatment had no effect – or even a negative influence on moral competence – but this is a general problem with competence tests and it is not typical for the MCT (Lind, 2016a). Thus, while I

appreciate these criticisms, I nonetheless chose to use the test for my intervention assessment.

4.1.3.2 Self-Report Evaluation Survey.

To obtain more information for the evaluation, I also collected self-reports from the participants after the treatment on whether they had liked the training, what they had liked most, and whether there were any improvements they would like to see. While these reactions do not show learning effects, they can provide useful information for consideration during the further development and improvement of such training programs. In addition, I asked the participants to describe what they had learned and whether they had noticed a learning effect for themselves. While self-reports about the learning effect should be considered critically because it is difficult to verify them (Martin, 2000), these responses can be used as supplementary to the evaluation of the MCT, as recommended in the literature (Lind, 2018; Lind, 2016a). The questionnaire was based on the final questionnaire for the supplementary evaluation of the KMDD (in addition to the MCT) by Lind (2018), and it was modified by the addition of two open questions (about what they had liked and their ideas for improvement), which I had found in evaluation sheets for university courses. The questionnaire can be found in Appendix 2.5.11.

The questionnaire consisted of six questions for evaluation on a Likert scale and three open questions. For the evaluation of the six Likert-scale questions, I calculated the mean for all the responses. Four of the six questions related to an evaluation of whether and what the participants had learned, as compared to their own expectations and other seminars/training, and how useful they considered their learning to be for their working life. The other two questions related to the participants' reactions and asked whether participants had enjoyed the experience and would voluntarily participate in such training in the future.

One of the three open questions asked what the participants had learned, and the other two questions related to their "reactions," asking what specifically they had liked about the training and whether they had any suggestions for improvements.

Table 10 provides an overview of the questions assigned to the evaluation level.

Table 10

Self-report Questions

Evaluation level	Question
Reaction	Did you enjoy the training program? ➔ 5-point Likert scale ➔ Not at all (0) – very much (4)
	I would voluntarily participate in the training program again. ➔ Yes or No
	What did you particularly like about this training program? ➔ Open question
	What are your suggestions or ideas for improvement of the training program? ➔ Open question
Learning	How much have you learned so far during this training program compared to what you expected? ➔ 9-point Likert scale ➔ Much less (-4) – much more (+4)
	How much have you learned so far during this training program compared to other teaching or seminar lessons? ➔ 9-point Likert scale ➔ Much less (-4) – much more (+4)
	How much do you think you will benefit in a professional context from what you have learned here? ➔ 9-point Likert scale ➔ Not at all (0) – very much (+8)
	Was the training more or less useful than other training programs and teaching or seminar lessons? ➔ 9-point Likert scale ➔ Much less (-4) – much more (+4)
	What are the most important things you have learned during this training program? ➔ Open question

Note. Own compiled table, based on recommended questions from Lind (2018) and open questions collected from the evaluation sheets for university courses (University of Erfurt), translated by the author.

For the evaluation of the open questions, all statements were screened, and a sample coding oriented on Mayring and Fenzl's (2014) evaluation method was conducted, in which corresponding topic categories were formed (according the recommendation of open questions in the survey from Züll & Menold, 2014). There were up to 27 very diverse categories, which were difficult to evaluate, so further checks were conducted to determine which of the statements could be summarized and which categories emerged most frequently. In the open question on the learning effect, the focus was on what should be trained (argumentation, judgment and change of perspective); and all other statements were coded as "other." A category was created for statements that indicated the respective participant had not learned anything or did not perceive any learning effects him/herself.

For the open questions about what the participants had liked and their suggestions for improvement, I checked which statements reoccurred frequently and which could be summarized thematically. It was also assessed whether the statement entered actually concerned a learning effect, what the participant had liked, or a suggestion for improvement (e.g., praise for the 15€ payment is not a learning effect). I also checked whether the statements referred specifically to the training program (i.e., the termination dilemma story and the collection of arguments), as some participants had also evaluated the MCT or the general conditions, such as the entrance control to the experiment, although this was not even asked for. These responses were coded as, "Yes (statement refers to training)," "No (statement does not refer to training)," or "Mixed (statement refers to training and also other aspects, such as MCT, experimental setting, etc.)."

Table 11 below details the procedure of the coding, including the categories of the three open questions.

Table 11

Coding Procedure and Categories

Questions/ procedure and categories	**Reference to training program**	**Statement relates to learning effect, what they liked, or suggestions for improvement**	**Categories**
What are the most important things you have learned during this training program?	First, it must be ensured that the statement refers to the training program. Coding: ➔ Yes ➔ No ➔ Mixed ➔ Not evaluable	The next step is to check that the respondent has reported a learning effect. The observation of a learning effect is subjective (can also include unintended effects). Coding: ➔ Yes ➔ No ➔ Mixed ➔ Not evaluable	The type of learning effect reported by the respondent must then be categorized. This is divided into the categories below. A participant can report more than one learning effect (i.e., someone may have addressed several categories). Categories in T1, T2, and T3: ➔ Argumentation, decisions, reflection and change of perspective ➔ Nothing learned ➔ Other (includes statements about other learning effects that are not intended by the training, e.g. careful reading) Categories in T4: ➔ Cocoa (information about the cocoa text) ➔ Test (referring to the test as a subcategory; we then look at who has seen a learning effect of the test) ➔ Argumentation, decisions, reflection, change of perspective ➔ Nothing learned ➔ Other (includes statements about unintended learning effects; e.g., careful reading)
What did you particularly like about this training program?	Does the statement refer to the training program? Coding: ➔ Yes	The next step is to check whether the respondents have made a statement about what they liked in this training program. Coding: ➔ Yes	It is necessary to categorize what the respondents indicate they liked about the training. Responses are divided into the categories below. A participant may address several categories. Categories in T1, T2, and T3

	➔ No ➔ Mixed ➔ Not evaluable	➔ No ➔ Mixed ➔ Not evaluable	➔ Situation/content/subject/case example ➔ Argumentation, decisions, change of perspective ➔ Nothing ➔ Other (used for every statement that cannot be assigned to other categories) ➔ Test (with reference to the test as a subcategory, we then look at who talks about effects of the test). ➔ Activity (design of the treatment) Categories in T4 ➔ Cocoa information ➔ Argumentation, decisions, change of perspective ➔ Nothing ➔ Other (used for every statement that cannot be assigned to other categories) ➔ Test (with reference to the test as a subcategory, we then look at who talks about effects of the test)
What are your suggestions or ideas for improvement of the training program?	Does the statement refer to the training program?	The next step is to check whether the participant has made a statement that gives suggestions or ideas for improvement (negative criticism, if applicable).	The respondent's suggestions for improvement are then categorized (possibly including negative criticism). Responses are divided into the categories below. A participant may address several categories.
	Coding: ➔ Yes ➔ No ➔ Mixed ➔ Not evaluable	Coding: ➔ Yes ➔ No ➔ Mixed ➔ not evaluable	Categories in T1, 2 and 3 ➔ Time, duration ➔ Nothing ➔ Situation/content/subject/case study ➔ Activity (design of the treatment) ➔ Media design/technical possibilities and rules ➔ Learning goals, connections, benefits ➔ Test ➔ Other (used for every statement that cannot be assigned to other categories) Categories in T4 ➔ Time, duration ➔ Nothing

	➔ Situation/content/subject/case study ➔ Media design/technical possibilities and rules ➔ Learning goals, connections, benefits ➔ Text length ➔ Test ➔ Other (used for every statement that cannot be assigned to other categories)

Note. Own compiled table. Open questions are based on questions from Lind (2018) and questions collected from the evaluation sheets for university courses (University of Erfurt), translated by the author.

Collegial feedback was continuously sought on the procedure and the creation of the categories. I then coded the statements (first coder). To check the reliability of the coding, it was important to check the intracoder reliability (Lewis-Back et al., 2004) and the intercoder reliability (Cho, 2008). This is done using the match coefficient (Maaz et al., 2009; Raupp & Vogelsang, 2009; Wirtz & Caspar, 2002). For this purpose, I did another coding by myself two weeks after the first. The intracoder reliability for the assignment of the statements to the learning effect was r=.95; for the statements about what the participants had liked, it was r=.95; and for the suggestions for improvement, it was r=.93. These are very good values (Raupp & Vogelsang, 2009). These coefficients can also be expressed as match in percentages of 95% (learning effect), 95% (what participants liked), and 93% (suggestions for improvement).

To check intercoder reliability, two additional coders were included. They both received a comprehensive briefing and information on the experiment and the individual treatments (including the control group), as well as the questionnaire and MCT. The coders also received a coding guide with the categories (see Appendix 2.6.5). Where there were questions after a first run, another exchange was necessary. The coders then independently assigned all statements to the categories. Afterwards, I made a comparison of the codings and consulted the coders. We talked

about the individual evaluations to identify how the coders had interpreted and assigned the statements. Where obvious errors had crept in (e.g., forgetting to code a statement), the respective coder checked it again. This was also done independently, thus no influence was exerted by the first coder. The final check showed agreement values in comparison with the first coding of r=.97 (learning effect), r=.92 (what participants had liked), and r=.94 (suggestions for improvement) for the second coder, and r=.92 (learning effect), r=.89 (what participants liked), and r=.88 (suggestions for improvement) for the third coder. The slightly higher match values for the second coder could be because the second coder knew the experiments better, as she had been entrusted with auxiliary activities during the experiment (participation in the pretest with volunteers and support in the entrance control to the experiment) and therefore had more previous knowledge. The coding of whether a statement genuinely referred to the training program required detailed knowledge of the individual treatments, but also of the test instrument and questionnaire. This information was of course also conveyed to the third coder by means of an extensive briefing. Nevertheless, I cannot exclude the possibility that the second coder was more experienced because of her previous support in study, which might have simplified the coding for the second coder.

The final check of all four codings (two for the first coder, then one each for the second and third) resulted in match values of r=.91 (learning effect), r=.84 (what participants liked), and r=.87 (suggestions for improvement). This short summary describes the main points of the process:

- The classification of whether the statements (for all three open questions) referred to the training program, or whether they were mixed (e.g., conflation with a test instrument) initially caused difficulties. In this case, an extensive briefing and complete familiarization with the experimental setup was

necessary to prevent confusion and ensure the coder could judge what the participant had meant by their statement.

- Nevertheless, some statements were difficult to interpret, as there was no match between the three coders. This was discussed again with each coder individually (to exclude typing errors, if possible), while taking steps to ensure no coder was influenced in his/her evaluation. Each coder explained the assignment differently, reflecting their different interpretations of the written text. Since such statements are obviously unclear, these "problem cases" were excluded from the evaluation.
- The easiest to classify were those statements that simply stated "nothing," or, "no suggestions for improvement," or the equivalent.
- Another difficulty was that the responses were very individualized and some contained several "statements," which meant they could be assigned to several categories at once.
- Open questions gave the participants the opportunity to communicate their reactions and describe their individual learning effects (if appropriate). This was evident from the variety of statements. However, this demanded greater efforts in the evaluation analysis, as multiple categories had to be created and the assignment of the statements to the categories had to be checked by several coders. The KMDD states that the trainer should not set a learning goal because it should be discovery learning, with each learner subjectively deciding what to take from the learning program for him/herself (statement made during collegial supervision by Lind). Providing a list of potential responses from which to choose can be problematic in this sense, as respondents are likely to be drawn to "socially desirable" answers that do not align with their true opinions. In the constructivist worldview, each participant connects new knowledge with his/her previous knowledge base (see section 3.2), which means that very different subjectively perceived learning effects can arise.

I set the following rules for the further use of the codings during the evaluation:

- Only those statements coded similarly by all three coders (including intracoding) were evaluated as 100% reliable data. Statements about which all three coders disagreed (i.e., there was no match between codings and intracoding) were evidently highly dependent on individual interpretation and were therefore not evaluated.
- Statements that did not refer to the training program were not evaluated, as only feedback on the training program was requested.
- Statements that were coded as "mixed" responses were not evaluated because this would have made interpretation more difficult (as it would not be possible to separate the statements) and these statements were not consistent with the purpose of evaluating reports about the training program.
- Responses that did not contain a statement relevant to the question (no indications of learning effect, which was enjoyable, or suggestions for improvement) were not evaluated because these failed to address the topic (see above: praise for the 15€ payment is not a learning effect).

4.1.4 Running the Experiment

4.1.4.1 Development of the Experiment and Technical Implementation.

To conduct the experiment, a data protection declaration / privacy policy, and participation declaration were drawn up in accordance with the legal requirements (see appendices 2.5.1 and 2.5.2). Feedback was obtained from the data protection officer of the University of Erfurt and was taken into account. Furthermore, I included a text on cocoa cultivation (copyright checked) to keep the participants of the control group (T4, without ethical relevance) busy during the ethics training.

The description of the project, data protect declaration and participant declaration, treatments, instructions, questionnaire,

MCT, and debriefing for the participants (made available to them on request) were submitted to the Ethics Council of the University of Erfurt for review. The Ethics Council gave a positive vote for the research project.

The experiment was technically implemented by programming the treatments and measurement instruments into oTree (Chen et al., 2016), a web-based program for experiments. The technical implementation was pretested with 13 volunteers. Small changes were made on the basis of their feedback (e.g., stronger highlighting of headlines; see also 3.3.4). For the technical execution of the experiment, oTreeHub (central platform to build, launch and monitor oTree experiment) was used in connection with Heroku (cloud platform, where a server was booked to run the experiment and collect the data).

4.1.4.2 Main Study.

Registered and active users of the eLab of the University of Erfurt received an invitation through the laboratory system ORSEE to take part in the experiment. Participants could register for their preferred date. There were 10 runs, with 20 test people in each (with random assignment to the treatments). Before each run, a laboratory entrance control was performed. Only those who received an invitation to the experiment and registered for the appointment were admitted. Before the start of the experiment, the respondents were asked to read and complete the privacy policy and participant declaration. Only those who agreed to the declarations could take part in the experiment, and they each received a seat ticket for the lab cabin. They were then welcomed and given instructions on how to proceed in case of technical problems or questions. The participants were then asked to close their cabins and the experiment began centrally. After the experiment, the participants received their remuneration (15€).

The between-subjects design was applied to the three developed ethical treatments, as well as the control (which had no ethical relevance). The experiment consisted of a four-group

analysis with 200 participants (N=50 each group). The participants were students (80% bachelor, 19.5% master), in different faculties and different major and minor fields of study (e.g., pedagogics, economics, law, social sciences, philosophy). The subjects were 21% male, 78% female, and 1% diverse; they had an average age of 21 years and very little work experience (94% had none at all). (An overview of descriptive statistics is included in Appendix 2.6.2.)

The first treatment group received the e-based ethics training that required active participation in individual work (T1). The participants were confronted with a dilemma story and had to collect arguments for different action alternatives and choose the best of the pro and con arguments. The second treatment group received e-based training that required active participation by collecting arguments in a digital group discussion (T2). This involved the same story as that used in T1. The third treatment group received the same dilemma story and a collection of arguments to read (T3). The control group received no ethics training and were asked to read a text about cocoa. The subjects were randomly assigned to their groups in a double-blind procedure, supported by the oTree programmed experiment (Chen et al., 2016). This removed the potential influence of the experiment supervisor, as all instructions were written (e-based, in the cabin). Only the welcome address and information about what to do in the event of technical problems was given orally, and this was done by the same supervisor in each case. Pretests and posttests were conducted to provide before and after measures for statistical analysis.

Table 12 below provides an overview of the structure of the experiment.

Table 12

Overview of the Experimental Structure

Point in time	Step	Group	Duration (orientation / estimate)	Duration (fix)

Before the experiment	Entrance control	All	Approx. 5 min.	./.
	Data protection declaration and declaration of participation (print)	All	Approx. 5 min.	./.
	Welcome (oral)	All	Approx. 2 min.	./.
Experiment (e-based)	Start slide	All	Approx. 1 min.	./.
	Questionnaire baseline survey with moral competence test (MCT; pretest)	All	Approx. 10 min.	./.
	Instructions for the training	All	Approx. 5 min.	./.
	Dilemma story	T1, T2, T3	Approx. 5 min.	./.
	Pro- and con lists (training – collect or read arguments)	T1, T2, T3	./.	20 min.
	Final task “best argument”	T1, T2, T3	./.	3 min.
	Cocoa text (reading)	Control group	./.	23 min.
	Final survey with MCT (posttest)	All	Approx. 10 min.	./.
	Closing slide	All	Approx. 1 min.	./.
After the experiment	Information after the experiment (oral) and payment	All	Approx. 5-10 min.	./.

	Debriefing (mailing)	As requested	./.	./.

Note. Own compiled table.

4.2 Results

4.2.1 Moral Competence Test (MCT)

The C-score obtained from the MCT was calculated for each participant, before and after the treatment, using a variance analysis. I was interested in identifying the change of C-score between the groups. For this purpose, a gain score analysis of variance (ANOVA) is recommended in the literature (Fitzmaurice et al., 2004; Maris, 1998; Maxwell & Delaney, 1990; Rogosa, 1988; Salkind, 2010). A gain score ANOVA examines the difference in the change of pretest and posttest scores between the treatment groups, thus it was well-suited to evaluate the effects of the training treatments (Salkind, 2010).

That fitted to my hypotheses, because I wanted to investigate and compare the change in moral competence (C-scores) for the ethics training groups and the control. Thus, I ran a gain score ANOVA with the four treatment conditions as the independent variable (1 = active, without interaction treatment; 2 = active, with interaction treatment; 3 = passive treatment; 4 = control) and the change of C-scores (posttest C-scores minus pretest C-scores) as the dependent variable.[4] I checked the randomization and the groups did not differ significantly in regard to the variables of age, gender, education, years working, student status, and faculty of major and minor field of study (for an overview of the calculations and descriptive statistics, see appendices 2.6.1 and 2.6.2). The groups also did not differ significantly in the pretest C-score.

[4] A gain score ANCOVA with demographic control variables (age, gender, educational, years working, student status, and faculty of major and minor field of study) was also run. No variable produced significant results. Because there is no theoretical foundation to put these variables in the analysis and the pro forma calculation (as recommended in Bortz & Döring, 2006) show no significant results, I report the gain score ANOVA results only, but the ANCOVA results are attached to the appendix 2.6.3.

To check the assumptions of the ANOVA normal distribution of the dependent variable (gain score of moral competence) and the homogeneity of the variances of these variable (Sweet & Grace-Martin, 2012), the Shapiro-Wilk test and the Levene test were used. These are the recommended tests for checking the assumptions of ANOVA (see, e.g., Gastwirth et al., 2009; Levene, 1960; Razali & Wah, 2011; Rothe, 2007). Furthermore, the dependent variable must be a metric variable (Backhaus et al., 2016), which was the case for the change of the competence (change of C-score).

The results of the Shapiro-Wilk test show a normal distribution of the dependent variable in the sample (p=.251). However, when separated by treatment groups, the result for T2 was doubtful, as it is significant (p=.043), which means that the normal distribution of the dependent variable in group 2 cannot be confirmed. However, the literature also indicates that the ANOVA is robust against violation of this assumption (Rothe, 2007). Because the samples (n>10) are large and of equal size (N=50), one can assume that the violation of the normal distribution assumption is negligible (Rothe, 2007). Decision errors are not to be expected in hypothesis testing (Bortz, 2005; Rothe, 2007). The Levene test produced no significant results (p=.913), thus the groups have equal variances (in regard to the dependent variable) and the assumption of homogeneity of variances is fulfilled.

Since I have derived from the theory, that treatments 1-3 (ethics training) cause an increase in the C-score, whereas it is not expected in the control group; thus, the null hypothesis of the gain score ANOVA is there is no difference between the gain score means of the groups (experimental groups and control group).

H_0: $\mu_{\text{participants of ethics training}} = \mu_{\text{participants control group}}$

The alternative hypothesis is as follows: there is a difference between the gain score means of the groups (treatments).

H_1: $\mu_{\text{participants of ethics training}} \neq \mu_{\text{participants control group}}$

As I expected a greater increase in moral competence in the experimental groups, I can also propose a directional hypothesis (Bühner & Ziegler, 2009; Creswell & Creswell, 2018), instead of a nondirectional alternative hypothesis: the ethics training is effective. The experimental ethics training groups have a greater increase in moral competence (C-score) than the control group. ($\mu_{\text{participants of ethics training}} > \mu_{\text{participants control group}}$).

The results of the gain score ANOVA, the descriptive statistics, and the additional test results are summarized in Table 13.

Table 13

Results of Statistical Analyses (Gain Score Analysis of Variance (ANOVA))

	T1 (n=50)	T2 (n=50)	T3 (n=50)	T4 (n=50)	Total Sample (N=200)
Mean gain score	.20	.35	2.37	2.78	1.43
Std.Dev gain score	12.10	12.86	12.26	11.89	12.24
Shapiro-Wilk test (Sig)	.236	.043*	.444	.406	.251
Levene-Test (Sig) (based on Mean)	./.	./.	./.	./.	.913
ANOVA (p-value)	./.	./.	./.	./.	.620
p.η^2 (Partial eta-squared; effect size measure)	./.	./.	./.	./.	.009

Note. Own compiled table.

The prefixed significance level is 0.05; and if the p-value is below this level, the result of the test is statistically significant and provides evidence against the null hypothesis (Gray & Kinnear,

2011). The results of the ANOVA show no significant between-group differences (p=.620). The interpretation of the effect size shows that less than 1% ($p.\eta^2$=.009) of the dispersion of the gain score can be explained by the treatments (according to Richardson, 2011). Thus, an impact of ethical treatments on change of moral competence cannot be confirmed. In addition, there are no significant differences between the ethics training variations, so further tests to determine which training was most effective are unnecessary. There is no evidence against the null hypothesis because there is no significant difference between the gain score means of all groups (experimental and control).

Because the normal distribution assumption is violated in T2, a non-parametric test was additionally calculated (Field & Hole, 2003). The Kruskal-Wallis test confirms the non-significant results of the ANOVA, and the p-value is .878.

I additionally tested the sample for outliers (boxplot to identify outliers, see Appendix 2.6.4) because the ANOVA is very sensitive to outliers and this could have been why no significant effect were calculated (Aguinis et al., 2013). However, when outliers are correct values, the decision on whether to leave an outlier value in the database is for the scientist to take (Osborne & Overbay, 2004). To sufficiently address the sensitivity of ANOVA to outliers, I checked the data for outliers and calculated a gain score ANOVA without the three outliers found. The results are shown in Table 14.

Table 14

Results of Statistical Analyses (Gain Score Analysis of Variance (ANOVA) After Dropping Outliers)

	T1 (n=49)	T2 (n=48)	T3 (n=50)	T4 (n=50)	Total Sample (N=197)
Mean gain score	.82	1.93	2.37	2.78	1.98
Std. Dev. gain score	11.42	10.39	12.26	11.89	11.46

Number of outliers	1	2	0	0	3
Shapiro-Wilk test (Sig)	.238	.466	.444	.406	.236
Levene-Test (Sig) (based on Mean)	./.	./.	./.	./.	.63
ANOVA (p-value)	./.	./.	./.	./.	.849
$p.\eta^2$ (Partial eta-squared; effect size measure)	./.	./.	./.	./.	.004

Note. Own compiled table.

The normal distribution and homogeneity of variance are fulfilled. The data indicate that the treatments have no significant effect on the gain score (p=.849). The effect size is even smaller when compared to the ANOVA results with outliers ($p.\eta^2$=.004). Examination of the descriptive statistics reveals that the difference between the mean gain scores becomes even smaller if the outliers are excluded.

In addition, the descriptive statistics indicate that the mean value of the change of C-score of the control group (M=2.78) is the highest among all the groups, regardless of whether outliers are considered. In the control group, where no change was expected, as moral competence was not strengthened by ethics training, the largest absolute increases are measured in the C-score (despite the lack of statistically significant differences). T3 has an increase of 2.37 in C-score. The change in C-score becomes more apparent when the outliers in T1 (mean change from .20 to .082) and T2 (mean change from .35 to 1.93) are considered; but, nonetheless, these saw still the smallest increases in moral competence.

Lind (2016a) suggests consideration of the absolute changes in C-score (gain), but in this case, there are no effects even if his

recommendations for interpreting these changes are taken into account. Lind expects an average rise in moral competence from 3 to 6 points in C-score as an effect of a KMDD intervention. In another publication, Lind (2007) states that a change of 3.5 C-points could be called an "interventional effect." Such changes were not observed in this study because all gain scores were < 3 and 3.5 C-points. The evaluation of the absolute numbers must be viewed critically, as it is only meaningful in comparison with the control group. If all groups saw an increase of 3.5 C-points, we cannot conclude an interventional effect, as the control group also saw the same increase in C-score. In this case, we should rather ask where the increase in C-score came from in the control group, which had not received any ethics training.

4.2.2 Self-Report Evaluation Survey

As described in section 4.1.3.2, the self-report questions can be assigned to the evaluation levels of *reaction* and *learning,* as well as to open questions and questions using a Likert scale. Thus, the results of the analysis are divided into *reaction* and *learning,* as well as "Likert-scale statements" and "open questions."

4.2.2.1 Evaluation of Reactions.

Table 15 presents the results for all treatment groups' responses to the Likert-scale statements.

Table 15

Reaction Results from the Survey (Likert-scale Statements)

Reaction	T1 (*n*=50)	T2 (*n*=50)	T3 (*n*=50)	T4 (*n*=50)
Did you enjoy the training program? ➔ 5-Likert scale ➔ Not at all (0) – very much (4)	2.5	2.6	2.2	1.4
I would voluntarily participate in the training program again. ➔ Yes or No	Yes – 80% No – 20%	Yes – 82% No – 18%	Yes – 82% No – 18%	Yes – 58% No – 42%

Note. Own compiled table, questions are taken from Lind (2018), translated by the author.

The average value on the five-point Likert scale for the question, "Did you enjoy the training program?" is 2.0. All the ethics training treatments produced above-average evaluations. The interactive treatment received the highest rating (2.6), but this was only slightly above those of the other treatment groups (2.5 for T1 and 2.2 for T3, respectively). The control group received the lowest score, and this was below the average value (1.4), indicating a clear difference from the ethics training treatments. Furthermore, 80% (T1) and 82% (T2 and T3) of the participants said they would voluntarily take part in such training again, which shows a positive tendency for the ethics training treatments to be well received, regardless of the training design. Only 58% of the participants in the control group said they would voluntarily participate again. This is also a notable difference in the evaluations of the training treatments. Overall, the participants evaluated the ethics training quite positively. The interactive treatment received the highest ratings, but only by a very small margin, while the ratings in the control group are noticeably poorer.

The responses of all treatment groups to the open question about what they liked are shown in Table 16.

Table 16

Reaction Results from the Survey – What Participants Liked about the Training Program (Open Question)

What did you particularly like about this training program?				
Category	T1 (*n*=25)	T2 (*n*=36)	T3 (*n*=28)	T4 (*n*=29)
➔ Situation/content/topic/case example (T1-3 only)	24%	19%	29%	./.
➔ Argumentation, decisions, reflection, change of perspective	60%	69%	50%	./.
➔ Nothing	8%	3%	11%	21%

➔ Other (used for every statement that cannot be assigned to other categories)	16%	11%	18%	48%
➔ Activity (design of the treatment; T1-3 only)	0%	83%	21%	./.
➔ Cocoa information (T4 only)	./.	./.	./.	31%

Note. Own compiled table, open question collected from the evaluation sheets for university courses (University of Erfurt), translated by the author.

Analyzed were 50 statements (for each treatment), excluding dropouts due to lack of reliability (coding, see 4.1.3.2), statements unrelated to the training program (and mixed statements), and statements unrelated to the question. Such excluded statements occurred frequently, thus the sample size was much reduced.

In all statements that related only to the ethics treatment, the number of references to argumentation, decisions, reflection, and change of perspectives (50-69%) was remarkable. No reference to the activity (with or without interaction) was made in T1; but, in T2, respondents most enjoyed the exchange within the group and the joint collection of arguments (83%). Reference to the activity was made, surprisingly, in T3, albeit to a small extent (21%). Thus, this result indicates that T3 generated activity inside the learners, despite the passive training design, with analyses and reflection on the dilemma and the given arguments.

The high scores for T2 may indicate that reaction about the intended training of the change of perspective produced by the interactive task, is evaluated positively and the treatment design was more acceptable (compared to T1 and T3). In the control group, statements were very frequently categorized as “other” (48%), with statements about the content of the text being the second most common (31%). A fifth (21%) of the participants in the control group said they did not particularly enjoy anything about the experience. With regard to the learning approach and the strengthening of moral competence (associated with argumentation, change of perspective, and dealing with counterarguments), T2

scored highest in the evaluation, as T2 participants most frequently reported a change of perspective and referred to the activity (collecting arguments in the exchange with the group). Moreover, participants in this group were the least likely to state that they had liked nothing about the experience (3%). This is in line with the responses to the Likert-scale statements, where T2 also received the highest scores (slightly ahead of the other treatments). In all groups (T1-3), the possibility of a change of perspective (i.e., viewing a moral dilemma situation from different angles through an intensive analysis of different arguments) was perceived as particularly positive. The dilemma story about a professional termination was also evaluated positively – and described as realistic, interesting, and close to everyday working life – in all three treatments. There were very few differences between the treatment groups in terms of other things that the participants liked (11-18%).

There are evident differences between the treatment groups and the control group. For example, 21% of the control group did not like anything at all, and benefits for argumentation and change of perspective were not cited (though this was not to be expected in the control group). Instead, discussions of other topics and information about cocoa were the most commonly referenced. A table with examples of statements in each category and for every treatment can be found in Appendix 2.6.6.

Table 17 provides the results for all treatment groups for the open question on suggestions for improvement of the training program.

Table 17

Reaction Results from the Survey – Suggestions and Ideas for Improving the Training Program (Open Question)

What are your suggestions or ideas for improvement of the training program?				
Category	T1 (n=42)	T2 (n=38)	T3 (n=44)	T4 (n=36)
➔ Time, duration	21%	26%	57%	14%
➔ Situation/content/	13%	3%	2%	25%

topic/case study				
➔ Media design, technical possibilities and rules	8%	21%	2%	17%
➔ Learning goals, connections, benefits	13%	5%	7%	6%
➔ Activity	0%	16%	11%	16%
➔ Other (used for every statement that cannot be assigned to other categories)	13%	3%	2%	11%
➔ Nothing	44%	47%	18%	22%
➔ Text-length (T4 only)	./.	./.	./.	25%

Note. Own compiled table, open question collected from the evaluation sheets for university courses (University of Erfurt), translated by the author.

Analyzed were 50 statements (for each treatment), excluding dropouts due to lack of reliability, statements unrelated to the training program (and mixed statements), and statements unrelated to the question, as considered in the prior open question analysis.

For T1, it was noted that 44% made no suggestions for improvements. The suggestions that were made were frequently around the duration of the training (too long or too short), the topics addressed (e.g., they wanted stories about the daily work of professionals in other domains), and the need to communicate the learning goals and the meaning of the training. The other categories were only infrequently referenced. For T2, 47% made no suggestions for improvements. The suggestions that were made relate primarily to the time (waiting times in the group) and the related technical possibilities (e.g., writing at the same time and hiding arguments for the first time). For the active/interactive group, more action was desired, which corresponds with the issues around waiting times, as participants indicated that they would have liked to contribute more. The other categories were rarely discussed. For T3, only 18% made no suggestions for improvement. The most frequently raised issue was time, with most

people wishing they had been given less time to read the arguments. In addition, the participants wanted more activity (11%) and would have liked to generate the arguments themselves. The other categories were not frequently referenced. Suggestions for improvement of T4 referred to the topic (with participants wanting a more interesting and professional topic than cocoa), as well as to the time and the text length. The participants wanted either a shorter text or more time. The T4 participants shared ideas for more technical possibilities and activities, such as by marking and taking notes on the text and completing tasks in relation the text. The control group needed to be occupied for 23 minutes, so a text of sufficient length was chosen for this. It is not necessary for the control group to be particularly interested in the topic, nor is it necessary for them to actively participate or extend technical possibilities.

Participants in T2 were less likely to make suggestions for improvement, which corresponds with the finding that the participants liked this treatment most and were least likely to be dissatisfied. Time was problematic for every treatment, but especially for T3 (57%), where many may have been bored, as the majority stated that the treatment took far too long and should be shortened. In T2, time in general was not a problem, but rather the time that participants spent waiting, between writing posts, was evaluated as too long. Some participants in T1 suggested that the duration of the training could be individualized to each person's needs. Participants in T1 were particularly keen for more clarity around the learning goals, though this was cited in all treatments. More activity was desired in every treatment to some degree, except T1.

4.2.2.2 Evaluation of Learning.

The responses from all treatment groups to the Likert-scale statements on learning effects are shown in Table 18.

Table 18

Learning Results from the Survey (Likert-scale Statements)

Learning	T1 (n=50)	T2 (n=50)	T3 (n=50)	T4 (n=50)
How much have you learned so far during this training program compared to what you expected? ➔ 9-point Likert scale ➔ Much less(-4) – much more (+4)	0.4	0.6	0.4	-0.2
How much have you learned so far during this training program compared to other teaching or seminar lessons? ➔ 9-point Likert scale ➔ Much less (-4) – much more (+4)	0	0.1	-0.5	-1.2
How much do you think you will benefit in a professional context from what you have learned here? ➔ 9-point Likert scale ➔ Not at all (0) – very much (+8)	3.5	3.3	3.7	1.3
Was the training more or less useful than other training programs and teaching/seminar lessons? ➔ 9-point Likert scale ➔ Much less (-4) – much more (+4)	0	-0.1	-0.1	-1.7

Note. Own compiled table, questions are taken from Lind (2018), translated by the author.

For the responses to the nine-point Likert-scale questions on how much participants had learned compared to (a) what they expected and (b) other teaching or seminar lessons, the average value is 0.0. Almost all the treatments evaluations were above the average value of the scale, albeit to a very small degree (except T3, with -0.5). Thus, the treatments were each perceived as similarly educative, compared to other training programs and seminars. The evaluation of whether the learning would be useful in a professional context was not good, with below-average values (an average value of 4.00 on the nine-point Likert scale, and all ethical treatments rated slightly below 4, with 3.5, 3.3, and 3.7). Participants in T3 felt they had learned less in comparison to other training programs and seminars, but the future professional benefits were still estimated slightly higher than those of T1 and T2.

The evaluations of the ethics training treatments were below or only slightly above the average values of the scales. Nevertheless, there is a clear difference to the control group. The control group participants judged the learning effect to be poor and did not consider the treatment to be very educative. The participants saw little professional benefit (as expected for reading a text about cocoa).

The responses from all treatment groups to the open question on learning are shown in Table 19.

Table 19

Learning Results from the Survey (Open Question)

What are the most important things you have learned during this training program?				
Category	T1 (n=47)	T2 (n=43)	T3 (n=42)	T4 (n=48)
➔ Argumentation, decisions, reflection, change of perspective	89%	70%	81%	19%
➔ Other (used for every statement that cannot be assigned to other categories)	13%	28%	26%	15%
➔ Nothing	4%	12%	5%	6%
➔ Cocoa information (T4 only)	./.	./.	./.	71%
➔ Test (T4 only)	./.	./.	./.	23%

Note. Own compiled table, question is taken from Lind (2018), translated by the author.

Analyzed were 50 statements, excluding dropouts due to unreliability, statements that did not refer to the training program (and mixed statements, which were difficult to separate and to trace the cause of – e.g., the experiment as a whole, the treatment only, or a combination of these), and those that did not represent a learning effect. The participants' statements about their learning were subjective, specifically in terms of whether they called something a learning effect or a learning outcome (which could be an unintended effect). A learning outcome is a change of experience or behavior, and it refers to the extent of such a change

(Funke, 2017). In an empirical-psychological point of view, the learning outcome is the difference between the posttest and pretest scores (Funke, 2017), as discussed in 4.2.1. As described above, this section is not concerned with the changes in pretest–posttest measurements, as calculated by the MCT, but rather about the changes in learning as perceived by the participants themselves. Asked what they had learned, I assume that participants considered what they had known before and assessed their knowledge base after the treatment. Their pre-existing knowledge and experiences would therefore not be mentioned when they were asked what they had learned through the training.

For the control group, many statements referred not only to the cocoa text, but also to the MCT. To identify the influence of the MCT – against the background that the control group had the highest gain score in the statistical analysis, despite there being no statistically significant changes – I decided to include these statements in the evaluation. This was important for determining whether learning impulses had been generated by completing the test.

The results indicate a clear difference between the control group and treatment groups with regard to intended learning effects associated with skills in argumentation, decisions, reflection, and change of perspective (19% vs. 89%, 70%, 81%, respectively). Other unintended learning effects, such as “read carefully” and “learn to be patient,” appeared in all treatments (13% to 28%). In addition, 4% to 12% of participants reported that they had learned nothing. Almost a quarter (23%) of the participants in the control group refer to the MCT and explain the 19% according to a learning outcome in argumentation, decisions, reflection, and change of perspective. However, statements on argumentation, decisions, reflection and change of perspective were scarce in T4, compared to the treatment groups, which clarifies that the test had a rather weaker learning effect. In fact, most statements in the control

group (71%) referred to a learning effect in terms of knowledge about cocoa.

Overall, T1 delivered the best results in this evaluation analysis. Most participants reported learning in the area of argumentation, decisions, reflection and change of perspective (89%) and only a few (4%) said they had not learned anything. The results for T3 are also very good, with 81% reporting a learning effect in the area of argumentation, decisions, reflection, and change of perspective, and only 5% of the participants saying they learned nothing. The T2 performance was a little worse, with 12% of participants saying they learned nothing (the highest number in this category across all groups). While 70% reported a learning effect in argumentation, decisions, reflection, and change of perspective, this was the lowest of all three treatments. T2 had the most statements referring to "other" learning effects associated with cooperation (patience when collecting arguments together, etc.).

4.2.2.3 Summary of the Results for Reaction and Learning from the Self-Reports.

The overall evaluation of the reactions suggests that the ethics training treatments were well received. T2 was particularly positively evaluated, but with only a minimal "lead" over the other treatment groups. Most participants in all three treatments affirmed their willingness to participate voluntarily in such a training program in the future, while this willingness was clearly lower in the control group. In the reaction evaluation, differences with the control group were very noticeable. The control group treatment was not very well received. T2 was most enjoyable for the participants, and it is judged most positively in the reaction rating. This was not only evidenced by responses to the Likert-scale statements, where there is a risk of participants choosing "socially desirable" answers and a tendency towards the middle of the Likert scale, but also supported by open statements about what the participants had liked (individual formulation). There were fewest

suggestions for improvement made in relation to T2. The highest scores, indicating what the participants had liked the most, were given to the opportunities for argumentation, decisions, reflection, and change of perspective in all three ethical treatments and the interactive design of T2. The dilemma story itself was also evaluated positively in all treatments (19–29%), with participants describing it as realistic, interesting, and relevant. In T1 and T2, many participants made no suggestions for improvement; while in T3, many participants wanted to see improvements. A similar number of participants in the control group made suggestions for improvements. The suggestions were diverse: in T1 most statements referred to time (21%), and in T2 to media design (21%). In T3, most participants (57%) criticized the time given and said they would have liked less. In the control group, the subject (cocoa) was unsurprisingly the most criticized element.

The overall evaluation for learning shows mixed results. The responses of the control group to the Likert-scale statements were negative. The evaluations by the participants in the ethical treatments were also very restrained. However, clear differences emerged in the comparison with the control group. The ethical treatments received ratings that were average or slightly below in various areas: how much the participants had learned, compared to what they had expected or compared to other teaching and seminar lessons; how much they thought they would benefit from the learning outcomes in a professional context; and how useful they considered the training program to be, compared to other training. The analysis of the open question on what participants had learned revealed that T1 received the highest scores for argumentation, decisions, reflection, and change of perspective (89%), followed by T3 (81%). In these groups, there were also the fewest participants who stated that they had not learned anything (4% and 5% for T1 and T3, respectively). T2 did not do badly (70% for change in perspective and 12% indicating that they had learned nothing), but slightly worse than T1 and T3. The learning effects in the control

group were very different. The control group, as expected, predominantly reported having learned something about cocoa, rather than about ethical reflection or changes in perspective.

4.2.3 Summary of Results in Relation to the Hypotheses

The theoretically derived hypotheses on the effect of the ethics training treatments cannot be confirmed from the findings of the experiment (pretest–posttest comparison). The self-report results certainly show learning effects in the desired area (argumentation, decisions, reflection, and change of perspective) and clear differences from the control group, but these results must be viewed critically, as they are based solely on the subjective statements of the subjects. Although the differences are small, the evaluation reveals that the participants in the interactive treatment (T2) were most satisfied with the design. Enjoyment of the training is not the only consideration, and training that is fun but has no or only minimal learning effects must be challenged. This is especially so where training variations are not offered to provide fun and entertainment to the participants, but rather to strengthen their moral competence to prepare them for dilemma situations in their everyday professional lives. The learning effect is therefore of primary importance. Nevertheless, enjoyment also plays a role, as participants are likely to be more motivated if they like the design of the training (in this case, the “learning approach” category). The self-report results give a slight indication that the ethics training provided an impulse to reflect on moral dilemma situations and see them from different angles. However, this is not sufficient to confirm the hypotheses on the learning effect of the training, though the results provide a good starting point for research to develop further e-based ethics training using moral dilemmas.

5 Discussion

The ethics training treatments did not produce significant results in terms of an increase in moral competence, as measured by the MCT. In this chapter, I will first consider what might be the reason for this and what needs to be looked at critically before the

results of the self-report are included and assessed critically. Suggestions for improving the treatments are presented, alongside notes on the limitations of this work and ideas for future research.

5.1 Discussion of the Moral Competence Test (MCT) Results

5.1.1 Sample Size, Absolute Change, and Moral Competence Measurement

For significant results in laboratory experiments, a sufficiently large sample is required. Two hundred subjects is a good sample size, albeit not huge for testing of three treatments and a control group. With a larger sample size, there is a lower risk that the results are simply random, as a larger sample enables more accurate inference (Creswell & Creswell, 2018). Thus, one must consider the role of the sample size in the results, especially when the absolute change in C-score (gain) is very small. In this study, the absolute changes are all positive, but very small, thus random variations in MCT cannot be excluded. Nevertheless, the control group has the largest absolute increase in C-score, which is even more difficult to explain theoretically. One explanation could be that the effects of the ethics treatments are underestimated. The tasks given to the ethics training subjects may have been too demanding and therefore only produced low values in the C-score in the posttest. In support of this assumption, a comparison of the three ethics training treatments reveals that the largest change was measured in T3. The subjects in T3 had less activity, allowing them to concentrate better in the posttest, while the T1 and T2 participants may have been exhausted by the active tasks. T1 received the worst scores, and the T1 participants not only had to work actively on the dilemma case, but were also left to their own devices for individual work, while the interactive group worked together on a list of arguments.

If one assumes that the effects of the ethical treatments are underestimated, the next step is to identify any indicators of a worse performance by treatment groups 1-3 in the posttest. Tiredness due to the difficult task (dilemma story) and the level of

activity seem to be an appropriate explanation, as Lind (2016a) provides three possibilities for why a C-score might be lower than it actually is: (1) time pressure, (2) external expectations in the form of performance tests, and (3) fatigue.

1. There was no time limit for completing the test, but the participants could have put themselves under time pressure, as they knew that the experiment would take about 60-75 minutes and that the posttest would be completed at the end. During the posttest, they knew that the end of the experiment was near, as there was also a time display for orientation. The participants were informed beforehand that there was no time pressure and that everyone could complete the test at their own pace. There was therefore no external time pressure.
2. There is also no indication of external expectations or pressure to perform, especially as this would raise the question of why only treatments 1-3 felt a pressure to perform and the control group did not. The participants all received 15€ for their participation, without exception, thus remuneration was not linked to performance in the treatment.
3. For the active groups, fatigue could be an explanation for the lower values. The participants filled out the pretest, actively dealt with another story, collected arguments, and were then tested again. This workload might have been simply too much for them, while the participants in the passive treatment also had to fill out the pretest and posttest and were challenged by another dilemma story, but there was no active discussion because the list of arguments was provided to them.

The passively designed group was therefore not challenged to the extent of the active groups. The control group participants could rather “rest” and simply let the time run out, because they had only to read a text and not to work on it. The participants in the control group were then perhaps simply “fresher” when they completed the MCT. Nevertheless, the control group should not actually show any effect at all. The gain score changes may be

random fluctuations or an indication that the MCT can have a very small effect, as the task of completing the test was perhaps perceived as significantly more interesting after the assigned text, which the control group rated very poorly. Previous studies have been unable to confirm a learning effect of the MCT (e.g., Friedrich et al., 2017; Lerkiatbundit et al., 2006), but it cannot be ruled out that repeating the test may provide at least a small impulse to think more deeply about moral dilemmas.

Nevertheless, an underestimation of the effect of the treatments due to fatigue is not sure and must also be critically questioned. For an effect in the absolute gain score, even more change is required. The values of the ethics training treatments are < 3 and 3.5 C-points, which – even according to the interpretation recommendation of Lind (2007) – does not represent an intervention effect. Additionally, a difference between the experimental ethics training groups and the control group is required to produce significant results. In addition, a session of KMDD lasts longer than this entire experiment; hence, I must critically question why fatigue would have occurred in this treatment, despite its shorter duration. Perhaps the training time was too short, especially for the active groups, meaning that more input had to be processed in less time. Perhaps phases for relaxation were necessary. However, this would have extended the experiment's overall duration. Outdoor breaks would also have been difficult to implement, as I would have had to ensure the participants did not talk to one another and exchange ideas.

To create more time to "digest" the contents, an asynchronous training format could be beneficial. For example, over a period of two weeks, the active groups could work on the task digitally and enter arguments every now and then, as the ideas occurred to them, reading and thinking about the dilemma over the period. This would create flexibility, allowing participants to relax as and when they needed to. This is in line with suggestions from the field of learning and education, which indicate that spaced

practice is more effective than massed practice (Hattie, 2009; see section 2.3). Spaced practice training, which would be fulfilled by applying an asynchronous format, would allow rest intervals for the participants. However, rest intervals can also be provided by a synchronous format in which training sessions are temporally distributed.

However, creating more time to digest the content would not resolve the problem of the passive group, which had sufficient time to read the arguments. Nevertheless, the confrontation with the dilemma story in addition to the MCT stories may have caused fatigue. More time to read the arguments is not equivalent to a break (particularly one in the open air). It cannot be ruled out that the passive group would have done just as well with a break and self-determined learning time, because the presentation of a list of arguments may not be sufficient to significantly stimulate the C-value.

5.1.2 Reduced Version and the Duration of the Ethical Treatments (based on KMDD)

The non-significant results may also be because the e-based design of the ethics training reduced the KMDD approach to the collection of arguments – and thus how to deal with arguments both *for* and *against* one's own view (since this is crucial for strengthening moral competence, according to Lind, 2010 and Walker, 1983). In order to strengthen the debate, the best argument should be individually stated on for both the pro and con sides after the collection of arguments is finished. In the context of the KMDD as a face-to-face session, there are rounds of voting on the dilemma story and a combination of individual work, small group work, a plenary discussion with all participants, and even feedback on the session by observers, as well as an exchange about the session between all participants as a conclusion. Thus, the KMDD has a combined learning approach, mixing active methods (with and without interaction) with passive methods (e.g., the teacher's presentation of the dilemma story, observation feedback).

Collecting and dealing with different pro and con arguments may not be sufficient to achieve an increase in moral competence. The combined learning approach (passive and active) is, however, difficult to investigate, since there are countless possible combinations and the test measures the results of the entire intervention, thus it is impossible to identify which individual task – and thus, also, which design – was responsible for the learning success. There is a need to test individual variations (see also, Artelt, 2000). I would expect the duration of the treatment to increase if other methods were included. This should be taken into account, especially for a laboratory experiment, which can require considerably more time and resources (human and financial). Fatigue among the test participants could also reoccur as an issue, which could negatively influence the C-score result of the posttest. However, an asynchronous or partially asynchronous format could allow sufficient time for breaks and rest.

5.1.3 E-based Format and Communication Signals

Participants may have been unsure about the e-based format if they had no previous experience with this type of training. They may need additional training sessions to become familiar with it. It is possible that significant effects will only become apparent when such training is repeated. This would give participants more experience of discussing and reflecting moral dilemmas in this format.

The uncertainty around the e-based and exclusively written training could have been increased by the loss of the communication signals used in face-to-face training sessions. These signals are likely to be helpful for the interpretation and discussion of arguments. Discussion in a face-to-face group – as in a KMDD session – has a different atmosphere to discussion in e-based training. The participants in the active treatment without interaction and in the passive treatment were on their own anyway; while the participants in the active treatment with interaction collected arguments together, there was no opportunity to perceive the facial

expressions or gestures of the other participants. In a face-to-face discussion, participants can evaluate more communication signals to help process the content. In the pure form of the learning approach (without combination), this is only relevant to the interactive and passive treatment. The active treatment that does not involve interaction does not include any external input or communication signals.

A video chat would be possible to increase communication in the interactive treatment. However, the opportunity for anonymous discussion could also be viewed positively (in T2), so the use of a video conference should be considered critically. During the passive treatment, a trainer could present the dilemma story and the arguments in a video lecture. In summary, a video conference or lecture would allow more communication signals (gestures and facial expressions) during the discussion (interactive) or presentation (passive), thereby creating a different learning atmosphere.

5.2 Discussion of the Self-Report Results

There are little hints from the self-report, which show advantages of an active design. The interactive treatment showed the best results in the reaction category and the active treatment without interaction was rated highest for the subjectively perceived learning effect, albeit with only a small lead in each case and some ratings were only slightly above average. The passive treatment also received good ratings. This does not contradict constructivist recommendations for training design, since constructivists does not negate the effect of passive training design, but does not prefer it. The reason could be that the enjoyment for participants is an important matter and constructivists see advantages of interactive designs compared to passive ones.

Although it is not possible to determine which treatment most effectively strengthens moral competence – due to the absence of a statistically significant effect on the C-score of participants in all ethics training groups – the responses to the open

question about subjectively perceived learning effects show that T1 had the strongest impact on argumentation, decisions, reflection, and change of perspective (89%), ahead of T3 (81%) and T2 (70%). The clear, explicit formulation in the open field (reducing the risk of social desirability bias) can be weighted somewhat more heavily than the Likert-scale responses (which produced mixed results); thus, T1 clearly saw the strongest moral competence-related learning effects. In contrast, the control group did not rate the treatment very positively and reported few moral competence-related learning effects (19%). If this is reported in the control group, it refers to the MCT and not to the treatment, as the control group did not receive any ethics training.

If suggestions for improvement are taken into account, there could be other results, because, for example, the slightly worse rating for the passive group with regard to reaction could be partially attributed to the duration of the treatment, which was criticized by participants. There is a risk of boredom during a treatment if it takes too long, and this can have a negative influence on participants' evaluations of how enjoyable the training was. Activity was also desired by this group. The participants wanted to be actively involved and to be invited to collect the arguments themselves. One possibility would be a combination, so that participants could add new arguments to a given list. This active involvement might have a positive influence on participants' evaluations of whether the treatment was enjoyable and what was liked.

Some participants would have liked to work at a self-determined pace. A flexible design of the ethics training in regard to duration could therefore be considered in future research. For T1 and T3, the duration could be individualized (self-chosen learning time), because these groups are working alone. There is a risk that this would cause the participants to spend less time on the treatment. The learning effect could suffer if the time were reduced or if participants could choose the duration for themselves (if they

could just click on it quickly to “get rid of it,” there might be no learning effect at all). However, the instructions could include a recommendation that participants must respond comprehensively to the task.

The T2 participants criticized the long waiting times. To guarantee more action and shorter waiting times, future adjustments could include a reduction in the group size, from five people to three, as well as other technical possibilities such as asynchronous access. This could reduce waiting times and allow a self-paced duration. Smaller groups could be engage in more productive discussion, so that everyone can provide arguments more often and more quickly. However, this would also introduce a risk of fatigue. Fewer people in the discussion groups and more contributions by the individuals themselves (more arguments) would mean more work for the participants, and this could lead to exhaustion that might reduce C-scores in the posttest. The problem with waiting times could be addressed by an asynchronous treatment design that allowed all participants to post whenever they wanted (e.g., over the period of a week). Participants in the current experiment were be obliged to refer to one another’s posts, so that interactivity was guaranteed and the project did not become individual work in the guise of a group assignment. This would be also important for an asynchronous training. In an asynchronous discussion forum, users do not have to wait for another person’s responses in real-time and can easily return any time they want to (perhaps with real-time updates). Video chat is also possible, but more difficult to implement in practice and unlikely to be feasible for testing the impact of a treatment in a laboratory experimental setting, due to issues of silence or sound isolation (depends on laboratory equipment) and users needing to log-in at the same time. There are also further requirements for participants (e.g., webcam, stable internet connection). Wang (2009) recommends a variety of communication tools in synchronous and asynchronous formats to support social knowledge construction. He highlights that

discussion fora, video conferencing, and chat rooms are possible for successful online discussions, but there is a need for moderation to provide rules and information, promote participation, and observe, and examine progress (see also, Salmon, 2004). A small number of the subjects in this study commented that they liked the anonymous group work because it was all about the arguments and not about the people. This allowed the discussion to remain objective and the participants to become more involved and to contribute more to the discussion.

5.3 Ideas for Further Research

5.3.1 Evaluation Method and Measurement

There is no uniform definition of "ethical competence," so it was necessary to choose a concept of competence associated with a well-validated test instrument. This is provided by Lind (2016a). The development of further competence concepts and tests for the measurement of ethical competence, e.g. also for moral awareness, would be welcome. It is important that tests in different languages must be validated and economically feasible. If an instrument is unfortunately only available in a validated form in another language, a mere translation is not sufficient to guarantee the value of the instrument.

If an "assessment center," lasting several hours, as a recommended alternative measurement tool (Eigenstetter et al., 2012), must first be conducted to assess competence, this increases the cost (human, financial, time) of the impact measurements immensely. Even with asynchronously designed training tested in experiments; this can reduce the participant and response rate enormously if the test already takes too much time. Once again, there is also the issue of fatigue, which could also occur in other tests and which may lead to an erroneous underestimation of training effects. Effects due to mere participation in the MCT can never be entirely excluded, as the test means that participants at least have the opportunity to think about morally difficult situations. I was unable to find any study that investigated and

measured a significant effect on the C-score due to simply filling out the MCT (this is supported by personal reports from Georg Lind, who in his years of practice with countless impact measurement studies, found no evidence of an effect of the MCT).

To avoid the underestimation of treatment effects (C-score measurement posttest), it is necessary to consider the factors that could negatively influence the C-score. These include performance pressure (there should be no grades on the MCT or performance-related remuneration of subjects), time pressure, and training designs that can cause fatigue. There is no evidence that time pressure or pressure to perform were relevant problems in this study. However, participant fatigue cannot be excluded, so further research could integrate breaks between the treatment and posttest, and could assess different training designs in which participants work on a problem with alternating passive and active phases to reduce the risk of exhaustion. This could be reduced also by an asynchronous design, as the participants would enjoy sufficient rest and breaks.

The advantages and necessity of a pretest–posttest design with a control group were explained in detail in Chapter 2. Further research should extend this procedure to include follow-up tests that measure whether effects persist several months after the treatment (or after a longer period). It is not always advisable to measure short-term effects, but this is widely used because further follow-up tests require more time and effort (personal and financial) and subjects must be motivated to participate again. This can be made more difficult by limited financial research funds, time-limited projects, and fluctuations of subjects, among both university students and professionals.

The supplementary questionnaire, based on the questionnaire of Lind (2018) and modified by the addition of some questions, might be extended to include further questions. For example, certain questions could control for fatigue and time or

performance pressure by inviting participants to communicate how they felt about these factors.

Here too, it is necessary to consider how much more time should be invested. The coding procedure for the open questions was very time-consuming and the evaluable statements were reduced by the reliability test. To facilitate the evaluation (with regard to the complex coding procedure) and to avoid a reduction of the sample (as a result of the reliability test), it would be useful for further research to provide a list of possible answers, followed by the option to give an open answer. The Likert-scale statements were taken from the final questionnaire of Lind (2018), but the Likert scales could be adjusted. The uniform use of a five-point Likert scale, for example, would be easier for the reader to evaluate, interpret, and understand than a number of different scales. The assessment of the participants' enjoyment of the treatment and how useful they found the learning effects can only be made after the treatment. A pre-post comparison would not be useful in this case. However, professionals could be asked in the pre-post design how well prepared they felt for morally problematic situations, including those arising in their daily work. The responses could be compared pre-post to deduce whether the treatment had a subjectively perceived effect.

5.3.2 Sample Size and Subjects

Two hundred subjects is already a good sample size (see also 5.1.1), but it would be preferable to recruit more (Bortz & Schuster, 2006). Every research project is financially restricted to some degree (Kelcey & Shen, 2020; Raudenbush, 1997), as remuneration must be paid and financial means are limited, and the recruitment of participants is also restricted. Subjects must be registered as participants for laboratory experiments, they must be available and registered at the time of the experiment, and they must agree to the privacy policy and the participant declaration. Unfortunately, some statements made in response to the open questions in the self-report were dropped out, because they did not

refer to the question asked or they were too ambiguous. As a result, they were left out of the coding process. The results must therefore be considered in a limited way. If financially feasible, it would be desirable to test larger samples to ensure the findings were drawn on sufficient statements, despite cases of non-usable data.

Another important topic is the subjects. If possible, training designed for professionals should also be tested on professionals. This was not done here. Experiments with professionals may involve higher costs, as they are more difficult to recruit and need stronger incentives to participate, such as higher remuneration. There is also a need to advertise to companies for participation in the research project; reimburse travel expenses for laboratory experiments at the university (if applicable); and consider longer lead times, which are difficult to implement, especially for a time-limited project. Work with students is easier to plan, they are easier to recruit, and this procedure is well-established and commonplace for experiments in both psychology (Haslam & McGarty, 1998) and economics. Furthermore, students are future professionals. In particular, students with a major or minor in economics, and law have an understanding of the termination topic. In addition, the ethical considerations in a dismissal decision are also evident to people who are not active in this field, as most people are workers themselves. Nevertheless, the treatments have not been tested on professionals, thus the results can only be transferred to the workplace to a limited extent, as students are not experienced in practice. This may also be an advantage, however, as the students had not been influenced by an existing corporate culture and were thus able to discuss and think about the moral dilemma “more freely” than they might otherwise have been.

5.3.3 Training Design

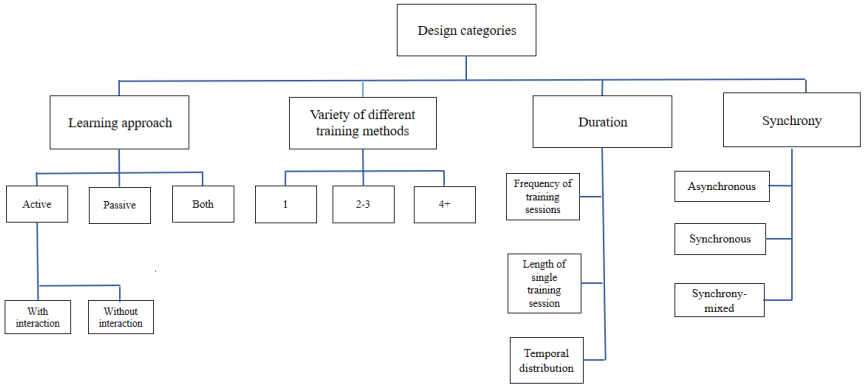
It is not possible to state conclusively which learning approach design is the most effective. However, the interactive design was well received by the participants, and the passive participants indicated they would have liked more activity. Whether

this activity is necessary alone or in a group (with/without interaction) is difficult to answer. The activity was at least not explicitly mentioned as positive in T1, so the interactive design appears to have offered more entertainment value. Combinations may be useful in order to combine the advantages of the various forms. However, there are countless possible learning approach combinations, the effects of which would have to be examined individually. In the case of the active/interactive design, it appears that too much activity can promote fatigue, which can have a negative effect on the test results. In this respect, breaks may be required.

The suggestions for improvement of the three ethical treatments referred to duration (T1 and T3) and waiting times (T2 only). The option to self-determine the learning time would affect the synchrony of the treatments and make it difficult to investigate treatment effects with a laboratory-experiment method. This self-determination of the learning time would be more possible with an asynchronous format or a combination. For an enhancement, the existing model of Kreismann and Talaulicar (2021) allows the possibility of an additional design category. Synchrony is especially important for e-based training. This can enable learners to participate in a treatment at their own pace, with flexible timing and can reduce the risk of exhaustion. Thus, it might be useful to examine synchrony of training in further research. This design category can include synchronous, asynchronous, or synchrony-mixed/combined design, as shown in Figure 2.

Figure 2

Modified Model of Design Categories for Ethics Training



Note. Adapted from *Business Ethics Training in Human Resource Development: A Literature Review*, by D. Kreismann and T. Talaulicar, 2020, p. 18. Unpublished manuscript, accepted for publication in Human Resource Development Review (Figure 1, modified by the author).

Synchronously designed discussions define the time and duration for collecting arguments in a discussion forum, chat, or video conference (or alone, in the case of active-without interaction). In this laboratory experiment, the implementation was designed to be synchronous. During the experiment, the participants had to invest exactly 23 minutes in the ethical treatment (with additional time for reading the dilemma story, pretesting, and posttesting, as no time pressure was to be introduced) and to work on an argumentation list (similar to a discussion forum) or to read a given list. The lists of active treatments were updated continuously (after each argument was inputted).

In T2, it was not possible for the participants to individualize the training duration in a synchronous format because the group needed to work together. The participants could not quit their treatments at different times, as the group members were dependent on one another for the shared work. To reduce the criticized waiting times in the discussion, the discussion group could be reduced from five people to two or three, so that participants would have more frequent access in the synchronous

format. However, this could lead to greater fatigue due to there being more activities, as discussed above.

In an asynchronously designed training, discussions can be arranged in a forum with a time span within the collection of arguments can take place. The learners could choose the concrete time (e.g., Monday morning, Wednesday afternoon) and take responsibility for organizing comfort breaks to prevent overexertion and fatigue during training. In an asynchronous format, participants would also have to wait for posts from the other participants, but this would be at different times. This would create flexibility, as a user could log-in five times during a two-week period of training, for example, and observe the progress of the discussion. The waiting time would not be at a single point in time, as in a laboratory experiment. Asynchronously designed passive training could include video recordings of a presentation for the participants to watch at a self-determined time, or participants could be given argument lists.

Overall, an asynchronous or synchrony-mixed design could ensure there is sufficient time to think about the content, breaks and self-determined learning. The options for the "synchrony" design category could therefore be further investigated. This is important because synchrony may influence the duration of the treatment. The relation between the learning time (both the amount of time and the point of time) and the synchrony is shown in Table 20.

Table 20

Synchrony Characteristics

Concrete point in time	Amount of learning time	Synchrony
Participants complete the treatment at a given point in time (includes common starting and end point)	Participants get the same learning time (given time)	Synchronous
Participants complete the treatment at a given point in time (includes common starting and end point)	Participants can choose different learning times (self-determined)	Not possible

Participants complete the treatment at different, self-chosen times (possibly within a given time span)	Participants get the same learning time (given time)	Asynchronous
Participants complete the treatment at different, self-chosen times (possibly within a given time span)	Participants can choose different learning times (self-determined)	Asynchronous

Note. Own compiled table.

If participants completed the treatment at different, self-chosen times (possibly within a given time span), it would always be asynchronous, even if the amount of learning time were the same. Only if the treatment is completed at a fixed (concrete) point in time and during a fixed duration of learning time is it a synchronous format. All other combinations are considered synchrony-mixed. The participants themselves deciding how much time to invest does not necessarily make the format asynchronous; a mixed format is also possible. For example, a mixed format has a common *starting point* but a flexible *quantity* of learning time (as it is no longer synchronous if, for example, one person finishes the treatment after 10 minutes and another after 30 minutes). There are also other mixed variants, such as a video conference conducted at a fixed time and lasting 15 minutes, with a subsequent discussion in the forum, where contributions can be posted at different points during a set time span.

If necessary, further rules or recommendations must be examined to ensure that the participants are sufficiently engaged. Accordingly, a recommendation (no compulsion) can be made for the amount of the learning time (especially if it is designed passively). In the case of active design, indications can be given that a minimum number of arguments must be collected (this was also the case in this study); and in the group work, this could be a minimum number for collection by each person. If a design is synchronous (as in this study), the learning time could be only extended or shortened uniformly for all participants (participants largely wanted to shorten the time in T3). Again, to reduce waiting

times in the synchronous group work, smaller groups should be chosen so that the participants can share arguments more frequently. Participants could also collect arguments at different points in time so they did not have to "wait" (asynchronous format). However, short waiting times are normal even in real-world discussions, where one must wait while other participants are speaking.

Whether spaced or massed practice is more effective remains open for further research, as duration was not examined in this experimental study (though it was covered in the discussion based on the participants' individual feedback). It might be that a synchronous format that is temporally distributed and provides sufficient rest intervals is more effective than an asynchronous or synchrony-mixed format, but this was not the preference of the participants, who requested different durations and thus self-chosen learning times.

6 Conclusion

The aim of this study was to develop and evaluate three different designs of e-based ethics training to examine and identify the best design for strengthening moral competence in a business context. Regarding the learning effect, the superiority of active and interactive designs over passively designed treatments, as assumed in the constructivist theoretical foundation (see section 3.2), cannot be confirmed. The measurement of moral competence using the MCT did not show a significant effect of the treatments, and the results of the self-report questionnaires are inconclusive.

The results show that the vast majority of participants saw a learning effect in the area of argumentation, decisions, reflection, and change of perspective (70-89% of the participants), which is related to moral competence. Therefore, all three learning approaches seem to provide an impulse to think about morally relevant problem situations, though none significantly increased the C-score compared to the control group. There may be various reasons for this (as discussed above), not only related to the

training, but also to the structure of the experiment – including the measurement of competence, which could have led to fatigue. This could have led to an underestimation of the training effects, with the values in the posttest being lower simply due to fatigue.

The evaluation of the participants' reaction shows that the interactive treatment was the most liked. Participants appreciated the possibility of active collaboration with others; and equally, the participants in the passive treatment said they would have liked more activity. The participants' individual feedback provides valuable information for further development of the treatments and many promising avenues for further research. The passive group reported that it would have enjoyed more activity, so that a combination, i.e. passive with a given list of arguments with the opportunity to add more arguments themselves (developed through individual or group work), could be useful. However, a combined learning approach could include many different combinations, so it would be necessary to explore various options to find the optimal design.

Further feedback from the respondents – especially concerning self-determined and time-flexible training – prompted me to rethink the framework of design categories (Kreismann & Talaulicar, 2021) and to extend it by adding the category of "synchrony," which in turn could influence the duration of the training. In this study, the training was performed synchronously, with session in the laboratory. In the case of asynchronously designed training, different learning times could occur regardless of the learning approach, in terms of both when the course is completed (the point in time) and how long the participant spends on it (amount of learning time). This flexibility could help to ensure that no learner feels overwhelmed or underchallenged by a fixed time schedule. It would also be possible for all participants to take breaks when they needed them. In this way, time pressure, fatigue, and boredom could be avoided. This would also address the rising

interest in asynchronous online discussion (Hammond, 1998; Hawkey, 2003).

The training programs developed for this study provide, at least, an impulse to consider reflection and a change of perspective in moral dilemma situations. The development and evaluation of the training programs represents a first step towards a body of knowledge on e-based implementation of ethics training, whereby hardly any differences between the learning approach designs could be identified. Further research is required to address the questions that remain open.

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Appendix

1. Original Documents in German

1.1 Material zum Schreiben von Dilemma-Geschichten

Vorgehen beim Schreiben der Dilemma-Geschichte mittels KMDD-Leitfaden

Vorgaben der KMDD (Lind, 2018):

- Geschichte in Sprechsprache/einfach und leicht verständlich
- Hauptperson direkt am Anfang mit Vornamen und ggf. Nachnamen vorstellen
- Nur eine Hauptperson vorstellen! Andere Personen müssen anonym bleiben
- Am Anfang soll sich schon das Problem andeuten (die Person muss vor einer ausweglos erscheinenden Situation stehen – die Geschichte darf nicht langweilen, aber auch nicht zu starke, den Teilnehmer belastende Emotionen auslösen)
- Entscheidungsdruck für den Protagonisten: Aufschieben ist nicht möglich
- Die Hauptperson muss klar zeigen, dass ihr die Entscheidung schwer fällt
- Technische Lösungen sind nicht möglich (kein Ausweichen möglich)
- Kurz fassen! Maximal ¼ Seite
- Am Ende nochmal prüfen: alles Unwichtige weglassen und nicht künstlich in die Länge ziehen
- Am Ende steht eine klare Entscheidung des Protagonisten oder die Entscheidung wird offen gehalten.

1.2 Erster Entwurf Dilemma-Geschichte und Tabelle für Treatment 3 (Argumente)

1) Dilemma-Geschichte: Führungskraft in der Zwickmühle

Herr Müller leitet ein kleines Team von fünf Personen. Er ist sehr zufrieden mit dem Arbeitsklima und den Leistungen seines Teams. In letzter Zeit gibt es allerdings Schwierigkeiten mit einer Mitarbeiterin.

Eine Mitarbeiterin seines Teams kommt in letzter Zeit häufig zwischen 15 bis 75 Minuten zu spät, sodass der betriebliche Ablauf erheblich gestört wird. Schon mehrfach haben sich Kunden und Kollegen beschwert, dass die Mitarbeiterin nicht oder zu spät zu einem Termin kam und nicht erreichbar war. Die betroffene Mitarbeiterin hat vor kurzem durch einen Unfall ihren Mann verloren und muss sich nun allein um ihre zwei kleinen Kinder kümmern. Außerdem leidet sie unter dem Druck, den Kredit für das Haus im Grünen jetzt allein abbezahlen zu müssen.

Herr Müller hat bereits mehrfach mit ihr über das Problem gesprochen. Trotz guter, jahrelanger Zusammenarbeit musste seine Mitarbeiterin aufgrund der vielen Verspätungen mehrfach ermahnt und auch einmal schriftlich abgemahnt werden.

Nachdem sie wiederholt 15 Minuten zu spät an ihrem Arbeitsplatz erschienen ist, verlangt die Unternehmensleitung von Herrn Müller, dass er das Problem endgültig und schnellstmöglich lösen muss. Er soll dringend darüber nachdenken, seiner Mitarbeiterin zu kündigen. Herr Müller erhält vom Justiziar eine juristische Beratung mit der Aussage, dass eine Kündigung zumindest arbeitsrechtlich möglich ist. Herr Müller ist unsicher, was er machen soll. Er muss schnell handeln. Er hat dennoch „Bauchschmerzen“, wenn er daran denkt, seiner Mitarbeiterin zu kündigen.

2) Argumente-Sammlung

Nr.	Pro Kündigung	Nr.	Contra Kündigung
1	Die Mitarbeiterin stört erheblich wiederholt betriebliche Abläufe.	2	Die Mitarbeiterin hat jahrelang sehr gute Arbeit geleistet, das muss jetzt auch zählen und berücksichtigt werden.

3	Die Verspätungen belaufen sich nicht nur auf wenige Minuten. Es sind sehr starke Verspätungen bis zu 75 Minuten.	4	Die Mitarbeiterin steht zurzeit unter großem emotionalen und finanziellen Druck, an dem sie keine Schuld hat. Der Arbeitgeber sollte dafür Verständnis haben.
5	Die Mitarbeiterin hat ihr Verhalten trotz mehrfacher Ermahnung und Abmahnung nicht geändert.	6	Die Mitarbeiterin muss sich allein um ihre Kinder kümmern und hat privat genug Probleme, da sollte der Arbeitgeber nicht auch noch Probleme machen.
7	Das Arbeitsklima in der Abteilung leidet unter der Unpünktlichkeit der Mitarbeiterin.	8	Mit einer Kündigung schadet man auch den Kindern der Mitarbeiterin, die an dieser Situation keine Schuld haben. Die Kinder würden darunter leiden.
9	Durch die Verärgerung der Kunden können das Image und die Reputation des gesamten Unternehmens Schaden nehmen.	10	Die Mitarbeiterin und ihre Kinder würden ihr Zuhause verlieren, da sie ohne Job die Kreditraten nicht zurückzahlen kann.
11	Die Kunden sind verärgert über das Verhalten der Mitarbeiterin – und unzufriedene Kunden sind eine Bedrohung für die Existenz des Unternehmens. Damit sind auch andere Mitarbeiter/innen betroffen, deren Arbeitsplatz geschützt werden muss.	12	Statt Abmahnung und Ermahnung hätte der Arbeitgeber vertrauensvoll Lösungsvorschläge mit der Mitarbeiterin erarbeiten können. So könnte vielleicht eine vorübergehende Teilzeitbeschäftigung für eine zeitliche Entlastung der Mitarbeiterin sorgen, bis sie ihre neue Situation und ihren Alltag ausreichend geplant und wieder im Griff hat.
13	Die Unternehmensleitung erwartet eine schnelle Problemlösung – dies ist durch eine Kündigung (statt weiterer Ermahnungen) gegeben.	14	Die Mitarbeiterin vollbringt inhaltlich gute Arbeit und leistet damit einen wertvollen Beitrag für das Unternehmen. Die Unpünktlichkeit ist das einzige Problem, das man vielleicht auch mit einer flexibleren Arbeitszeitregelung in den Griff bekommen könnte.
15	Herr Müller darf sich von seiner Mitarbeiterin nicht „auf der Nase herumtanzen lassen“.	16	Die Kündigung sollte das letzte Mittel sein. In diesem Fall kommt aber statt einer Kündigung vielleicht auch eine Versetzung in eine andere Abteilung, ggf. ohne

			Kundenkontakt und weniger Termindruck, infrage.
17	Herr Müller muss als Führungskraft, nach all den Ermahnungen und Abmahnungen, konsequent handeln, wenn er seine Glaubwürdigkeit behalten will.	18	Eine Neubesetzung der Stelle und die Einarbeitung eines/r neue/n Mitarbeiters/in kostet das Unternehmen viel Zeit und Geld.
19	Herr Müller muss auch seine eigene Position schützen und stärken. Wenn er die Mitarbeiterin nicht kündigt, könnte die Unternehmensleitung sonst den Eindruck bekommen, dass er als Führungskraft nicht taugt.	20	Solange die Stelle nicht neu besetzt und der/die neue Mitarbeiter/in eingearbeitet ist, bedeutet dies Mehrarbeit für das Team. Unter dieser Belastung kann das Arbeitsklima leiden.
21	Eine Kündigung der Mitarbeiterin schafft die Möglichkeit für eine Neubesetzung der Stelle mit einem/r zuverlässigeren Mitarbeiter/in.	22	Die Mitarbeiterin hätte es schwer, unter den Voraussetzungen einen neuen Job zu finden. Sie muss aber ihre Familie versorgen.
23	Das Vertrauensverhältnis zwischen der Mitarbeiterin und ihrem Arbeitgeber ist zerrüttet, da sie die vorangegangenen Gespräche offenbar nicht ernst nimmt.	24	Herr Müller könnte ein schlechtes Gewissen haben, das ihn noch längere Zeit plagt, wenn er nicht alles versucht hat, um eine gütliche Einigung mit der Mitarbeiterin zu erzielen.
25	Die Mitarbeiterin hat genug Chancen zur Verbesserung bekommen. Jetzt reicht es.	26	Die anderen Mitarbeiter könnten Herrn Müller als eiskalte, berechnende Führungskraft sehen, die ihre Mitarbeiter solange behält, solange sie „funktionieren“ und sie rauswirft, wenn mal Probleme auftreten.
27	Die Mitarbeiterin wird bezahlt für ihre Arbeit. Der Arbeitgeber darf erwarten, dass sie diese, wie vereinbart, ausführt. Tut sie dies nicht, muss sie mit einer Kündigung rechnen. Ihre persönlichen Probleme muss sie privat klären.	28	Herr Müller kann gegenüber der Unternehmensleitung geltend machen, dass er seine Mitarbeiter nicht als Maschinen sieht und respektvoll mit ihnen zusammenarbeiten will. Persönliche Hintergründe und Probleme müssen daher auch ernst genommen und berücksichtigt werden. Hier ist für ihn als Führungskraft neben Konsequenz auch Verständnis und ein „zu den Mitarbeitern- Stehen“ erforderlich. Dazu gehört

	auch Probleme gemeinsam zu meistern, auch wenn es mal etwas länger dauert und weitere Gespräche notwendig sind.

1.3 Material Experteninterview und Auswertung

1.3.1 Interviewleitfaden Experteninterview[5]

Liebe/r XX,

Vielen Dank, dass du mich unterstützt, indem du dich als Experte für ein Interview zur Verfügung stellst. Die Inhalte werde ich für das Trainingsprogramm nutzen, das ich entwickelt habe.

Das Trainingsprogramm soll in drei verschiedenen Varianten auf seine Wirksamkeit bezüglich der Stärkung der moralischen Kompetenz (mittels Moralischen Kompetenztest – MKT von Lind) geprüft werden. Das Trainingsmodul wird e-basiert in Laborexperimenten geprüft. Hierfür wird den Teilnehmern*innen eine Dilemma-Geschichte digital präsentiert. Beim Schreiben der Dilemma-Geschichte wurden die Leitlinien des KMDD-Manuals verwendet. Eine Teilnehmergruppe soll dann in Einzelarbeit Pro- und Contra-Argumente zusammensammeln (Design-Ausgestaltung: aktiv – ohne Interaktion). Die zweite Gruppe sammelt in Gruppenarbeit Pro- und Contra-Argumente zusammen (aktiv – mit Interaktion) und der dritten Gruppe wird eine Liste mit Argumenten vorgegeben (passiv). Die Durchführung des Trainings dauert ca. 25 Min. für alle Teilnehmer*innen. Alle Teilnehmer*innen erhalten die Abschlussaufgabe, das für sich überzeugendste Argument, jeweils auf der Pro- und Contra-Seite, zu wählen.

Zuvor die obligatorische Frage, ob du einverstanden bist, dass ich das Interview aufzeichne – hierfür liegt dir auch schriftlich die Datenschutzerklärung vor.

[5] Der Interviewleitfaden wurde den Experten bereits vorab zur Verfügung gestellt, um sich auf die Fragen vorbereiten und die ausgearbeiteten Inhalte ausführlich prüfen zu können.

Dann kann es ja jetzt losgehen. Dir ist zuvor die Dilemma-Geschichte und eine Tabelle mit Pro- und Contra-Argumenten für den Fall zugegangen. Dazu habe ich jetzt einige Fragen.
Für Fragen stehe ich dir gerne zur Verfügung.
Freundliche Grüße

Dominic Kreismann
Kontakt:
dominic.kreismann@uni-erfurt.de
0361/737-4512

1) Fragen zur Geschichte

1.1) Fragen zur Erprobung der Geschichte (1-4 aus dem KMDD-Manual; Lind, 2018):

1.1.1 Fühlst du in der Geschichte ein Problem oder Dilemma?

☐ Ja ☐ Nein ☐ Weiß nicht ☐ Keine Angabe

1.1.2 Welche Gefühle hat der Fall bei dir ausgelöst?

Klicken oder tippen Sie hier, um Text einzugeben.

1.1.3 Wie schwer würde dir die Entscheidung fallen, wenn du der Hauptakteur wärst?

☐ Sehr schwer ☐ Eher schwer ☐ Neutral ☐ Eher leicht ☐ Sehr leicht ☐ Weiß nicht ☐ Keine Angabe

1.1.4 Gibt es aus deiner Sicht eine einfache technische Lösung, die eine nähere Befassung mit dem moralischen Kern der Geschichte überflüssig machen würde?

☐ Ja, nämlich:Klicken oder tippen Sie hier, um Text einzugeben.

☐ Nein ☐ Weiß nicht ☐ Keine Angabe

1.1.5 Sind die KMDD-Vorgaben an das Schreiben der Dilemma-Geschichte erfüllt (mit Ausnahme der dargelegten Änderungen im Anhang 1)?

☐ Ja ☐ Nein ☐ Weiß nicht ☐ Keine Angabe

Wenn nein, bitte begründen (Was müsste dafür noch angepasst werden?): Klicken oder tippen Sie hier, um Text einzugeben.

1.2) Fragen zur sprachlichen Ausgestaltung & zum Verständnis:

1.2.1 Ist die Geschichte deiner Meinung nach gut verständlich?

☐ Ja ☐ Nein ☐ Weiß nicht ☐ Keine Angabe

Wenn nein, bitte begründen (Was ist unverständlich?): Klicken oder tippen Sie hier, um Text einzugeben.

1.2.2 Gibt es Verbesserungshinweise in Bezug auf den Inhalt oder die Formulierung der Geschichte (Inhalt)?

☐ Ja ☐ Nein ☐ Weiß nicht ☐ Keine Angabe

Wenn ja, welche? Bitte um Angabe: Klicken oder tippen Sie hier, um Text einzugeben.

1.3) Relevanz des Themas (Praxisbezug)

1.3.1 Wie schätzt du die Wahrscheinlichkeit ein, dass eine Führungskraft mit einem Problem, wie Herr Müller es hat, in der beruflichen Praxis konfrontiert werden könnte?

☐ Sehr wahrscheinlich ☐ Eher wahrscheinlich ☐ Neutral ☐ Eher unwahrscheinlich ☐ Sehr unwahrscheinlich ☐ Weiß nicht ☐ Keine Angabe

1.3.2 Ist das Thema Kündigung und Trennungsmanagement, wie es in dieser Geschichte aufgegriffen wird, ein schwieriges, ethisch-relevantes Thema für Führungskräfte?

☐ Ja ☐ Nein ☐ Weiß nicht ☐ Keine Angabe

2) Feedback zu den Argumenten

Dir ist zuvor eine Liste mit Argumenten FÜR und GEGEN eine Kündigung der Mitarbeiterin zugegangen.

2.1 Ist die Formulierung der Argumente deiner Meinung nach gut verständlich?

☐ Ja ☐ Nein ☐ Weiß nicht ☐ Keine Angabe

Wenn nein, bitte begründen (Was ist unverständlich?): Klicken oder tippen Sie hier, um Text einzugeben.

2.2 Gibt es weitere Argumente, die du anbringen möchtest, die auf der Liste nicht enthalten sind?

☐ Ja ☐ Nein ☐ Weiß nicht ☐ Keine Angabe

Wenn ja, welche?

Nr. 29: Klicken oder tippen Sie hier, um Text einzugeben.

Nr. 30: Klicken oder tippen Sie hier, um Text einzugeben.

Nr. 31: Klicken oder tippen Sie hier, um Text einzugeben.
Nr. 32: Klicken oder tippen Sie hier, um Text einzugeben.
Nr. 33: Klicken oder tippen Sie hier, um Text einzugeben.
Nr. 34 Klicken oder tippen Sie hier, um Text einzugeben.
2.3 Gibt es Verbesserungshinweise in Bezug auf den Inhalt oder die Formulierung der Argumente?
☐ Ja ☐ Nein ☐ Weiß nicht ☐ Keine Angabe

Wenn ja, welche? Bitte um Angabe: Klicken oder tippen Sie hier, um Text einzugeben.

2.4 Wie viele Argumente werden in einer KMDD-Session in der Erwachsenenbildung deiner Erfahrung nach insgesamt gesammelt?
Klicken oder tippen Sie hier, um Text einzugeben.
2.5 Welche Anzahl an Argumenten wäre für die vorgegebene Liste (passive Ausgestaltung des Trainings) deiner Erfahrung nach optimal für die Teilnehmer/innen, um in den 20 Minuten Durchführungszeit eine Über- und Unterforderung der Teilnehmer/innen zu vermeiden und eine gute Übersichtlichkeit der Pro- und Contra-Listen zu gewährleisten?
Klicken oder tippen Sie hier, um Text einzugeben.
2.6 Ggf. je nach Antwort in 2.4 und 2.5: Ob und wie kann man die vorhandenen Listen sinnvoll reduzieren, zusammenfassen (oder Argumente streichen) oder sollen noch weitere Argumente aufgenommen oder ausgetauscht werden? Wie lauten deine Empfehlungen?
Klicken oder tippen Sie hier, um Text einzugeben.
2.7 Für die aktive Ausgestaltung ohne Interaktion und mit Interaktion soll eine Mindestanzahl an Argumenten gefordert werden (als Empfehlung – „wird gewünscht/erwartet“), damit gewährleistet ist, dass sich die Teilnehmer/innen mit der Geschichte auseinandersetzen und aktiv Argumente sammeln. Ich möchte gern deine Meinung erfassen, ob und wie hoch man diese Zahl ansetzen sollte (Was könnte zu viel sein? Was könnte die Teilnehmer/innen überfordern/unterfordern?)?

z.B. feste Regel: so viele Argumente sammeln wie in 20 Min. möglich, aber mind. jeweils 3 Argumente für die Pro- und Contra-Seite.
Klicken oder tippen Sie hier, um Text einzugeben.
2.8 Bei der Sammlung soll auf Ausgeglichenheit der Argumente-Anzahl geachtet werden (also nicht etwa 20 Argumente auf der Pro-Seite und nur drei auf der Contra-Seite). Diese Ausgeglichenheit soll gefordert werden, um eine einseitige Beschäftigung mit dem Fall zu vermeiden, denn die Teilnehmer/innen sollen sich mit beiden Seiten auseinandersetzen (überlegen und austauschen). Wie lautet dazu deine Empfehlung? Hast du diesbezüglich Bedenken, befürwortest du diese Regel oder hast du andere Anmerkungen und Verbesserungshinweise dazu?
Klicken oder tippen Sie hier, um Text einzugeben.

1.3.2 Material zur Vorbereitung für die Experten

1) Dilemma-Geschichte wie in Anhang 1.2 dargestellt.
2) Tabelle für passives Training wie in Anhang 1.2 dargestellt.
3) Vorgehen beim Schreiben der Dilemma-Geschichte mittels KMDD-Leitfaden

Vorgaben der KMDD (Lind, 2018, modifiziert v. Verf.):

- Geschichte in Sprechsprache/einfach und leicht verständlich
- Hauptperson direkt am Anfang mit Vornamen und ggf. Nachnamen vorstellen
- Nur eine Hauptperson vorstellen! Andere Personen müssen anonym bleiben
- Am Anfang soll sich schon das Problem andeuten (die Person muss vor einer ausweglos erscheinenden Situation stehen – darf nicht langweilen, aber auch nicht zu starke, den TN belastende Emotionen auslösen)
- Entscheidungsdruck für den Protagonisten: Aufschieben ist nicht möglich
- Die Hauptperson muss klar zeigen, dass ihr die Entscheidung schwerfällt

- Technische Lösungen sind nicht möglich (kein Ausweichen möglich)
- Kurz fassen! Maximal ¼ Seite
- Am Ende nochmal prüfen: alles Unwichtige weglassen und nicht künstlich in die Länge ziehen
- Am Ende steht eine klare Entscheidung des Protagonisten: wird aufgrund der Sonderkonstruktion nicht eingehalten→ Es gibt keine Entscheidung des Protagonisten, sondern es wird offen gehalten, da die Teilnehmer/innen sich dann über beide Seiten (Pro & Contra) Gedanken machen sollen (nicht wie in KMDD, wo man nach einer Entscheidung des Protagonisten einem Meinungslager zugeordnet wird und nur für eine Seite Argumente sammelt → dies wäre für die aktive Ausgestaltung des Trainings nicht sinnvoll und ist abhängig von einer Entscheidung, wie man die Handlung des Protagonisten bewertet)

Weitere Informationen zum Training:

- Das Trainingsmodul bleibt für alle gleich (Dilemma-Geschichte & Auseinandersetzung Pro & Contra), lediglich die Aktivität bzw. Interaktivität wird variiert.
- Um die Treatments außer in der Aktivität gleichbleibend designen zu können, wird auch auf andere Teilmethoden der KMDD verzichtet (z.B. Aufteilung in Pro- und Contra-Gruppe).

1.3.3 Datenschutzerklärung für Experteninterview[6]

Datenschutzerklärung gem. Art. 13 DSGVO und Einwilligung in die Anfertigung von Tonaufnahmen

Thema/Anlass: Experteninterview zur Entwicklung von e-basierten Trainingsmodulen (angelehnt an die KMDD)

Name und Anschrift des Verantwortlichen

Der Verantwortliche im Sinne der EU-Datenschutzgrundverordnung (DSGVO) und anderer nationaler

[6] Die Datenschutzerklärung wurde erstellt mithilfe von Hinweisen und Feedback von der Datenschutzbeauftragten der Universität Erfurt.

Datenschutzgesetze der Mitgliedsstaaten sowie sonstiger datenschutzrechtlicher Bestimmungen ist:

Dominic Kreismann, M.A.
Doktorandin an der Universität Erfurt
Lehrstuhl für Organisation und Management
Private Kontaktdaten aus datenschutzrechtlichen Gründen entfernt

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E-Mail: dominic.kreismann@uni-erfurt.de

1. Datenverarbeitung im Rahmen der Anfertigung und Veröffentlichung von Tonaufnahmen

a) Umfang der Datenverarbeitung

Im Rahmen der Anfertigung und Veröffentlichung von Tonaufnahmen zu dem o. g. Thema/Anlass verarbeiten wir von Ihnen folgende Daten:

- Vorname und Nachname
- Geburtsdatum
- E-Mail-Adresse
- Mediale Inhalte (Tonaufnahme), in denen Sie wahrnehmbar sind

b) Zwecke der Datenverarbeitung

Die Verarbeitung Ihrer oben genannten personenbezogenen Daten wird zur Entwicklung der Trainingsprogramm im Rahmen der Dissertation von Dominic Kreismann an der Universität Erfurt verwendet.

Es erfolgt eine Veröffentlichung der Transkription der Tonbandaufnahme in der Dissertation von Dominic Kreismann.

2. Rechtsgrundlage für die Verarbeitung personenbezogener Daten

Rechtsgrundlage für die Verarbeitung Ihrer oben genannten personenbezogenen Daten durch die Dominic Kreismann ist Ihre Einwilligung, Art. 6 Abs. 1 Satz 1 lit. a DSGVO.

3. Weitere Empfänger Ihrer personenbezogenen Daten

Ihre obengenannten personenbezogenen Daten werden an folgende Empfänger innerhalb bzw. außerhalb der Universität Erfurt weitergegeben:

- Empfänger innerhalb der Universität Erfurt: Prof. Dr. Till Talaulicar, Nordhäuser Str. 63, 99089 Erfurt
- Empfänger außerhalb der Universität Erfurt: keine.

Ihre personenbezogenen Daten werden nicht an weitere Empfänger innerhalb oder außerhalb der Universität Erfurt weitergegeben.

4. Dauer der Speicherung der personenbezogenen Daten

Ihre obengenannten personenbezogenen Daten werden so lange gespeichert, wie sie für die oben genannten Zwecke (Promotion) benötigt werden. Wenn Sie Ihre Einwilligung widerrufen, werden die Daten gelöscht.

5. Ihre Rechte als Betroffener

Sie haben gem. Art. 13 Abs. 2 DSGVO ein Recht auf Auskunft über Ihre von Dominic Kreismann verarbeiteten personenbezogenen Daten (Art. 15 DSGVO), ein Recht auf Berichtigung Ihrer personenbezogenen Daten (Art. 16 DSGVO), ein Recht auf Löschung (Art. 17 DSGVO), ein Recht auf Einschränkung der Verarbeitung (Art. 18 DSGVO) und ein Recht auf Widerruf Ihrer Einwilligung (Art. 7 Abs. 3 DSGVO).
Außerdem haben Sie das Recht, Beschwerde bei der Aufsichtsbehörde einzulegen. Zuständige Aufsichtsbehörde ist der Landesbeauftragte für Datenschutz und Informationssicherheit Thüringen, Dr. Lutz Hasse, Postfach 90 04 55, 99107 Erfurt/ Häßlerstraße 8, 99096 Erfurt, Telefon: 0361/57 311 29 00, E-Mail: poststelle@datenschutz.thueringen.de.

Einwilligungserklärung

Name + Geburtsdatum: _____

E-Mail _____

Mit Ihrer Einwilligung erklären Sie, dass Dominic Kreismann Ihre oben unter 1.a) genannten personenbezogenen Daten erheben und weiterverarbeiten darf für die unter 1.b) genannten Zwecke.
Sie haben das Recht, Ihre Einwilligung jederzeit gegenüber dem Verantwortlichen zu widerrufen. Durch den Widerruf der Einwilligung wird die Rechtmäßigkeit der aufgrund der Einwilligung bis zum Widerruf erfolgten Datenverarbeitung nicht berührt.
Hiermit willige ich freiwillig in die Erhebung und Verarbeitung meiner personenbezogenen Daten ein. Ich bin über den Umfang und Zweck der Datenerhebung und Datenverarbeitung sowie über mein Widerrufsrecht informiert worden. Eine Kopie der Datenschutzerklärung und der Einwilligungserklärung habe ich erhalten.
Ort, Datum: _____

Unterschrift: _____

1.3.4 Transkriptionsrichtlinien für die Experteninterviews

Transkriptionsrichtlinien für die Experteninterviews[7]

(.)	kurze Pausen (circa 1 Sekunde)
(..)	mittlere Pausen (circa 2 Sekunden)
(…)	längere Pausen
Wei-	Wortabbruch
Äh	Planungspause
[Ähm	Planungspause]
Hm	überlegend
m-hm	zustimmend
(Türklappern)	nichtsprachliche Handlungen
(lacht)	Begleiterscheinungen des Sprechens
<u>Sicher</u>	Wortbetonung

- Alle gesprochenen Inhalte inkl. Wortwiederholungen, Stottern usw. werden aufgenommen.

[7] Vgl. nach Vorbild von Barth (2012), S. 284.

- Eigennamen werden notiert, wie sie verstanden werden.
- Dialekt wird ans Hochdeutsche angepasst.
- Bei jedem Sprecherwechsel wird der Zeitcode der Tonbandaufnahme dokumentiert.
- Nichtsprachliche Handlungen wie auffällige Pausen, Räuspern, Lachen, etc. werden berücksichtigt, aber keine Nebengeräusche.

1.4 Dilemma-Geschichte und Tabelle für Treatment 3 nach Anpassungen (nach Expertenfeedback)

1) Dilemma-Geschichte: Führungskraft in Not

Herr Müller leitet erfolgreich seit einigen Jahren ein kleines Team von fünf Personen. Er ist sehr zufrieden mit den Leistungen seines Teams. In letzter Zeit gibt es allerdings Schwierigkeiten mit einer Mitarbeiterin.

Diese langjährige, gute Mitarbeiterin seines Teams kommt in letzter Zeit häufig zwischen 15 bis 75 Minuten zu spät, sodass der betriebliche Ablauf erheblich gestört wird. Schon mehrfach haben sich wichtige Großkunden und Kollegen beschwert, dass die Mitarbeiterin nicht oder zu spät zu einem Termin kam und nicht erreichbar war. Die betroffene Mitarbeiterin wurde vor kurzem von ihrem Lebensgefährten verlassen und muss sich nun allein um ihre zwei kleinen Kinder kümmern. Außerdem leidet sie unter dem Druck, den Kredit für das Haus jetzt allein abbezahlen zu müssen. Herr Müller hat bereits mehrfach mit ihr über das Problem gesprochen. Trotzdem musste die Mitarbeiterin aufgrund der vielen Verspätungen mehrfach ermahnt und auch einmal schriftlich abgemahnt werden.

Nachdem sie wiederholt 15 Minuten zu spät zu einem Termin an ihrem Arbeitsplatz erschienen ist, verlangt die Unternehmensleitung von Herrn Müller, dass er das Problem endgültig und schnellstmöglich lösen muss. Auf die daraufhin wieder eingegangene Kundenbeschwerde muss schnell reagiert werden. Er soll dringend darüber nachdenken, seiner Mitarbeiterin zu kündigen. Hierfür setzt ihm die Unternehmensleitung eine Frist

von 3 Tagen. Herr Müller erhält vom Justiziar eine juristische Beratung mit der Aussage, dass eine Kündigung zumindest arbeitsrechtlich möglich ist. Herr Müller ist unsicher, was er machen soll. Er muss schnell handeln. Er ist auch sehr verärgert über das Verhalten der Mitarbeiterin, hat aber dennoch „Bauchschmerzen“, wenn er daran denkt, sie zu kündigen.

2) Argumente-Sammlung

Nr.	Pro Kündigung	Nr.	Contra Kündigung
1	Die Mitarbeiterin stört wiederholt betriebliche Abläufe. Die Verspätungen belaufen sich dabei auch nicht nur auf wenige Minuten. Es sind sehr starke Verspätungen bis zu 75 Minuten und teilweise komplette Terminausfälle.	2	Das Arbeitsklima im Team kann darunter leiden, wenn ersichtlich ist, dass Herr Müller selbst Skrupel hat, der Mitarbeiterin zu kündigen, und der Eindruck erweckt wird, dass diese Entscheidung von der Unternehmensleitung „durchgedrückt“ wurde.
3	Die Mitarbeiterin wird bezahlt für ihre Arbeit. Der Arbeitgeber darf erwarten, dass sie diese wie vereinbart ausführt. Tut sie dies nicht, muss sie mit einer Kündigung rechnen. Ihre persönlichen Probleme muss sie privat klären.	4	Die Mitarbeiterin steht zurzeit unter großem emotionalen und finanziellen Druck, an dem sie keine Schuld hat. Der Arbeitgeber sollte dafür Verständnis haben und nicht auch noch Probleme machen.
5	Die Mitarbeiterin hat ihr Verhalten trotz vieler Gespräche, mehrfacher Ermahnung und einer Abmahnung nicht geändert.	6	Die Mitarbeiterin hat jahrelang sehr gute Arbeit geleistet, das muss jetzt auch zählen und berücksichtigt werden.
7	Das Arbeitsklima in der Abteilung leidet unter der Unpünktlichkeit der Mitarbeiterin. Ein Team muss sich auf die einzelnen Teammitglieder verlassen können.	8	Mit einer Kündigung schadet man auch den Kindern der Mitarbeiterin, die an dieser Situation keine Schuld haben. Die Mitarbeiterin und ihre Kinder würden ihr Zuhause verlieren, da sie ohne Job die Kreditraten nicht zurückzahlen kann.
9	Die Kunden sind verärgert über das Verhalten der Mitarbeiterin – und unzufriedene Kunden sind eine Bedrohung für die Existenz des Unternehmens. Damit sind auch andere Mitarbeiter/innen betroffen,	10	Herr Müller kann gegenüber der Unternehmensleitung geltend machen, dass er seine Mitarbeiter nicht als Maschinen sieht und respektvoll mit ihnen zusammenarbeiten will. Persönliche Hintergründe und Probleme müssen daher

	deren Arbeitsplatz geschützt werden muss.		auch ernst genommen und berücksichtigt werden. Hier ist für ihn als Führungskraft neben Konsequenz auch, Verständnis und ein „zu den Mitarbeitern- Stehen“ erforderlich. Dazu gehört auch, Probleme gemeinsam zu meistern, auch wenn es mal etwas länger dauert und weitere Gespräche notwendig sind.
11	Durch die Verärgerung der Kunden können das Image und die Reputation des gesamten Unternehmens Schaden nehmen.	12	Die anderen Mitarbeiter könnten Herrn Müller als eiskalte, berechnende Führungskraft sehen, die ihre Mitarbeiter solange behält, solange sie „funktionieren“, und sie rauswirft, wenn mal Probleme auftreten. Es könnte dann zu einem Schneeballeffekt kommen, sodass andere Mitarbeiter von selbst kündigen.
13	Die Unternehmensleitung erwartet eine schnelle Problemlösung – dies ist durch eine Kündigung (statt weiterer Ermahnungen und Abmahnungen) gegeben.	14	Herr Müller könnte ein schlechtes Gewissen haben, das ihn noch längere Zeit plagt, wenn er nicht alles versucht hat, um eine gute Lösung und Einigung mit der Mitarbeiterin zu erzielen.
15	Herr Müller darf sich von seiner Mitarbeiterin nicht „auf der Nase herumtanzen lassen“. Er muss als Führungskraft nach all den Ermahnungen und Abmahnungen konsequent handeln, wenn er seine Glaubwürdigkeit behalten will.	16	Die Kündigung sollte das letzte Mittel sein. Das Unternehmen kann das Problem sicherlich auch anders lösen. Dies wäre eine Investition in die Zukunft, da die Mitarbeiterin eine größere Bindung zum Unternehmen aufbauen könnte und zukünftig mehr Leistung erbringen würde, wenn sie in Krisenzeiten Fürsorge von ihrem Arbeitgeber erfährt.
17	Die Mitarbeiterin hat genug Chancen zur Verbesserung bekommen. Jetzt reicht es.	18	Eine Neubesetzung der Stelle und die Einarbeitung eines/r neue/n Mitarbeiters/in kostet das Unternehmen viel Zeit und Geld.
19	Herr Müller muss auch seine eigene Position schützen und stärken. Wenn er der Mitarbeiterin nicht kündigt, könnte die	20	Solange die Stelle nicht neu besetzt und der/die neue Mitarbeiter/in eingearbeitet ist, bedeutet dies Mehrarbeit für das Team. Unter dieser

	Unternehmensleitung sonst den Eindruck bekommen, dass er als Führungskraft nicht taugt.		Belastung kann das Arbeitsklima leiden.
21	Eine Kündigung der Mitarbeiterin schafft die Möglichkeit für eine Neubesetzung der Stelle mit einem/r zuverlässigeren Mitarbeiter/in.	22	Die Mitarbeiterin hätte es schwer, unter den Voraussetzungen einen neuen Job zu finden. Sie muss aber ihre Familie versorgen.

1.5 Experiment und Treatments

1.5.1 Datenschutzerklärung (Druck)[8]

Datenschutzerklärung gem. Art. 13 DSGVO und Einwilligung in die Erhebung Ihrer Daten

Thema/Anlass: Laborexperiment zur Wirkung und Ausgestaltung von Trainingsprogrammen

Name und Anschrift des Verantwortlichen

Der Verantwortliche im Sinne der EU-Datenschutzgrundverordnung (DSGVO) und anderer nationaler Datenschutzgesetze der Mitgliedsstaaten sowie sonstiger datenschutzrechtlicher Bestimmungen ist:

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1. Datenverarbeitung im Rahmen der Studie

a) Umfang der Datenverarbeitung

Im Rahmen der Durchführung des Laborexperiments sowie der Veröffentlichung der Ergebnisse zu dem o. g. Thema/Anlass verarbeiten wir von Ihnen folgende Daten:

- Vorname und Nachname
- Geburtsdatum

[8] Die Datenschutzerklärung wurde erstellt mithilfe von Hinweisen und Feedback von der Datenschutzbeauftragten der Universität Erfurt.

- E-Mail-Adresse
- Ihre elektronischen Eingaben während des Experiments

b) Zwecke der Datenverarbeitung

Die Verarbeitung Ihrer obengenannten personenbezogenen Daten wird zur Wirksamkeitstestung von Trainingsprogrammen im Rahmen der Dissertation von Dominic Kreismann an der Universität Erfurt verwendet.

Es erfolgt eine Veröffentlichung der Experimentergebnisse in der Dissertation von Dominic Kreismann. Wissenschaftliche Veröffentlichungen erfolgen in einer Art und Weise, dass kein Rückschluss auf einzelne Personen mehr möglich ist.

2. Rechtsgrundlage für die Verarbeitung personenbezogener Daten

Rechtsgrundlage für die Verarbeitung Ihrer obengenannten personenbezogenen Daten durch die Dominic Kreismann ist Ihre Einwilligung, Art. 6 Abs. 1 Satz 1 lit. a DSGVO.

3. Weitere Empfänger Ihrer personenbezogenen Daten

Ihre obengenannten personenbezogenen Daten werden an folgende Empfänger innerhalb bzw. außerhalb der Universität Erfurt weitergegeben:

- Empfänger innerhalb der Universität Erfurt:
  Prof. Dr. Till Talaulicar, Nordhäuser Str. 63, 99089 Erfurt
- Empfänger außerhalb der Universität Erfurt:
  Zur Durchführung des Experiments erfolgt eine passwortgeschützte, anonymisierte Zwischenspeicherung der Daten auf der Cloud-Plattform Heroku. Diese werden im Anschluss an das Experiment von Dominic Kreismann heruntergeladen und auf der Plattform gelöscht.

Ihre personenbezogenen Daten werden nicht an weitere Empfänger innerhalb oder außerhalb der Universität Erfurt weitergegeben.

4. Dauer der Speicherung der personenbezogenen Daten

Ihre obengenannten personenbezogenen Daten werden so lange gespeichert, wie sie für die obengenannten Zwecke (Promotion) benötigt werden. Wenn Sie Ihre Einwilligung widerrufen, werden die Daten gelöscht.

5. Ihre Rechte als Betroffener

Sie haben gem. Art. 13 Abs. 2 DSGVO ein Recht auf Auskunft über Ihre von Dominic Kreismann verarbeiteten personenbezogenen Daten (Art. 15 DSGVO), ein Recht auf Berichtigung Ihrer personenbezogenen Daten (Art. 16 DSGVO), ein Recht auf Löschung (Art. 17 DSGVO), ein Recht auf Einschränkung der Verarbeitung (Art. 18 DSGVO) und ein Recht auf Widerruf Ihrer Einwilligung (Art. 7 Abs. 3 DSGVO).
Außerdem haben Sie das Recht, Beschwerde bei der Aufsichtsbehörde einzulegen. Zuständige Aufsichtsbehörde ist der Landesbeauftragte für Datenschutz und Informationssicherheit Thüringen, Dr. Lutz Hasse, Postfach 90 04 55, 99107 Erfurt/ Häßlerstraße 8, 99096 Erfurt, Telefon: 0361/57 311 29 00, E-Mail: poststelle@datenschutz.thueringen.de.

Einwilligungserklärung

Hiermit willige ich freiwillig in die Erhebung und Verarbeitung meiner personenbezogenen Daten ein. Ich bin über den Umfang und Zweck der Datenerhebung und Datenverarbeitung sowie über mein Widerrufsrecht informiert worden. Eine Kopie der Datenschutzerklärung und der Einwilligungserklärung habe ich erhalten.

Vor- & Nachname: _____

Geburtsdatum: _____

E-Mail: _____

Ort, Datum: _____

Unterschrift: _____

Mit Ihrer Einwilligung erklären Sie, dass Dominic Kreismann Ihre oben unter 1.a) genannten personenbezogenen Daten erheben und weiterverarbeiten darf für die unter 1.b) genannten Zwecke.
Sie haben das Recht, Ihre Einwilligung jederzeit gegenüber dem Verantwortlichen zu widerrufen. Durch den Widerruf der

Einwilligung wird die Rechtmäßigkeit der aufgrund der Einwilligung bis zum Widerruf erfolgten Datenverarbeitung nicht berührt.

1.5.2 Teilnahmeerklärung (Druck)[9]

Herzlich willkommen und vielen Dank für Ihr Interesse an dieser Studie.

Wir untersuchen mit dieser Studie die Wirksamkeit von e-basierten Trainingsprogrammen.

Insgesamt dauert das Experiment ca. 60 Minuten.

Freiwilligkeit und Anonymität

Die Teilnahme an der Studie ist freiwillig. Sie können jederzeit und ohne Angabe von Gründen Ihre Einwilligung zur Teilnahme an dieser Studie widerrufen, ohne dass Ihnen daraus Nachteile entstehen. Bitte informieren Sie in diesem Fall Ihre*n Versuchsleiter*in.

Die im Rahmen dieser Studie erhobenen Daten und persönlichen Mitteilungen werden vertraulich behandelt. Diejenigen Mitarbeiter, die durch direkten Kontakt mit Ihnen über personenbezogene Daten verfügen, unterliegen der Schweigepflicht. Ihre Antworten und Ergebnisse werden nicht unter Ihrem Namen, sondern unter einem Codewort abgespeichert, das nur Ihnen bekannt ist (siehe Datenschutz). Bitte machen Sie sich bewusst, dass die Ergebnisse der Studie als wissenschaftliche Publikation veröffentlicht werden können. Dies geschieht in anonymisierter Form, d. h. ohne dass Ihre Daten Ihrer Person zugeordnet werden können.

Datenschutz

Variante „Persönliches Codewort“: Ihre Antworten und Ergebnisse werden unter einem persönlichen Codewort gespeichert, das Sie selbst anhand einer Regel im Experiment erstellen und das außer Ihnen niemand kennt. Die anonymisierten Daten werden mindestens 10 Jahre gespeichert. Sie können allerdings, wenn immer Sie dies möchten, die Löschung der von Ihnen erhobenen

[9] Die Teilnahmeerklärung wurde mit Hilfe eines Musters der Universität Hamburg, https://bit.ly/3mU8t6Y [05-05-2019], erstellt.

Daten verlangen. Dazu müssen Sie uns nicht Ihren Namen verraten, sondern nur Ihr Codewort. Für die Erstellung Ihres Codeworts erhalten Sie im Verlauf des Experiments eine Anleitung.
Zur Sicherung des Datenschutzes liegt Ihnen die Datenschutzeinverständniserklärung in zweifacher Ausführung vor. Bitte füllen Sie diese komplett aus und geben ein ausgefülltes, unterschriebenes Exemplar beim/bei der Versuchsleiter*in ab.
Verschwiegenheit
Sie verpflichten sich zur Verschwiegenheit über Inhalt und Ablauf des Experiments.
Vergütung
Für die Teilnahme an der Untersuchung erhalten Sie eine Vergütung in Höhe von 15 €. Die Vergütung wird Ihnen in bar im Anschluss an das Experiment ausgezahlt. Bei Empfang der Vergütung in bar müssen Sie eine Quittung mit Angabe Ihres Namens und Ihrer Adresse unterschreiben.

☐ Ich habe die Teilnehmer-Informationen gelesen und bin einverstanden, freiwillig an der Studie teilzunehmen. Ich wurde darüber unterrichtet, dass ich diese Bereitschaftserklärung jederzeit widerrufen kann.

☐ Ich habe die Teilnehmer-Informationen gelesen und bin nicht einverstanden, an der Studie teilzunehmen.
Datum,
Unterschrift:_____

1.5.3 Anleitung Codewort (Druck)[10]

Für Teilnahme am Experiment haben Sie ein Codewort erzeugt. Dieses setzt sich wie folgt zusammen:
Erste zwei Buchstaben des Rufnamens Ihrer Mutter ___ ___
(z.B. M A für MAria)

[10] Gemäß Fragebogen von Lind (2018), siehe Anhang 1.5.6.

Erste zwei Buchstaben des Rufnamens Ihres Vaters: ___ ___
(z.B. P E für PEter)
Geburtstag (nur Tag, nicht Monat oder Jahr, zweistellig): ___ ___
(z.B. 0 5 für 05.04.64)
Die ersten beiden Buchstaben Ihres Geburtsorts: ___ ___
(z.B. E R bei ERfurt)

1.5.4 Begrüßung (Mündlich)

1. Herzlich willkommen zu unserem Experiment zu e-basierten Trainingsprogrammen.
2. Sofern dies noch nicht geschehen ist, möchte ich Sie bitten, Ihre Handys jetzt auszuschalten, damit das Experiment ungestört durchgeführt werden kann.
3. Das Experiment wird ca. 1 Stunde dauern.
4. Das Experiment läuft über den Chrome-Browser – das Experiment startet, sobald ich das hier zentral eingerichtet habe automatisch. Wichtig: der Browser darf nie geschlossen werden, das führt sonst zum Komplettabbruch des Experiments.
5. Bei Fehlermeldungen oder falls man bei einem Formular nicht weiterklicken kann, dann mal mit „F5“ ein neues Laden der Seite probieren, wenn der Fehler dann immer noch besteht, dann öffnen Sie bitte Ihre Kabine, damit wir sehen, wenn es Probleme gibt. Wir sehen uns das dann an.
6. Ansonsten erfolgen alle Instruktionen im Experiment elektronisch, Sie werden durch das Experiment geführt. Wichtig ist, dass Ihnen oben rechts im Browser jeweils eine Zeit zur Orientierung angezeigt wird. Sie können alles auch schneller weiterklicken, wenn Sie schneller sind mit dem Ausfüllen, oder sich auch etwas mehr Zeit lassen – mit einer Ausnahme: das Trainingsprogramm, das Sie dann absolvieren, ist auf 20 Minuten eingestellt. Diese Zeit ist fix und muss genutzt bzw. abgewartet werden (es geht dann automatisch weiter im Experiment).
7. Ich richte jetzt die Session für Sie ein, das dauert nochmal zwei Minuten. Lassen Sie die Kabine noch geöffnet und starten Sie noch nicht. Ich gebe gleich das Startsignal.

8. Jetzt müsste jeder einen Startbildschirm vor sich haben. Ist das bei jemanden nicht so? Wenn nicht, dann startet das Experiment jetzt, bitte schließen Sie Ihre Kabinen und folgen Sie den Anweisungen.

1.5.5 Startfolie Experiment (e-basiert)

Herzlich willkommen und vielen Dank für Ihr Interesse an dieser Studie.

Wir untersuchen mit dieser Studie die Wirksamkeit von e-basierten Trainingsprogrammen.

Insgesamt dauert das Experiment ca. 60 Minuten.

1.5.6 Fragebogen Basiserhebung mit MKT-Pretest (e-basiert)[11]

Liebe*r Teilnehmer*in,

diese Erhebung dient als Grundlage für die Evaluation des folgenden Trainingsprogramms.

Diese Erhebung erfolgt anonym. Notieren Sie bitte nirgends Ihren Namen.

Am Ende des Trainingsprogramms werde ich Sie nochmals befragen. Damit dann eine Zuordnung zu dieser ersten Befragung auch ohne Ihren Namen möglich ist, benötige ich folgende Angaben als Kennung:

Erste zwei Buchstaben des Rufnamens Ihrer Mutter ___ ___
(z.B. M A für MAria)

Erste zwei Buchstaben des Rufnamens Ihres Vaters: ___ ___
(z.B. P E für PEter)

Geburtstag (nur Tag, nicht Monat oder Jahr, zweistellig): ___ ___
(z.B. 0 5 für 05.04.64)

Die ersten beiden Buchstaben Ihres Geburtsorts: ___ ___
(z.B. E R bei ERfurt)

Bei den Fragen ist entweder eine von mehreren Antworten anzukreuzen oder etwas einzutragen.

Bitte beantworten Sie jede Frage!

Ihr Alter: _____

[11] Fragebogen basierend auf Lind (2018), modifiziert v. Verf.

Ihr Geschlecht: ☐männlich

☐weiblich

☐divers

Welchen Bildungsabschluss haben Sie?

Bitte den höchsten Abschluss ankreuzen:

☐Hauptschulabschluss

☐Mittlere Reife

☐Abitur / Fachabitur

☐Hochschule / Universität

☐Trifft nicht zu / weiß nicht

Sind Sie zurzeit Studierende*r? ☐Ja, in einem Bachelorstudiengang

☐ Ja, in einem Master / Magister / Diplomstudiengang

☐Ja, ich bin Doktorand

☐ Trifft nicht zu / weiß nicht

Wenn ja, was ist Ihre Hauptstudienrichtung? Klicken oder tippen Sie hier, um Text einzugeben.

Wenn ja, was ist Ihre Nebenstudienrichtung? Klicken oder tippen Sie hier, um Text einzugeben.

Wie viele Jahre sind Sie bereits berufstätig (einschließlich Mutterschaft/Elternzeit und Zeit ohne Arbeit)

☐noch nicht berufstätig

____ Jahre

Auf den nächsten Seiten sind zwei Geschichten.

Wie denken Sie darüber?

Ihr Urteil ist gefragt

Die Protagonisten in den beiden folgenden Geschichten müssen eine Entscheidung treffen:

Ist sie richtig oder falsch?

Und wie akzeptabel finden Sie die Argumente, die für und gegen ihre Entscheidung vorgebracht werden?

Sie können sich bei Ihren Antworten Zeit lassen. Aber Sie müssen nicht zu lange darüber nachdenken.

Hinweis: Hier wurde den Teilnehmern der Moralische Kompetenztest (MKT) zum Ausfüllen angezeigt. Es ist rechtlich nicht erlaubt, den MKT zu veröffentlichen, er kann aber für Forschungszwecke von Georg Lind zur Verfügung gestellt werden (Georg.Lind@uni-konstanz.de).

1.5.7 Instruktionen für das Training (e-basiert)

Treatment 1

Im folgenden Experiment präsentieren wir Ihnen eine Geschichte, in der eine Person in einer Zwickmühle steckt.

Ihr Trainingsprogramm besteht darin, in Einzelarbeit die Pro- und Contra-Argumente für die Entscheidung des Protagonisten zu sammeln. Hierfür haben Sie 20 Minuten Zeit. Erst nach Ablauf der Zeit geht es automatisch weiter im Experiment. Sammeln Sie bitte so viele starke Argumente wie möglich. Bitte sammeln Sie mindestens drei Argumente jeweils auf der Pro- und Contra-Seite. Achten Sie bei der Sammlung der Argumente möglichst auf Ausgeglichenheit bezüglich der Anzahl der Argumente (ausgeglichene Anzahl an Pro- und Contra-Argumenten).

Die Argumente können Sie nacheinander eintragen. Bitte senden Sie jedes Argument einzeln ab und tragen dann das nächste Argument ein, da immer nur ein Argument zu selben Zeit gespeichert werden kann.

Bei der Sammlung ist jedes Argument zulässig, aber kein Teilnehmer (und auch kein anderer Mensch) darf angegriffen oder bewertet werden – auch nicht positiv.

Sowohl diese Instruktionen als auch die Geschichte kann während der Bearbeitung per Klick auf den Button „Blick in die Geschichte“ und „Blick in die Instruktionen“ immer wieder aufgerufen werden.

Treatment 2

Im folgenden Experiment präsentieren wir Ihnen eine Geschichte, in der eine Person in einer Zwickmühle steckt.

Ihr Trainingsprogramm besteht darin, in Gruppenarbeit gemeinsam Pro- und Contra-Argumente für die Entscheidung des Protagonisten zu sammeln. Hierfür hat Ihre Gruppe 20 Minuten Zeit. Erst nach Ablauf der Zeit geht es automatisch weiter im Experiment. Sammeln Sie bitte so viele starke Argumente wie möglich. Bitte sammeln Sie dabei mindestens drei Argumente jeweils auf der Pro- und Contra-Seite.

Die Gruppenarbeit findet ausschließlich schriftlich auf elektronischem Weg statt. Sie sehen im Anschluss an die Geschichte eine Pro- und Contra-Tabelle, in der Sie alle Ihre Argumente elektronisch eintragen können.

In der Gruppe sind Sie nacheinander an der Reihe und können jeweils immer ein Argument einbringen, danach ist der Nächste Ihrer Gruppe dran. Sie können aber auch „Weiter“ klicken, wenn Ihnen gerade kein weiteres Argument einfällt, dann ist auch erstmal wieder der Nächste an der Reihe. So wird das reihum gehen, bis Sie wieder dran sind. Sie müssen sich jede Runde neu entscheiden, ob Sie ein Pro- oder ein Contra-Argument einbringen wollen.

Versuchen Sie die Argumente so verständlich wie möglich, d.h. in kurzen Sätzen und Stichpunkten zu sammeln, sodass die gesamte Gruppe Ihren Gedanken verstehen kann und es jedem in der Gruppe möglich ist, auf die Argumente der anderen Gruppenteilnehmer Bezug zu nehmen.

Die Eingabe Ihres Arguments sollte 2 Minuten nicht überschreiten, damit die anderen in der Gruppenarbeit nicht zu lange auf ihren Einsatz warten müssen. Sollten Sie nicht innerhalb von 2 Minuten Ihr Argument eingetragen und abgesendet oder „Weiter“ geklickt haben, ist automatisch der Nächste an der Reihe.

Einmal erfasste (abgesendete) Argumente können nicht mehr geändert oder gelöscht werden.
Achten Sie bei der Sammlung der Argumente möglichst auf Ausgeglichenheit bezüglich der Anzahl der Argumente (ausgeglichene Anzahl an Pro- und Contra-Argumenten).
Bei der Sammlung ist jedes Argument zulässig, aber kein Teilnehmer (und auch kein anderer Mensch) darf angegriffen oder bewertet werden – auch nicht positiv.
Sowohl diese Instruktionen als auch die Geschichte kann während der Bearbeitung per Klick auf den Button „Blick in die Geschichte“ und „Blick in die Instruktionen“ immer wieder aufgerufen werden.

Treatment 3

Im folgenden Experiment präsentieren wir Ihnen eine Geschichte, in der eine Person in einer Zwickmühle steckt.
Wir präsentieren Ihnen im Anschluss daran Pro- und Contra-Argumente für die Entscheidung des Protagonisten.
Ihr Trainingsprogramm besteht darin, sich diese Argumente in Ruhe durchzulesen und sich mit beiden Perspektiven (Pro und Contra) vertraut zu machen. Hierfür haben Sie 20 Minuten Zeit.
Erst nach Ablauf der Zeit geht es automatisch weiter im Experiment.
Sowohl diese Instruktionen als auch die Geschichte kann während der Bearbeitung per Klick auf den Button „Blick in die Geschichte“ und „Blick in die Instruktionen“ immer wieder aufgerufen werden.

Treatment 4 (Kontrollgruppe)

Im folgenden Experiment präsentieren wir Ihnen einen Text zum Kakaoanbau.
Ihr Trainingsprogramm besteht darin, sich den Text in Ruhe durchzulesen und sich mit den Inhalten vertraut zu machen. Hierfür haben Sie 23 Minuten Zeit.
Erst nach Ablauf der Zeit geht es automatisch weiter im Experiment.

Hier wurde dann folgender Text als scrollbare PDF angezeigt:
Holst, Herbert (1961). Kleine Kakao-Kunde. Reprint 2016,
Berlin/Boston: De Gruyter, S. 17-30.

1.5.8 Dilemma-Geschichte (e-basiert)

Treatment 1, 2 und 3

Geschichte: Führungskraft in Not

Herr Müller leitet erfolgreich seit einigen Jahren ein kleines Team von fünf Personen. Er ist sehr zufrieden mit den Leistungen seines Teams. In letzter Zeit gibt es allerdings Schwierigkeiten mit einer Mitarbeiterin.

Diese langjährige, gute Mitarbeiterin seines Teams kommt in letzter Zeit häufig zwischen 15 und 75 Minuten zu spät, sodass der betriebliche Ablauf erheblich gestört wird. Schon mehrfach haben sich wichtige Großkunden und Kollegen beschwert, dass die Mitarbeiterin nicht oder zu spät zu einem Termin kam und nicht erreichbar war. Die betroffene Mitarbeiterin wurde vor kurzem von ihrem Lebensgefährten verlassen und muss sich nun allein um ihre zwei kleinen Kinder kümmern. Außerdem leidet sie unter dem Druck, den Kredit für das Haus jetzt allein abbezahlen zu müssen. Herr Müller hat bereits mehrfach mit ihr über das Problem gesprochen. Trotzdem musste die Mitarbeiterin aufgrund der vielen Verspätungen mehrfach ermahnt und auch einmal schriftlich abgemahnt werden.

Nachdem sie wiederholt 15 Minuten zu spät zu einem Termin an ihrem Arbeitsplatz erschienen ist, verlangt die Unternehmensleitung von Herrn Müller, dass er das Problem endgültig und schnellstmöglich lösen muss. Auf die daraufhin wieder eingegangene Kundenbeschwerde muss schnell reagiert werden. Er soll dringend darüber nachdenken, seiner Mitarbeiterin zu kündigen. Hierfür setzt ihm die Unternehmensleitung eine Frist von 3 Tagen. Herr Müller erhält vom Justiziar eine juristische Beratung mit der Aussage, dass eine Kündigung zumindest arbeitsrechtlich möglich ist. Herr Müller ist unsicher, was er machen soll. Er muss schnell handeln. Er ist auch sehr verärgert

über das Verhalten der Mitarbeiterin, hat aber dennoch „Bauchschmerzen“, wenn er daran denkt, sie zu kündigen.

1.5.9 Pro- & Contra-Listen (e-basiert)

Treatment 1 (leer)

Button: Blick in die Geschichte

Button: Blick in die Instruktionen

Argumente-Sammlung

Nr.	Pro Kündigung	Absenden	Nr.	Contra Kündigung	Absenden
1		Button: Absenden	2		Button: Absenden
3		Button: Absenden	4		Button: Absenden
5		Button: Absenden	6		Button: Absenden
7		Button: Absenden	8		Button: Absenden
9		Button: Absenden	10		Button: Absenden
11		Button: Absenden	12		Button: Absenden
13		Button: Absenden	14		Button: Absenden
15		Button: Absenden	16		Button: Absenden
17		Button: Absenden	18		Button: Absenden
19		Button: Absenden	20		Button: Absenden
21		Button: Absenden	22		Button: Absenden
23		Button: Absenden	24		Button: Absenden
25		Button: Absenden	26		Button: Absenden
27		Button: Absenden	28		Button: Absenden
29		Button: Absenden	30		Button: Absenden

Treatment 2 (leer)

Button: Blick in die Geschichte

Button: Blick in die Instruktionen

Argumente-Sammlung

Nr.	Pro Kündigung	Absenden	Nr.	Contra Kündigung	Absenden
1		Button: Absenden Button: Weiter	2		Button: Absenden Button: Weiter
3		Button: Absenden Button: Weiter	4		Button: Absenden Button: Weiter
5		Button: Absenden Button: Weiter	6		Button: Absenden Button: Weiter
7		Button: Absenden Button: Weiter	8		Button: Absenden Button: Weiter
9		Button: Absenden Button: Weiter	10		Button: Absenden Button: Weiter
11		Button: Absenden Button: Weiter	12		Button: Absenden Button: Weiter
13		Button: Absenden Button: Weiter	14		Button: Absenden Button: Weiter
15		Button: Absenden Button: Weiter	16		Button: Absenden Button: Weiter
17		Button: Absenden Button: Weiter	18		Button: Absenden Button: Weiter
19		Button: Absenden Button: Weiter	20		Button: Absenden Button: Weiter
21		Button: Absenden	22		Button: Absenden

	Button: Weiter		Button: Weiter
23	Button: Absenden Button: Weiter	24	Button: Absenden Button: Weiter
25	Button: Absenden Button: Weiter	26	Button: Absenden Button: Weiter
27	Button: Absenden Button: Weiter	28	Button: Absenden Button: Weiter
29	Button: Absenden Button: Weiter	30	Button: Absenden Button: Weiter

Treatment 3

Button: Blick in die Geschichte

Button: Blick in die Instruktionen

Argumente-Sammlung

Nr.	Pro Kündigung	Nr.	Contra Kündigung
1	Die Mitarbeiterin stört wiederholt betriebliche Abläufe. Die Verspätungen belaufen sich dabei auch nicht nur auf wenige Minuten. Es sind sehr starke Verspätungen bis zu 75 Minuten und teilweise komplette Terminausfälle.	2	Das Arbeitsklima im Team kann darunter leiden, wenn ersichtlich ist, dass Herr Müller selbst Skrupel hat, der Mitarbeiterin zu kündigen, und der Eindruck erweckt wird, dass diese Entscheidung von der Unternehmensleitung „durchgedrückt“ wurde.
3	Die Mitarbeiterin wird bezahlt für ihre Arbeit. Der Arbeitgeber darf erwarten, dass sie diese wie vereinbart ausführt. Tut sie dies nicht, muss sie mit einer Kündigung rechnen. Ihre persönlichen Probleme muss sie privat klären.	4	Die Mitarbeiterin steht zurzeit unter großem emotionalen und finanziellen Druck, an dem sie keine Schuld hat. Der Arbeitgeber sollte dafür Verständnis haben und nicht auch noch Probleme machen.
5	Die Mitarbeiterin hat ihr Verhalten trotz vieler Gespräche, mehrfacher Ermahnung und einer Abmahnung nicht geändert.	6	Die Mitarbeiterin hat jahrelang sehr gute Arbeit geleistet, das muss jetzt auch zählen und berücksichtigt werden.

7 Das Arbeitsklima in der Abteilung leidet unter der Unpünktlichkeit der Mitarbeiterin. Ein Team muss sich auf die einzelnen Teammitglieder verlassen können.

8 Mit einer Kündigung schadet man auch den Kindern der Mitarbeiterin, die an dieser Situation keine Schuld haben. Die Mitarbeiterin und ihre Kinder würden ihr Zuhause verlieren, da sie ohne Job die Kreditraten nicht zurückzahlen kann.

9 Die Kunden sind verärgert über das Verhalten der Mitarbeiterin – und unzufriedene Kunden sind eine Bedrohung für die Existenz des Unternehmens. Damit sind auch andere Mitarbeiter/innen betroffen, deren Arbeitsplatz geschützt werden muss.

10 Herr Müller kann gegenüber der Unternehmensleitung geltend machen, dass er seine Mitarbeiter nicht als Maschinen sieht und respektvoll mit ihnen zusammenarbeiten will. Persönliche Hintergründe und Probleme müssen daher auch ernst genommen und berücksichtigt werden. Hier ist für ihn als Führungskraft neben Konsequenz auch Verständnis und ein „zu den Mitarbeitern- Stehen“ erforderlich. Dazu gehört auch, Probleme gemeinsam zu meistern, auch wenn es mal etwas länger dauert und weitere Gespräche notwendig sind.

11 Durch die Verärgerung der Kunden können das Image und die Reputation des gesamten Unternehmens Schaden nehmen.

12 Die anderen Mitarbeiter könnten Herrn Müller als eiskalte, berechnende Führungskraft sehen, die ihre Mitarbeiter solange behält, solange sie „funktionieren“, und sie rauswirft, wenn mal Probleme auftreten. Es könnte dann zu einem Schneeballeffekt kommen, sodass andere Mitarbeiter von selbst kündigen.

13 Die Unternehmensleitung erwartet eine schnelle Problemlösung – dies ist durch eine Kündigung (statt weiterer Ermahnungen und Abmahnungen) gegeben.

14 Herr Müller könnte ein schlechtes Gewissen haben, das ihn noch längere Zeit plagt, wenn er nicht alles versucht hat, um eine gute Lösung und Einigung mit der Mitarbeiterin zu erzielen.

15 Herr Müller darf sich von seiner Mitarbeiterin nicht „auf der Nase herumtanzen lassen“. Er muss als Führungskraft nach all den Ermahnungen und Abmahnungen konsequent

16 Die Kündigung sollte das letzte Mittel sein. Das Unternehmen kann das sicherlich auch anders lösen. Dies wäre eine Investition in die Zukunft, da die Mitarbeiterin eine größere

	handeln, wenn er seine Glaubwürdigkeit behalten will.		Bindung zum Unternehmen aufbauen könnte und zukünftig mehr Leistung bringt, wenn sie in Krisenzeiten Fürsorge von Ihrem Arbeitgeber erfährt.
17	Die Mitarbeiterin hat genug Chancen zur Verbesserung bekommen. Jetzt reicht es.	18	Eine Neubesetzung der Stelle und die Einarbeitung eines/r neue/n Mitarbeiters/in kosten das Unternehmen viel Zeit und Geld.
19	Herr Müller muss auch seine eigene Position schützen und stärken. Wenn er der Mitarbeiterin nicht kündigt, könnte die Unternehmensleitung sonst den Eindruck bekommen, dass er als Führungskraft nicht taugt.	20	Solange die Stelle nicht neu besetzt und der/die neue Mitarbeiter/in eingearbeitet ist, bedeutet dies Mehrarbeit für das Team. Unter dieser Belastung kann das Arbeitsklima leiden.
21	Eine Kündigung der Mitarbeiterin schafft die Möglichkeit für eine Neubesetzung der Stelle mit einem/r zuverlässigeren Mitarbeiter/in.	22	Die Mitarbeiterin hätte es schwer, unter den Voraussetzungen einen neuen Job zu finden. Sie muss aber ihre Familie versorgen.

1.5.10 Abschlussaufgabe „bestes Argument“ (e-basiert)

Jeweils Anzeige der Tabelle (bei Treatment 1 und 2 die jeweils selbst, in Einzelarbeit oder Gruppenarbeit erstellte Liste; bei Treatment 3 die fertige, vorgegebene Liste)

Die Kontrollgruppe liest in der Zeit noch ihren Kakao-Text.

<u>Treatment 1</u>

Ihre Pro- und Contra-Sammlung ist nun fertig.

Bitte nominieren Sie jetzt noch jeweils für die Pro- und Contra-Seite ein Argument, das Sie am meisten überzeugt, indem Sie die jeweilige Nummer im Eingabefeld notieren. Hierfür haben Sie 3 Minuten Zeit.

Nummer

Das überzeugendste Pro-Argument für mich: _____

Das überzeugendste Contra-Argument für mich: _____

<u>Treatment 2</u>

Ihre gemeinsame Pro- und Contra-Sammlung ist nun fertig.

Bitte nominieren Sie jetzt noch jeweils (jeder für sich) für die Pro- und Contra-Seite ein Argument, das Sie am meisten überzeugt, indem Sie die jeweilige Nummer im Eingabefeld notieren. Hierfür haben Sie 3 Minuten Zeit.

Nummer

Das überzeugendste Pro-Argument für mich: _____

Das überzeugendste Contra-Argument für mich: _____

Treatment 3

Nachdem Sie die Argumente-Sammlung in Ruhe durchgelesen haben, möchten wir Sie bitten, jeweils für die Pro- und Contra-Seite ein Argument zu nominieren, das Sie am meisten überzeugt, indem Sie die jeweilige Nummer im Eingabefeld notieren. Hierfür haben Sie 3 Minuten Zeit.

Nummer

Das überzeugendste Pro-Argument für mich: _____

Das überzeugendste Contra-Argument für mich: _____

1.5.11 Schlusserhebung mit MKT-Posttest (e-basiert)[12]

Diese zweite Erhebung am Ende des Experiments dient als Grundlage für die abschließende Evaluation des Trainingsprogramms.

Die Erhebung erfolgt wie schon die Basiserhebung anonym.

Notieren Sie daher bitte nirgends Ihren Namen.

Damit eine Zuordnung zur Basiserhebung auch ohne Ihren Namen möglich ist, benötigen wir die folgenden vier Angaben.

Erste zwei Buchstaben des Rufnamens Ihrer Mutter ___ ___

(z.B. M A für MAria)

Erste zwei Buchstaben des Rufnamens Ihres Vaters: ___ ___

(z.B. P E für PEter)

Geburtstag (nur Tag, nicht Monat oder Jahr, zweistellig): ___ ___

(z.B. 0 5 für 05.04.64)

Die ersten beiden Buchstaben Ihres Geburtsorts: ___ ___

(z.B. E R bei ERfurt)

[12] Gemäß Abschlussfragebogen von Lind (2018), modifiziert v. Verf.

Im weiteren Fragebogen ist nun entweder eine von mehreren Antworten anzukreuzen oder etwas einzutragen.
Um die Schlusserhebung mit der Basiserhebung vergleichen zu können, ist ein Teil dieses Fragebogens identisch. Beantworten Sie bitte alle Fragen wieder genauso sorgfältig wie beim ersten Mal.

Ihr Alter: _____

Ihr Geschlecht: ☐männlich

☐weiblich

☐divers

Was sind die wichtigsten Dinge, die Sie während dieses Trainingsprogramms gelernt haben?
Klicken oder tippen Sie hier, um Text einzugeben.

Wie waren Ihre Erfahrungen mit diesem Trainingsprogramm?

Hat Ihnen das Trainingsprogramm Spaß gemacht?	Gar nicht 0		1		2		3		Sehr 4
Wie viel haben Sie bislang in diesem Trainingsprogramm gelernt … im Vergleich zu dem, was Sie erwartet haben?	Viel weniger -4	-3	-2	-1	0	1	2	3	Viel mehr 4
… im Vergleich zu anderen Unterrichts-/Seminarveranstaltungen?	-4	-3	-2	-1	0	1	2	3	4
Wie stark, glauben Sie, wird Ihnen das hier Gelernte beruflich später einmal von Nutzen sein?	Gar nicht 0	1	2	3	4	5	6	7	Sehr stark 8
War die Veranstaltung mehr oder weniger nützlich als andere Trainingsprogramme und Unterrichts-/Seminarveranstaltungen?	Viel weniger -4	-3	-2	-1	0	1	2	3	Viel mehr 4

Ich würde an dem Trainingsprogramm auch freiwillig wieder teilnehmen ☐ Ja ☐ Nein

Was hat Ihnen besonders gut gefallen an diesem Trainingsprogramm? *

Klicken oder tippen Sie hier, um Text einzugeben.

Welche Anregungen oder Verbesserungsvorschläge haben Sie zu dem Trainingsprogramm? *

Klicken oder tippen Sie hier, um Text einzugeben.

**Hinzugefügte offene Fragen, die aus Bewertungsbögen für Universitätskurse der Universität Erfurt gewonnen wurden.*

Was meinen Sie jetzt zu den folgenden beiden Geschichten? Beantworten Sie die Fragen bitte wieder genauso sorgfältig wie beim ersten Mal.

Hinweis: Hier wurde den Teilnehmern wieder der MKT zum Ausfüllen angezeigt. Es ist rechtlich nicht erlaubt, den MKT zu veröffentlichen, er kann aber für Forschungszwecke bei Georg Lind angefordert werden (Georg.Lind@uni-konstanz.de).

1.5.12 Abschlussfolie (e-basiert)

Haben Sie vielen Dank für Ihre Teilnahme an unserer Studie.
Sie erhalten nun die Auszahlung Ihrer Vergütung durch den/die Versuchsleiter*in.
Bitte öffnen Sie Ihre Kabine. Sie werden aufgerufen.

1.5.13 Informationen nach dem Experiment (Mündlich)

1. Das Experiment ist jetzt abgeschlossen (Kabinen müssten alle geöffnet sein).
2. Ich teile Ihnen jetzt Quittungen für die Auszahlung aus (2x pro Person)!
3. Bitte füllen Sie die Quittungen aus, ich werde Sie gleich nacheinander nach Kabinennummer aufrufen, dann erhalten Sie Ihre Auszahlung. Bitte bringen Sie die ausgefüllte Quittung und Ihre Kabinennummerkarte und ggf. den Kugelschreiber mit. Ein Exemplar der Quittung ist für Ihre eigenen Unterlagen bestimmt.
4. Wer Interesse an weiteren Informationen zu diesem Experiment hat und sich ein Debriefing wünscht, kann hier (Tisch in der Mitte des Raumes) ein Formular ausfüllen und auch bei mir mit abgeben. Sie erhalten dann nach Abschluss und Auswertung aller Experimente ein Debriefing per Mail.
5. Vielen Dank für Ihre Teilnahme und Ihnen noch einen schönen Tag!

1.5.14 Debriefing (Mailversand 2020)

Sehr geehrte Teilnehmer*innen,

Sie haben im November 2019 an einer Studie zur Wirksamkeitsmessung von Trainingsprogrammen teilgenommen.
In dieser Studie wurde untersucht, ob die unterschiedliche Ausgestaltung von Trainingsprogrammen einen Einfluss auf die Wirksamkeit hat.
Gemessen wurde die Wirksamkeit e-basierter Trainings auf die moralische Kompetenz. Hierfür wurde die Dilemma-Methode genutzt, bei der in einer Geschichte ein Protagonist eine schwierige Entscheidung treffen muss.
Je nach Ausgestaltung des Treatments erhielten die Teilnehmer*innen die Aufgabe:

- in Einzelarbeit Pro- und Contra-Argumente für die Entscheidungsmöglichkeit des Protagonisten zu sammeln (Treatment 1: aktive Ausgestaltung ohne Interaktion) oder
- in Gruppenarbeit Pro- und Contra-Argumente für die Entscheidungsmöglichkeit des Protagonisten zu sammeln (Treatment 2: aktive Ausgestaltung mit Interaktion) oder
- eine vorgegebene Argumente-Liste durchzulesen (Treatment 3: passive Ausgestaltung).

Zuletzt wurden alle Teilnehmer*innen einzeln gebeten, jeweils das für sich überzeugendste Argument auf der Pro- und Contra-Seite zu wählen.
Die Geschichte ist an die Vorgaben der Konstanzer Methode der Dilemma-Diskussion (KMDD) angelehnt (vgl. Lind, 2016). Die Geschichte und das Trainingsprogramm wurden von zwei unabhängigen, zertifizierten KMDD-Lehrern auf dessen Tauglichkeit und Einsatz geprüft und nach deren Hinweisen entsprechend angepasst.
Eine vierte Gruppe fungierte als Kontrollgruppe, diese erhielt einen Text zum Thema Kakaoanbau.
Um die Wirksamkeit messen zu können, mussten die Teilnehmer*innen vor und nach der Trainingsmaßnahme den Moralischen Kompetenztest (MKT) ausfüllen. Dieser Test wurde für Interventionsstudien in Forschungseinrichtungen entwickelt und

ist in der Wissenschaftscommunity zur Messung der moralischen Kompetenz verbreitet und anerkannt (vgl. Hummel/Pfaff/Rost, 2018). Um weitere Aspekte des Trainingsprogramms messen zu können, z.B. ob die Teilnehmer*innen an dem Treatment Spaß hatten, wurden im Anschluss an den Test noch weitere Fragen zum Trainingsprogramm gestellt.

Ich danke Ihnen nochmals herzlich für Ihre Teilnahme.

Freundliche Grüße

Dominic Kreismann

1.6 Auswertung

1.6.1 Prüfung der Randomisierung (Prüfung auf Gruppenunterschiede)

Variable	Skalenniveau	Test	Statistik	p-Wert (Sig.)
Alter	Metrisch - Intervallskaliert	ANOVA	F =.811	.489
Geschlecht	Nominal	Fisher's Exakt	P = 5.580	.393
Bildung	Ordinal	Kruskal-Wallis	H = 2.139	.544
Studierenden-Status	Nominal	Fisher's Exakt	P = 5.177	.510
Hauptfach Studium (Fakultät)	Nominal	Fisher's Exakt	P = 2.806	.847
Nebenfach Studium (Fakultät)	Nominal	Pearson Chi-square	Chi^2 = 4.315	.641
Berufserfahrung in Jahren	Metrisch - Intervallskalliert	Kruskal-Wallis	H = 6.313	.097

Pretest (Prüfung auf Gruppenunterschiede)

Variable	Skalenniveau	Test	Statistik	p-Wert (Sig.)
C-score	Metrisch - Intervallskaliert	ANOVA	F =.890	.447

1.6.2 Deskriptive Statistik

		N
TREATMENT	1	50
	2	50
	3	50
	4 (control)	50
ALTER	18	3
	19	28
	20	47
	21	36
	22	34
	23	25
	24	12
	25	8
	26	1
	27	3
	28	1
	29	1
	35	1
GESCHLECHT	männlich	42
	weiblich	156
	divers	2
BILDUNG	Abitur / Fachabitur	157
	Hochschul-abschluss	40
	Trifft nicht zu / weiß nicht	3
STUDIERENDEN-STATUS	Bachelor	160
	Master	39
	Trifft nicht zu / weiß nicht	1
HAUPTFACH STUDIUM (FAKULTÄT)	Trifft nicht zu / weiß nicht	1
	Erziehungs-wissenschaften	116
	Philosophie	18
	Staats-wissenschaften (Recht, Wirtschaft, Sozialwissen-schaften)	65
NEBENFACH STUDIUM (FAKULTÄT)	Trifft nicht zu / weiß nicht	17
	Erziehungs-wissenschaften	51
	Philosophie	73
	Staats-wissenschaften (Recht, Wirtschaft, Sozialwissen-schaften)	59
	0	188

BERUFSERFAHRUNG IN JAHREN	2	2
	3	2
	4	1
	5	2
	6	1
	7	1
	8	2
	10	1

Alter

	TREATMENT		Statistik	Std.-Fehler
ALTER	1	Mittelwert	21.42	.301
		Median	21.00	
		SD	2.129	
		Minimum	19	
		Maximum	27	
	2	Mittelwert	21.68	.264
		Median	22.00	
		SD	1.867	
		Minimum	18	
		Maximum	26	
	3	Mittelwert	21.08	.388
		Median	20.00	
		SD	2.747	
		Minimum	19	
		Maximum	35	
	4	Mittelwert	21.66	.272
		Median	21,00	
		SD	1,923	
		Minimum	18	
		Maximum	29	

Geschlecht

*GESCHLECHT *TREATMENT Kreuztabelle*

			TREATMENT				
			1	2	3	4	Total
GE-SCHLECHT	1	Anzahl	8	12	8	14	42
		%	16	24	16	28	21
	2	Anzahl	42	37	42	35	156
		%	84	74	84	70	78
	3	Anzahl	0	1	0	1	2
		%	0	2	0	2	1
Total		Anzahl	50	50	50	50	200

	%	100	100	100	100	100

Geschlecht 1= männlich, Geschlecht 2 = weiblich, Geschlecht 3 = divers; Treatment 1 = Ethik-Training, aktiv ohne Interaktion; Treatment 2 = Ethik-Training, aktiv mit Interaktion; Treatment 3 = Ethik-Training, passiv; Treatment 4 = Kontrollgruppe (Kakaotext)

Bildung

	TREATMENT		Statistik
BILDUNG	1	Median	3.0
	2	Median	3.0
	3	Median	3.0
	4	Median	3.0

*BILDUNG *TREATMENT Kreuztabelle*

			TREATMENT				
			1	2	3	4	Total
BILDUNG	3	Anzahl	39	36	42	40	157
		%	78	72	84	80	78,5
	4	Anzahl	9	14	8	9	40
		%	18	28	16	18	20
	5	Anzahl	2	0	0	1	3
		%	4	0	0	2	1,5
Total		Anzahl	50	50	50	50	200
		%	100	100	100	100	100

Bildung 3 = Abitur / Fachabitur; Bildung 4 = Hochschulabschluss / Universität; Bildung 5 = Trifft nicht zu / weiß nicht; Treatment 1 = Ethik-Training, aktiv ohne Interaktion; Treatment 2 = Ethik-Training, aktiv mit Interaktion; Treatment 3 = Ethik-Training, passiv; Treatment 4 = Kontrollgruppe (Kakaotext)

Studierenden-Status

*STUDIERENDENSTATUS *TREATMENT Kreuztabelle*

			TREATMENT				
			1	2	3	4	Total
STUD.-STATUS	1	Anzahl	41	37	43	39	160
		%	82	74	86	78	80
	2	Anzahl	9	13	7	10	39
		%	18	26	14	20	19.5
	4	Anzahl	0	0	0	1	1
		%	0	0	0	2	0.5
Total		Anzahl	50	50	50	50	50
		%	100	100	100	100	100

Stud.-Status 1 = Bachelor, Stud.-Status 2 = Master, Stud.-Status 4 = Trifft nicht zu / weiß nicht; Treatment 1 = Ethik-Training, aktiv ohne Interaktion; Treatment 2 = Ethik-Training, aktiv mit Interaktion; Treatment 3 = Ethik-Training, passiv; Treatment 4 = Kontrollgruppe (Kakaotext)

Hauptfach Studium (Fakultät)

*HAUPTFACH STUDIUM *TREATMENT Kreuztabelle*

			TREATMENT				
			1	2	3	4	Total
HAUPT-FACH STUDIUM	EW	Anzahl	30	28	31	27	116
		%	60	56	62	55,1	58,3
	PH	Anzahl	3	5	3	7	18
		%	6	10	6	14,3	9,0
	ST	Anzahl	17	17	16	15	65
		%	34	34	32	30,6	32,7
Total		Anzahl	50	50	50	49	199
		%	100	100	100	100	100

Hauptfach EW = Studienrichtung der erziehungswissenschaftlichen Fakultät; Hauptfach PH = Studienrichtung der philosophischen Fakultät; Hauptfach ST = Studienrichtung der staatswissenschaftlichen Fakultät; Treatment 1 = Ethik-Training, aktiv ohne Interaktion; Treatment 2 = Ethik-Training, aktiv mit Interaktion; Treatment 3 = Ethik-Training, passiv; Treatment 4 = Kontrollgruppe (Kakaotext)

Nebenfach Studium (Fakultät)

*NEBENFACH STUDIUM *TREATMENT Kreuztabelle*

			TREATMENT				
			1	2	3	4	Total
NEBEN-FACH STUDIUM	EW	Anzahl	16	12	9	14	51
		%	35,6	28,6	18,4	29,8	27,9
	PH	Anzahl	14	17	23	19	73
		%	31,1	40,5	46,9	40,4	39,9
	ST	Anzahl	15	13	17	14	59
		%	33,3	31	34,7	29,8	32,2
Total		Anzahl	45	42	49	47	183
		%	100	100	100	100	100

Nebenfach EW = Studienrichtung der erziehungswissenschaftlichen Fakultät; Nebenfach PH = Studienrichtung der philosophischen Fakultät; Nebenfach ST = Studienrichtung der staatswissenschaftlichen Fakultät; Treatment 1 = Ethik-Training, aktiv ohne Interaktion; Treatment 2 = Ethik-Training, aktiv mit Interaktion; Treatment 3 = Ethik-Training, passiv; Treatment 4 = Kontrollgruppe (Kakaotext)

Berufserfahrung in Jahren

Treatment 1

		Anzahl	%
Berufserfahrung in Jahren	0	46	92
	3	1	2
	4	1	2
	6	1	2
	8	1	2
	Total	50	100

Treatment 1 = Ethik-Training, aktiv ohne Interaktion

Treatment 2

		Anzahl	%
Berufserfahrung in Jahren	0	49	98
	2	1	2
	Total	50	100

Treatment 2 = Ethik-Training, aktiv mit Interaktion

Treatment 3

		Anzahl	%
Berufserfahrung in Jahren	0	49	98
	10	1	2
	Total	50	100

Treatment 3 = Ethik-Training, passiv

Treatment 4

		Anzahl	%
Berufserfahrung in Jahren	0	44	88,0
	2	1	2,0
	3	1	2,0
	5	2	4,0
	7	1	2,0
	8	1	2,0
	Total	50	100,0

Treatment 4 = Kontrollgruppe (Kakaotext)

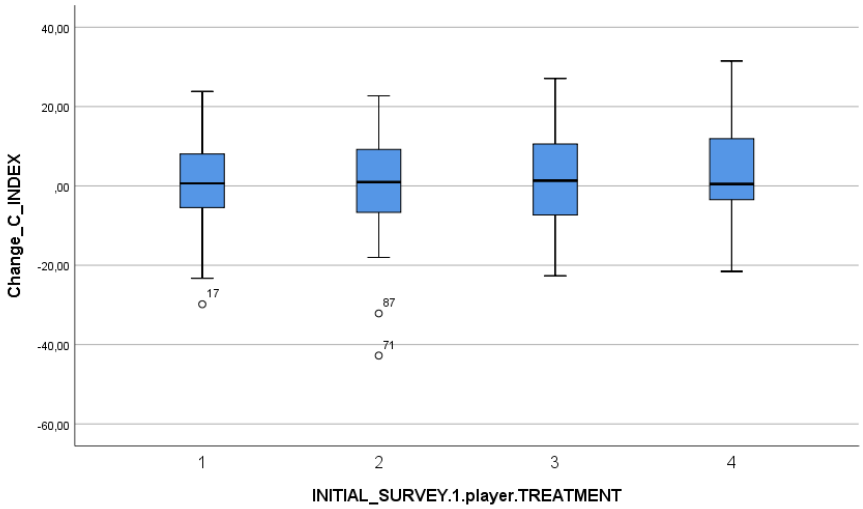
1.6.3 Gain Score ANCOVA

Abhängige Variable: Gain score C-score (Posttest C-scores minus Pretest C-scores)

Variable	F	p	p.η²
Intercept	0.217	.642	.001
Treatment	0.547	.651	.009
Geschlecht	0.387	.680	.004
Bildung	0.130	.878	.001
Studierenden-Status	0.265	.607	.002
Hauptfach Studium	1.552	.215	.017
Nebenfach Studium	1.423	.238	.024
Berufserfahrung in Jahren	0.613	.767	.027
Alter	0.490	.485	.003

Hinweis: Ich habe die Daten auch auf Ausreißer überprüft und eine gain score ANCOVA ohne Ausreißer berechnet. Dies ergab ebenfalls keine signifikanten Ergebnisse.

1.6.4 Boxplot



1.6.5 Codierungsanleitung

<u>1. Was sind die wichtigsten Dinge, die Sie während dieses Trainingsprogramms gelernt haben?</u>

- Freies Feld zum Antworten – daher sollten die Antworten kategorisiert werden.
- Getrennte Auswertung nach Treatments

1.1 Bezug auf Trainingsprogramm

- Zuerst muss geprüft werden, ob sich die Aussage auf das Trainingsprogramm bezieht.
- Ja / Nein / Mix / nicht auswertbar

1.2 Lerneffekt

- Als Nächstes muss geprüft werden, ob jemand von einem Lerneffekt berichtet.
- Subjektive Aussage, ob jemand etwas als Lerneffekt bezeichnet bzw. für sich mitnimmt (kann auch ein nicht intendierter Effekt sein)
- Was ist ein Lernerfolg? „Learning outcome/success → in der Lernforschung eine unter bestimmten Bedingungen zustande gekommene Erlebens- und/oder Verhaltensänderung; bedeutet das Ausmaß oder den Betrag solcher Änderung. In enger empirisch-psychologischer Fassung ist Lernerfolg der Differenzbetrag zwischen Nachtest und Vortest nach

zwischenzeitlich erfolgter „Lernaktivität“ des Probanden (Treatment) – dies wird durch die Lerndiagnostik gemessen; wobei der Begriff Lernerfolg tendenziell eher eine Bewertung solcher Veränderungen (Erlebens- und/oder Verhaltensänderung) im Hinblick auf ein Lehrziel oder Lernziel bezeichnet“ (Funke, J. (2017), In: Dorsch - Lexikon der Psychologie, Stichwort: Lernerfolg).

- „Lernen bezeichnet Prozesse, die zu einer relativ langfristigen Veränderung im Verhaltenspotenzial eines Organismus führen und das Ergebnis von Erfahrung darstellen. Eine in der aktuellen Lernforschung wesentliche Frage ist, ob Lernen an Bewusstsein gebunden ist. Die Befunde legen nahe, dass Lernen implizit (oder unbewusst) verlaufen kann, da das Verhalten der Person Wissen widerspiegelt, nicht aber ein sensitiver Wissenstest“ (Haider, H. (2017), In: Dorsch - Lexikon der Psychologie, Stichwort: Lernen, Lernforschung).
- Ausprägungen:
  Ja / Nein / Mix / nicht auswertbar

1.3 Kategorie

- Danach ist zu kategorisieren, von welcher Art Lerneffekt der Proband berichtet. Dieses wird in folgende Kategorien unterteilt (siehe unten).
- Ein Teilnehmer kann auch von mehr als einem Lerneffekt berichten, d.h. es kann auch jemand mehrere Kategorien angesprochen haben (in der Tabelle sind es maximal 3 bzw. 4 in der Kontrollgruppe).

  <u>Kategorien in Treatment 1, 2 und 3</u>

  - Argumentation, Entscheidungen, Reflektieren und Perspektivwechsel (als PW)
  - Nichts (als N)
  - Sonstiges (als S) – steht für andere, nicht mit dem Training intendierte Lerneffekte (Auffangkategorie)

  <u>Kategorien in Treatment 4</u>

  - Kakao – Informationen

- Test – Bezug auf den Test → als Unterkategorie wird dann betrachtet, wer aus dem Test offenbar etwas mitgenommen hat, was er als Effekt sieht → PW, N oder S
- Argumentation, Entscheidungen, Reflektieren und Perspektivwechsel (als PW)
- Nichts gelernt (als N)
- Sonstiges (als S) – steht für andere, nicht mit dem Training intendierte Lerneffekte (Auffangkategorie)

<u>2. Was hat Ihnen besonders gut gefallen an diesem Trainingsprogramm?</u>

2.1 „Gut gefallen“ in Bezug auf das Trainingsprogramm

- Wie oben beim Lerneffekt: Bezieht sich die Aussage auf das Trainingsprogramm?
- Ja / Nein / Mix / nicht auswertbar

2.2 „Gut gefallen“–Aussage ja/nein

- Als Nächstes wird geprüft, ob jemand auch wirklich eine Aussage dazu macht, was besonders gut gefallen hat.
- Ja / Nein / Mix / nicht auswertbar

2.3 Kategorien

- Danach ist zu kategorisieren, was der Proband als besonders gut berichtet. Dieses wird in folgende Kategorien unterteilt (siehe unten). Ein Teilnehmer kann auch mehrere Kategorien ansprechen.

  <u>Kategorien in Treatment 1–3</u>

  - Situation/Inhalt/Thema/Fallbeispiel (als Sit)
  - Argumentation, Entscheidungen und Perspektivwechsel (als PW)
  - Nichts (als N)
  - Sonstiges (als S) – steht für alles, was nicht in den anderen Kategorien zugeordnet werden kann (Auffangkategorie)
  - Test – Bezug auf den Test → als Unterkategorie wird dann betrachtet, wer aus dem Test offenbar etwas mitgenommen hat, das er als Effekt sieht → PW, Aktivität, N oder S
  - Aktivität (Ausgestaltung des Treatments)

Kategorien in Treatment 4

- Kakao- Informationen
- PW – siehe oben (wie Treatment 1–3)
- N– siehe oben (wie Treatment 1–3)
- S– siehe oben (wie Treatment 1–3)
- Test– siehe oben (wie Treatment 1–3)
- Aktivität (Ausgestaltung des Treatments)

3. Welche Anregungen oder Verbesserungsvorschläge haben Sie zu dem Trainingsprogramm?

3.1 Anregungen/Verbesserungsvorschläge in Bezug auf das Trainingsprogramm

- Wie oben beim Lerneffekt: Bezieht sich die Aussage auf das Trainingsprogramm?
- Ja/Nein/Mix/Nicht auswertbar

3.2 Verbesserungsvorschlag/Anregung (ggf. negative Kritik)

- Als Nächstes wird geprüft, ob jemand auch wirklich eine Aussage macht, die Verbesserungsvorschläge oder Anregungen (ggf. negative Kritik) enthält.
- Ja / Nein / Mix / nicht auswertbar

3.3 Kategorien

- Danach ist zu kategorisieren, was der Proband für Verbesserungsvorschläge/Anmerkungen (ggf. negativ Kritik) berichtet. Dieses wird in folgende Kategorien unterteilt (siehe unten). Ein TN kann auch mehrere Kategorien ansprechen.

  Treatment 1–3

  - Zeit
  - N – Nichts/keine
  - Sit – Situation/Inhalt/Thema/Fallbeispiel
  - A – Aktivität (Ausgestaltung des Treatments)
  - MD – Mediendesign/technische Möglichkeiten & Regeln
  - LZ – Lernziele, Zusammenhänge und Nutzen
  - Test
  - Sonstiges – Auffangkategorie

  Treatment 4 (Kontrollgruppe)

- Zeit
- N – Nichts/keine
- Sit – Situation/Inhalt/Thema (Kakao)
- A – Aktivität (Ausgestaltung des Treatments)
- MD – Mediendesign/technische Möglichkeiten & Regeln
- Text-Länge
- LZ – Lernziele, Zusammenhänge und Nutzen
- Test
- Sonstiges – Auffangkategorie

Bei allen Schritten gilt: Wenn du dir unsicher bist und partout nicht weißt, ob und wie man die Inhalte zuordnen kann, dann schreib dies bitte mit Begründung in die Spalte „Bemerkungen“ und markiere diese rot (Ausfüllfunktion der Zelle). Darüber können wir dann nochmal sprechen.

1.6.6 Übersicht Aussagen aus dem Self-report (Beispiele) – Treatments 1–3

Kategorie	Aussagen (Beispiele)
Was sind die wichtigsten Dinge, die Sie während dieses Trainingsprogramms gelernt haben?	
Argumentation, Entscheidungen, Reflektieren und Perspektivwechsel (PW)	Von beiden Seiten eine Perspektive auf ein bestimmtes Argument oder Verhalten zu werfen, um sich seiner Meinung, aber auch dem richtigen Handeln klar zu werden. Es ist nicht immer leicht Entscheidungen zu treffen. Man sollte seine eigenen Entscheidungen hinterfragen. Und vor allem sollte man auch mal darüber nachdenken aus welchen Gründen andere eine Entscheidung treffen. Strukturiertes Aufbauen von Argumenten. Mich in Situationen und andere Menschen hineinzuversetzen. Aus verschiedenen Blickwinkeln auf Situationen blicken. Argumente zu erstellen, die gar nicht meiner Meinung entsprechen. Dass der erste Impuls beim Bewerten einer Situation oft moralisches Abwägen ist und man diesen

	Standpunkt nochmals hinterfragen sollte. Argumente sammeln, mit einer Gruppe in den Diskurs kommen, verschiedenen Sichtweisen einzelner Personen wahrzunehmen und zu verstehen. Die Seiten zu wechseln und somit auch Argumente von meiner Gegenseite zu lesen und versuchen nachzuvollziehen. Sich auch mit der Contra Seiten bzw. der anderen Seite in einer Diskussion auseinander zu setzen, denn sie gibt einem neue Einblicke, kann aber beispielsweise auch die eigene Meinung stärken. Beides ist möglich. Was feststeht ist jedoch, dass sich dadurch ein differenzierterer Blick auf Sachverhalte ergibt und das ist für alle Beteiligten und die Sache an sich mit Sicherheit von Vorteil. Eine ausführliche Beschäftigung mit Themen und moralischen Fragestellungen benötigt eine Multiperspektivität. Bei dieser tut es gut, gezwungen zu sein sich länger mit ihr auseinander zu setzten, bzw. über das Durchlesen hinaus Zeit darein zu investieren. Es ist wichtig, sich in andere Personen hineinzuversetzen. Dass es wichtig ist beide Seiten zu beleuchten und es sowohl bei Contra als auch bei Pro gute und sinnvolle Argumente gibt. Für eine Entscheidung von dieser Tragweite sollte sich ausreichend Bedenkzeit genommen werden.
Nichts (N)	./.
Sonstiges (S) – steht für andere, nicht mit dem Training intendierte Lerneffekte (Auffangkategorie)	Genaues Lesen Geduld bewahren Konzentration Aufmerksam zu lesen Kontinuierlich arbeiten, sich nicht ständig ablenken lassen (Kontrollgruppe)
Was hat Ihnen besonders gut gefallen an diesem Trainingsprogramm?	
Situation/Inhalt/Thema/Fallbeispiel (Sit)	Die gegebene Situation war alltagsnah, vielschichtig und interessant. Die Nähe zum Berufsalltag

	Die Thematik hat mir gut gefallen.
	Das Thema zwischen Moral und Recht
Argumentation, Entscheidungen und Perspektivwechsel (PW)	Dass sowohl Pro- als auch Contra-Argumente zu sammeln waren→ keine Einseitigkeit
	Verschiedene Perspektiven einnehmen. Sensibilisierung, Einfühlungsvermögen
	Die verschiedenen Perspektiven, Sichtweisen und Argumente zu sehen
Nichts (N)	./.
Sonstiges (S) – steht für alles, was nicht den anderen Kategorien zugeordnet werden kann (Auffangkategorie)	Übersichtlich und gut verständlich aufgebaut
	Es war kein Leistungsdruck vorhanden und man hatte genug Zeit.
	Dass ich es von überall hätte bewältigen können und es kein stumpfer Dozentenvortrag war.
Aktivität (Ausgestaltung des Treatments) (A)	Selbst aktiv Argumente zu sammeln und sich unbekannterweise auf die Reaktionen und Meinungen der Kollegen einzustellen.
	Es wirkte wie eine echte Diskussion, nur dass man zu Wort kam und keiner dazwischen geredet hat, alle durften ausreden, sich Gedanken machen, sehr angenehm. Und sehr sachlich.
	Gemeinsames Brainstorming der Pro und Contra Liste.
	Durch die Ausführlichkeit war man „gezwungen“ sich mit vielen Argumenten auseinanderzusetzen - in einem Maße, in dem man es vermutlich mit der bloßen Problemstellung nicht getan hätte.
Welche Anregungen oder Verbesserungsvorschläge haben Sie zu dem Trainingsprogramm?	
Zeit (Z)	Weniger Zeit geben
	Die Wartezeiten zwischen den eigenen Eintragungen sind sehr lang.
	Zum Durchlesen der Pro und Contra Argumente wären 10 Minuten ausreichend gewesen
Nichts/keine (N)	./.

Situation/Inhalt/Thema/Fallbeispiel (Sit)	Weitere pädagogische Arbeitsfelder in der Analyse einbeziehen. Auch in diesen Berufen müssen Entscheidungen getroffen werden, die oftmals sehr schwer sind.
	Eventuell genauere Infos zu den Personen in der Geschichte, die eine Entscheidungen vereinfachen
	etwas weniger Argumente um eine bessere Übersicht zu behalten
Aktivität (Ausgestaltung des Treatments) (A)	Mehr Interaktion ermöglichen
	Mehr Möglichkeiten, die eigene Meinung einzubringen, also zum Beispiel selber Argumente zu entwickeln.
	Mehr Selbstgenerierung von Argumenten
Mediendesign/technische Möglichkeiten & Regeln (MD)	Eine Korrekturmöglichkeit bei den Argumenten, wenn man sich vertippt hat. Es aber erst im nach hineinmerkt.
	Argumente der anderen vorerst verbergen
Lernziele, Zusammenhänge und Nutzen (LZ)	Eine genauere Erklärung über Sinn und Zweck (was soll trainiert werden, warum ist das hilfreich?)
	Ich verstehe nicht wirklich den Sinn bzw. was hier genau vermittelt werden soll.
	Es wäre schön, erstmal zu erfahren, genau welchen Zweck das Trainingsprogramm hat, was die Ziele sind, was man erreichen möchte. Dann vielleicht noch erwähnen, mit welchen Schritten diese Ziele erreicht werden sollen.
Sonstiges (S) – Auffangkategorie	Eine kleine Auswertung, was die Ergebnisse anderer Teilnehmer waren, würde mich sehr interessieren.
	Mehr Fragen wären gut gewesen

2. Documents in English[13]

2.1 Guidelines for Writing a Dilemma Story (Lind, 2018)

- The story should be written in plain English that is simple and easy to understand. Tell your story the way you would tell it to a friend.
- Introduce your main character right at the beginning with their first name or surname (use fictitious names only).
- Only one main character! Other people must remain anonymous (e.g., the employee) and should not be given a name.
- The problem should be described at the beginning of the story. The person must be faced with a seemingly hopeless situation. It must not be boring, but should not trigger emotions that are too strong and which may burden the participant.
- There should be pressure on the protagonist to make a decision: a postponement is not possible (e.g., due to a deadline).
- The main character has to show that the decision is difficult.
- Technical solutions to the problem must not be possible (no evasion).
- Keep it short! Maximum of a quarter of a page.
- Check again: leave out anything unimportant (do not artificially stretch the story).
- At the end, there should be two possible variants: either a clear decision by the protagonist or no decision and events are kept open.

2.2 First Draft of the Dilemma Story and Table (Arguments) for Treatment 3

1) Dilemma story: Team leader in a quandary

Mr. Müller leads a small team of five people. He is very satisfied with the working atmosphere and the performance of his team. Recently, however, there have been difficulties with one of his employees.

[13] All documents in Appendix 1 have been translated by the author to provide the English version in the Appendix 2.

One member of his team is often late – recently, it has been between 15 and 75 minutes – and this is causing considerable disruption to business operations. Customers and colleagues have complained several times that the employee did not arrive or arrived late for an appointment and could not be reached. The employee concerned recently lost her husband in an accident and must now look after her two small children on her own. She is also struggling under the pressure of having to pay off a loan for a house in the countryside.

Mr. Müller has already spoken to her several times about the problem. Despite good cooperation over many years, his employee has had to be reminded several times and has been given a written warning about lateness and delays.

After she repeatedly arrived 15 minutes late at the workplace, the company management demands that Mr. Müller resolve the problem definitively and as quickly as possible. He should think about dismissing his employee. Mr. Müller receives advice from the legal advisor, who indicates that a termination is at least possible under labor law. Mr. Müller is unsure what he should do. He must act quickly. He feels uncomfortable with the thought of dismissing his employee.

2) Collection of Arguments

Nr.	Pro Termination	Nr.	Contra Termination
1	The employee has disturbed operational processes – considerably and repeatedly.	2	The employee has done a very good job for many years. This must be taken into account now.
3	The delays are not only a few minutes. They are very severe delays of up to 75 minutes.	4	The employee is currently under great emotional and financial pressure, for which she is not to blame. The employer should understand this.
5	The employee has not changed her behavior, despite several warnings and admonitions.	6	The employee is taking care of her children alone and has enough problems in her private life. The employer should not cause problems as well.
7	The working atmosphere in the department is suffering	8	By dismissing an employee, you also harm the

	due to the employee's lack of punctuality.		employee's children, who are not to blame for this situation.
9	The image and reputation of the entire company could be damaged by the customers' annoyance.	10	The employee and her children would lose their home; because without a job, she cannot pay the loan installments.
11	The customers are angry about the employee's behavior – and dissatisfied customers are a threat to the existence of the company. This also affects other employees, whose jobs must be protected.	12	Instead of warnings and admonitions, the employer could have devised solutions with the employee. For example, a temporary part-time job could perhaps relieve the employee's workload, until she has made sufficient plans for her new life situation and has things under control again.
13	The company management expects a quick solution to the problem, and this would be achieved by a dismissal (rather than further admonitions).	14	The employee does a good job and thus makes a valuable contribution to the company. Her lack of punctuality is the only problem, and that could perhaps be tackled with more flexible working time arrangements.
15	Mr. Müller must not allow his employee to walk all over him.	16	Dismissal should be the final resort. In this case, however, instead of dismissal, a transfer to another department, possibly without customer contact and with less deadline pressure, may be an option.
17	Mr. Müller, as a leader, must act consistently after all the admonitions and warnings, if he wants to maintain his credibility.	18	Filling a new position and training a new employee costs the company a lot of time and money.
19	Mr. Müller must also protect and strengthen his own position. If he does not dismiss the employee, management might get the impression that he is not an adequate leader.	20	Until a replacement was found and trained, there would inevitably be extra work for the team. The working atmosphere could suffer under this strain.
21	Dismissing the employee creates an opening for a more reliable employee.	22	The employee would find it difficult to find a new job under these conditions; and she must provide for her family.

23	The relationship of trust between the employee and employer is shattered because she apparently does not take the previous discussions seriously.	24	Mr. Miller could be left with a guilty conscience that would plague him for a long time if he has not tried everything to reach an amicable agreement with the employee.
25	The employee has been given enough chances to improve. Now it is enough.	26	The other employees might see Mr. Müller as a cold, calculating leader who keeps his employees only as long as they "work" and throws them out if problems arise.
27	The employee is paid for her work. The employer can expect her to carry out her work as agreed. If she does not, she must expect to be dismissed. Her personal problems must be resolved privately.	28	Mr. Müller could assert to management that he does not see his employees as machines and prefers to work with them respectfully. Personal situations must therefore also be taken seriously. For him as a team leader, this requires both consistency and understanding: he must stand by his employees. This also includes mastering problems together, even if it takes a little longer and further discussions are necessary.

2.3 Documents Expert Interview and Evaluation

2.3.1 Guideline Expert Interview[14]

Dear XX,

Thank you very much for making yourself available for an expert interview. I will be using the contents for the training program that I have developed.

Three variants of the training program will be tested to determine their effectiveness in strengthening moral competence (using the moral competence test (MCT) developed by Lind). The training module will be tested in an e-based form in a laboratory experiment. For this purpose, a dilemma story was written, based on the guidelines in the KMDD manual, and this story will be digitally presented to the test participants. A group of participants,

[14] The interview guideline was available to the experts in advance in order to prepare for the questions and to be able to examine the elaborated contents in detail.

working individually, will then collect pro and con arguments in response to the dilemma presented in the story (design: active, without interaction). The second group will work together to collect pro and con arguments (design: active, with interaction); and the third group will be given a pre-written list of arguments (design: passive). The training will take approximately 25 minutes for each group. All participants will be given the same final task of choosing the most convincing argument from each side of the debate.

Before the test begins, it is obligatory that I ask whether you agree to be recorded for the interview. For this purpose, you will be given the written data protection declaration.

At this point, you will have received the dilemma story and a table with pro and con arguments for the case; and I will now have some questions.

If you have any queries, I am at your disposal.

Kind regards

Dominic Kreismann
Contact:
dominic.kreismann@uni-erfurt.de
0361/737-4512

1) Questions about the story:

1.1) Questions for testing the story (1-4 from the KMDD manual, Lind. 2018, p. 70):

1.1.1 Can you identify a problem or dilemma in the story?

☐ Yes ☐ No ☐ I do not know ☐ No information

1.1.2 How did this case make you feel?

Click or tap here to enter text.

1.1.3 How difficult would the decision be for you, if you were the protagonist?

☐ Very difficult ☐ Rather difficult ☐ Neutral ☐ Rather easy

☐ Very easy ☐ I do not know ☐ No information

1.1.4 In your opinion, is there a simple technical solution that would make a closer look at the moral core of the story unnecessary?

☐ Yes, that is… Click or tap here to enter text. ☐ No ☐ I do not know ☐ No information

1.1.5 Have the KMDD requirements for writing the dilemma story been met (with the exception of the outlined changes in the enclosed material)?

☐ Yes ☐ No ☐ I do not know ☐ No information

If no, please give reasons. (What would have to be adjusted for this?): Click or tap here to enter text.

1.2) Questions on linguistic design & understanding:

1.2.1 Do you think the story is easy to understand?

☐ Yes ☐ No ☐ I do not know ☐ No information

If no, please give reasons (what is incomprehensible?): Click or tap here to enter text.

1.2.2 Are there any suggestions for improvement of the content or formulation of the story (content)?

☐ Yes ☐ No ☐ I do not know ☐ No information

If so, which ones? Please specify: Click or tap here to enter text.

1.3) Relevance of the topic (practical relevance)

1.3.1 What do you estimate is the probability that a leader could be confronted with a problem like Mr. Müller's in a professional practice?

☐ Very likely ☐ More likely ☐ Neutral ☐ More unlikely ☐ Very unlikely ☐ I do not know ☐ No information

1.3.2 Is the topic of termination and separation management, as it is described in this story, a difficult and ethically relevant topic for leaders?

☐ Yes ☐ No ☐ I do not know ☐ No information

1.4) Feedback on the arguments

You have previously received a list of arguments FOR and AGAINST dismissal of the employee.

1.4.1 In your opinion, is the formulation of the arguments easy to understand?

☐ Yes ☐ No ☐ I do not know ☐ No information

If no, please give reasons (what is incomprehensible?): Click or tap here to enter text.

1.4.2 Are there any other arguments not on the list that you would like to bring up?

☐ Yes ☐ No ☐ I do not know ☐ No information

If so, which ones?

Nr. 29: Click or tap here to enter text.

Nr. 30: Click or tap here to enter text.

Nr. 31: Click or tap here to enter text.

Nr. 32: Click or tap here to enter text.

Nr. 33: Click or tap here to enter text.

Nr. 34 Click or tap here to enter text.

1.4.3 Are there any suggestions for improvement of the content or formulation of the arguments?

☐ Yes ☐ No ☐ I do not know ☐ No information

If so, which ones? Click or tap here to enter text.

1.4.4 In your experience, how many arguments are collected in a KMDD session in adult education?

Click or tap here to enter text.

1.4.5 In your experience, how many arguments would be optimal for the given list (the passive training design) to ensure that participants are not over- or underchallenged in the 20 minutes of implementation time and to ensure that the pro and con lists are clear and comprehensive?

Click or tap here to enter text.

1.4.6 If applicable (depending on the answers given in 1.4.4 and 1.4.5), should the existing lists be reduced, combined (arguments deleted), or increased? If so, what are your recommendations for doing so?

Click or tap here to enter text.

1.4.7 For the active designs (with and without interaction), a minimum number of arguments will be either recommended or required (as a recommendation - “is wanted/expected”) to ensure that the participants deal with the story and actively collect

arguments. In your opinion, how high should this number be set? What would be too high? What is likely to over- or underchallenge the participants? (For example, a fixed rule could be to collect as many arguments as possible in 20 minutes, including at least three for each of the pro and con sides.)
Click or tap here to enter text.
1.4.8 The number of arguments on each side should be roughly balanced. This should prevent a one-sided approach to the case, as participants are obliged to deal with both sides (thinking and exchanging ideas). What is your recommendation? Do you support the inclusion of this rule? Do you have any concerns about it? Do you have any other comments or suggestions for improvement?
Click or tap here to enter text.

2.3.2 Preparatory Material for the Experts

1) Dilemma story, as shown in Appendix 2.2
2) Collection of arguments, as shown in Appendix 2.2
3) Procedure for writing the dilemma story using the KMDD guide (Lind, 2018, modified by the author)

- The story should be written in plain English that is simple and easy to understand.
- Introduce the main character at the beginning of the story, using their first name and/or and surname.
- Only one main character! Other people must remain anonymous.
- The problem should be described at the beginning of the story. The person must be faced with a situation that seems hopeless. It must not be boring, but neither should it trigger very strong emotions that could burden the participant.
- There should be pressure on the protagonist to make a decision. A postponement must not be possible.
- The main character must find it difficult to make the decision.
- Technical solutions to the problem must not be possible (no evasion).
- Keep it short! Maximum of a quarter of a page.

- Check again: leave out anything unimportant (do not artificially stretch the story).
- At the end, there should be a clear decision for the protagonist to make. The choice is left open, and the participants must think about both sides (pro and con). This is distinct from the KMDD, where the protagonist takes a decision and each test participant is assigned to an opinion camp and asked to collect only arguments for their own side. This would not be useful for the active design of this training, which invites the evaluation of the protagonist's action.

Further information about the training:

- The training module is the same for all participants (including the dilemma history and pro and con discussion). Only the activity or interactivity is varied
- To ensure consistency between the treatment designs except the activity, other sub-methods of the KMDD are not used (e.g., division between pro and con groups).

2.3.3 Data Protection Declaration for Expert Interview

Data protection declaration in accordance with Art. 13 GDPR and consent to the production of sound recordings

Topic/occasion: Expert interview on the development of e-based training modules (based on the KMDD)

The name and address of the responsible person

The responsible person, in terms of the EU General Data Protection Regulation (GDPR) and other national data protection laws of the member states, as well as other data protection regulations, is the following:

Dominic Kreismann, M.A.
PhD candidate at the University of Erfurt
Chair of Organization and Management
Private contact data removed for data protection reasons
Phone: 0361/737-4512
Email: dominic.kreismann@uni-erfurt.de

1. Data processing within the framework of the production and publication of sound recordings

a) Scope of data processing

In the context of the production and publication of sound recordings on the abovementioned topic/event, the following data are required from you:

- First name and surname
- Date of birth
- Email address
- Media content (sound recording) in which you are perceptible

b) The purposes of the data processing

The processing of your abovementioned personal data will be used for the development of the training program in the context of Dominic Kreismann's dissertation at the University of Erfurt.
The transcription of the tape recording in Dominic Kreismann's dissertation will be published.

2. Legal basis for the processing of personal data

The legal basis for the processing of your abovementioned personal data by Dominic Kreismann is your consent, Art. 6 para. 1 sentence 1 lit. a GDPR.

3. Other recipients of your personal data

Your abovementioned personal data will be passed onto the following recipients within or outside the University of Erfurt:

- Recipients within the University of Erfurt:
  Prof. Dr. Till Talaulicar, Nordhäuser Str. 63, 99089 Erfurt
- Recipients outside the University of Erfurt: None.

Your personal data will not be passed onto other recipients inside or outside of the University of Erfurt.

4. Duration of storage of personal data

The personal data mentioned above will be stored for as long as they are needed for the abovementioned purposes (promotion). If you withdraw your consent at any time, the data will be deleted.

5. Your rights as a data subject

According to Art. 13 para. 2 GDPR, you have a right of access to your personal data processed by Dominic Kreismann (Art. 15 GDPR), a right of rectification of your personal data (Art. 16 GDPR), a right of deletion (Art. 17 GDPR), a right to limit processing (Art. 18 GDPR), and a right to withdraw your consent (Art. 7 para. 3 GDPR).
You also have the right to lodge a complaint with the supervisory authority. The competent supervisory authority is the State Commissioner for Data Protection and Information Security of Thuringia, Dr. Lutz Hasse, Postfach 90 04 55, 99107 Erfurt/Häßlerstraße 8, 99096 Erfurt, telephone: 0361/57 311 29 00, email: poststelle@datenschutz.thueringen.de.
Declaration of consent

Name + date of birth _____

Email: _____

With your consent, you declare that Dominic Kreismann may collect and process your personal data mentioned above under 1.a) for the purposes mentioned under 1.b).
You have the right to revoke your consent at any time vis-à-vis the person responsible. Revocation of consent does not affect the lawfulness of the data processing carried out on the basis of the consent until revocation.
I hereby voluntarily consent to the collection and processing of my personal data. I have been informed about the scope and purpose of data collection and data processing, as well as my right of revocation. I have received a copy of the privacy policy and the declaration of consent.
Place, date: _____

Signature: _____

2.3.4 Transcription Guideline for the Expert Interviews

Transcription guidelines (cf. Barth, 2012, p. 284)

(.)	short break
(..)	middle break
(...)	longer break
Wei-	abort word
Äh	planning break
[Ähm	planning break]
Hm	thinking
m-hm	agreeing
(door rattles)	non-verbal actions
(laughs)	Non-linguistic speech
Sure	word stress"

- Recording of all spoken content including word repetitions, stuttering etc.
- Proper names are recorded as they are understood.
- Dialect is adapted to High German.
- The time code of the tape recording is noted for each speaker change.
- Consideration of non-linguistic actions (such as conspicuous pauses, clearing, laughing, etc.) but no background noise

2.4 Dilemma Story and Table for Treatment 3 After Adjustments (After Expert Feedback)

1) Dilemma story: Team leader distressed

Mr. Müller has successfully managed a small team of five people for several years. He is very satisfied with the performance of his team. However, there have recently been difficulties with one of his employees.

This long-standing, skilled member of the team is often late, and it is by anything from 15 to 75 minutes. As a result, the operational flow is considerably affected. Several times, important key accounts and colleagues have complained that the employee did not arrive or arrived late for an appointment and could not be reached. The employee concerned was recently left by her partner and is

now looking after her two small children on her own. She is also suffering from the pressure of having to pay off the loan for her house on her own.

Mr. Müller has already spoken to her about the problem on several occasions. Nevertheless, the employee had to be reminded several times about many delays and has also received a written warning. After she repeatedly arrived at work 15 minutes late for appointments, management demands that Mr. Müller resolve the problem, finally and as quickly as possible. The customer complaint that has just been received requires a rapid response. Mr. Müller should seriously consider dismissing the employee. Management sets him a deadline of three days to make the decision. Mr. Müller receives advice from the legal advisor and is informed that a dismissal is at least possible under labor laws. Mr. Müller is unsure what he should do. He must act quickly. He is also very angry about the employee's behavior, but he feels bad when he thinks about dismissing her.

2) Collection of Arguments

No.	Pro termination	No.	Contra termination
1	The employee repeatedly disrupts operational processes. The delays are not just a few minutes; there are very long delays of up to 75 minutes and sometimes full cancellations.	2	The working atmosphere in the team will suffer if it is evident that Mr. Müller himself has doubts about the dismissal, as this will create the impression that this decision was “pushed through” by management.
3	The employee is paid for her work. The employer expects her to carry out her work as agreed. If she does not, she must expect to be dismissed. She must resolve her personal problems privately.	4	The employee is currently under great emotional and financial pressure, for which she is not to blame. The employer should understand this and not cause further problems.
5	The employee has not changed her behavior, despite many conversations, several admonitions, and a written warning.	6	The employee has done a very good job for many years, and she deserves to have this now taken into account.
7	The working atmosphere in the department suffers from the employee’s lack of punctuality. A team must be	8	By dismissing the employee, he will also harm the employee’s children, who are not to blame for this situation. The employee and

able to rely on the individual team members.

her children would lose their home, because she cannot pay back the loan installments without a job.

9 Customers are angry about the employee's behavior, and dissatisfied customers are a threat to the company's existence. This could also affect other employees, whose jobs must be protected.

10 Mr. Müller can assert to management that he does not see his employees as machines and, instead, wants to work with them respectfully. Personal situations must therefore be taken seriously. For him, as a team leader, consistency and understanding are required: he must stand by his employees. This includes overcoming problems together, even if this takes a little more time and requires further discussions.

11 The image and reputation of the entire company could be damaged by customers' annoyance.

12 The other employees could see Mr. Müller as a cold, calculating manager who keeps his employees only as long as they can "work," then throws them out if problems arise. There could be a snowball effect, with other employees quitting of their own accord.

13 The company management expects a quick solution to the problem. A dismissal would provide a rapid resolution (unlike further admonitions and warnings).

14 Mr. Miller could be left with a guilty conscience that will plague him for a long time if he has not tried everything to find a good solution and reach an agreement with the employee.

15 Mr. Müller must not allow his employee to walk all over him. He must act consistently as a leader, after all the admonitions and warnings, if he wants to maintain his credibility.

16 Dismissal should be the final resort. The company can certainly find another solution. This would be an investment in the future, as the employee could build a stronger bond with the company. In the future, she will perform better if she receives care from her employer in times of crisis.

17 The employee has been given enough opportunities for improvement. She has reached the end of the line.

18 Training a new employee for the position would cost the company a lot of time and money.

19 Mr. Müller must also protect and strengthen his own position. If he does not dismiss the employee,

20 Until a replacement has been appointed and trained, there will inevitably be extra work for the team. The

	management might get the impression that he is not an adequate leader.		working atmosphere could suffer under this strain.
21	Dismissing the employee creates the opportunity to take on a more reliable employee.	22	The employee would find it difficult to find a new job under these conditions; and she has to provide for her family.

2.5 Experiment and Treatments

2.5.1 Data Protection Declaration (Print)

Data protection declaration in accordance with Art. 13 GDPR and consent to the collection of your data

Topic/occasion: Laboratory experiment on the effect and design of training programs

Name and address of the responsible person

The responsible person, in terms of the EU General Data Protection Regulation (GDPR) and other national data protection laws of the member states, as well as other data protection regulations, is the following:

Dominic Kreismann, M.A.
PhD candidate at the University of Erfurt
Chair for Organization and Management
Nordhäuser Str. 63
99089 Erfurt
Phone: 0361/737-4512
Email: dominic.kreismann@uni-erfurt.de

1) Data processing in the context of the study

a) Scope of data processing

Within the scope of the execution of the laboratory experiment, as well as the publication of the results on the abovementioned topic/occasion, the following data are required from you:

- First name and surname
- Date of birth
- Email address
- Your electronic inputs during the experiment

(b) The purposes of the data processing

Your abovementioned personal data will be used in the testing of the effectiveness of training programs in the context of Dominic Kreismann's dissertation at the University of Erfurt.
The results of the experiments will be published in Dominic Kreismann's dissertation. Scientific publications will be made in such a way that it is no longer possible to draw conclusions about individual people.

2. Legal basis for the processing of personal data

The legal basis for the processing of your abovementioned personal data by Dominic Kreismann is your consent, Art. 6 para. 1 sentence 1 lit. a GDPR.

3. Further recipients of your personal data

Your abovementioned personal data will be passed on to the following recipients within or outside the University of Erfurt:

- Recipients within the University of Erfurt:
  Prof. Dr. Till Talaulicar, Nordhäuser Str. 63, 99089 Erfurt
- Recipients outside the University of Erfurt:
  To conduct the experiment, there will be password-protected, anonymized intermediate storage of the data on the cloud platform Heroku. After the experiment, Dominic Kreismann will download the data and deletes them from the platform.

Your personal data will not be passed on to other recipients within or outside the University of Erfurt.

4. Duration of storage of personal data

The personal data mentioned above will be stored for as long as they are needed for the abovementioned purposes (promotion). If you withdraw your consent, the data will be deleted.

5. Your rights as data subject

According to Art. 13 para. 2 GDPR, you have a right of access to your personal data processed by Dominic Kreismann (Art. 15 GDPR), a right of rectification of your personal data (Art. 16 GDPR), a right of deletion (Art. 17 GDPR), a right to limit processing (Art. 18 GDPR), and a right to withdraw your consent (Art. 7 para. 3 GDPR).

You also have the right to lodge a complaint with the supervisory authority. The competent supervisory authority is the State Commissioner for Data Protection and Information Security of Thuringia, Dr. Lutz Hasse, Postfach 90 04 55, 99107 Erfurt/ Häßlerstraße 8, 99096 Erfurt, phone: 0361/57 311 29 00, email: poststelle@datenschutz.thueringen.de.

Declaration of consent

I hereby voluntarily consent to the collection and processing of my personal data. I have been informed about the scope and purpose of data collection and data processing as well as my right of revocation. I have received a copy of the privacy policy and the declaration of consent.

Date of birth: _____

Email: _____

Place, date: _____

Signature: _____

With your consent, you declare that Dominic Kreismann may collect and process your personal data mentioned above under 1.a) for the purposes mentioned under 1.b).

You have the right to revoke your consent at any time vis-à-vis the person responsible. Revocation of consent does not affect the lawfulness of the data processing carried out on the basis of the consent until revocation.

2.5.2 Declaration of Participation (Print)[15]

Welcome and thank you for your interest in this study.

This study will investigate the effectiveness of e-based training programs.

In total, the experiment will last about 60 minutes.

[15] The declaration of participation was prepared using a sample from the University of Hamburg, https://bit.ly/3mU8t6Y [05-05-2019].

Voluntariness and anonymity

Participation in the study is voluntary. You can revoke your consent to participate in this study at any time and without giving reasons or incurring any disadvantages. If you would like to withdraw, please inform your experiment supervisor.

The data and personal information collected in the course of this study will be treated confidentially. Those employees who have access to personal data through direct contact with you are subject to the duty of confidentiality. Your answers and results will not be stored under your name, but under a code word that is known only to you (see "Data protection" below). Please be aware that the results of the study may be published as a scientific publication. This would be done in an anonymous form, thus your data would not be assigned to you personally.

Data protection

Variant "Personal code word"

Your answers and results will be stored under a personal code word, which you will create yourself, using a rule in the experiment and which nobody will know, other than you. The anonymized data will be stored for at least 10 years. However, if you wish, you can request that the data collected from you be deleted. To do so, you do not have to tell us your name; only your code word. You will receive instructions for creating your codeword during the course of the experiment.

To ensure data protection, the data protection declaration of consent is available to you in duplicate. Please fill it in completely and hand in a completed and signed copy to the experiment supervisor.

Confidentiality

You commit yourself to secrecy about the content and the course of the experiment.

Payment

For your participation, you will receive remuneration of 15 €. The remuneration will be paid to you in cash after the experiment. Upon

receipt of the cash payment, you must sign a receipt with your name and address.

☐ I have read the participant information and agree to participate voluntarily in the study. I have been informed that I can revoke this declaration of willingness at any time.

☐ I have read the participant information and do not agree to participate in the study.

Date,

Signature:_____

2.5.3 Instruction Code Word (Print)[16]

You have created a code word for participation in the experiment. This is made up as follows:

First two letters of your mother's first name: ___ ___

(e.g., M A for MAria)

First two letters of your father's first name: ___ ___

(e.g., P E for PEter)

Birthday (two digits for the day only; not month or year): ___ ___

(e.g., 0 5 for 05.04.64)

The first two letters of your birthplace: ___ ___

(e.g., E R near ERfurt)

2.5.4 Welcome (Oral)

1. Welcome to this experiment on e-based training programs.
2. I would like to ask you to switch off your mobile phones now, if you have not already done so, so that the experiment will not be disturbed.
3. The experiment will take about one hour.
4. The experiment runs via the Chrome browser. This will start automatically as soon as I have set this up centrally. Important to note: the browser must never be closed; otherwise the experiment will be aborted.

[16] According to the questionnaire from Lind (2018), see Appendix 2.5.6.

5. If you receive an error message or cannot click on a form, try to reload the page using “F5.” If the error persists, please open your cabin, so we can see if there are any problems.
6. Otherwise, all instructions in the experiment are given electronically. You will be guided through the experiment. You will see a timer for orientation in the upper-right corner of your browser. You can click through faster if you like, or you can take a little more time. However, the training program is set to 20 minutes, and this time is fixed: if you do not use it up, you will need to wait for it to expire (it then continues automatically in the experiment).
7. I have now set up the session for you. It will take another two minutes. Leave the cabin open and do not begin yet. I will give the start signal.
8. Now, everyone should have a start screen in front of them. Isn't that the case for someone? If not, then: start the experiment now. Please close your cabins and follow the instructions.

2.5.5 Start Slide Experiment (E-based)

Welcome and thank you for your interest in this study.
This study will investigate the effectiveness of e-based training programs.
In total, the experiment will last about 60 minutes.

2.5.6 Questionnaire Baseline Survey with Moral Competence Test (MCT) Pretest (E-based)[17]

Dear participant,
This survey serves as a basis for the evaluation of the following training program.
This survey is anonymous. Please do not note your name anywhere. I will ask you to complete this survey again at the end of the training program. So that your name is not associated with your responses, I need the following information to use as identification:
First two letters of your mother's first name: ___ ___
(e.g., M A for MAria)

[17] Lind (2018), modified by the author.

First two letters of your father's first name: ___ ___

(e.g., P E for PEter)

Birthday (two digits for the day only; not month or year): ___ ___

(e.g., 0 5 for 05.04.64)

The first two letters of your birthplace: ___ ___

(e.g., E R near ERfurt)

For each of the questions, you should either tick one of the possible answers or enter something into the appropriate field.

Please answer all questions.

Your age: _____

Your gender: ☐male

☐female

☐diverse

What is your educational background?

Please tick the highest level of education:

☐First general school leaving certificate

☐Secondary school

☐High school

☐University

☐Not applicable / I do not know

Are you currently a student*?

☐Yes, on a bachelor’s degree course

☐Yes, on a master’s degree course

☐Yes, I am a PhD candidate

☐Not applicable / I do not know

If yes, what is your major field of study? Click or tap here to enter text.

If yes, what is your minor field of study? Click or tap here to enter text.

How many years have you been working (including maternity/parental leave and time without work)?

☐not yet employed

____ years

There are two stories on the next few pages.
What do you think about them?

Your judgment is needed.
The protagonists in the two following stories must make a decision.
Is the proposed action right or wrong?
How morally acceptable do you find the arguments for and against the decision?
You can take your time with your answers. But you don't have to think about them too long.

Note: here, participants were shown the MCT. It is not legally permitted to publish the MCT, but it can be requested for research purposes from Georg Lind (Georg.Lind@uni-konstanz.de).

2.5.7 Instructions for the Training (E-based)

Treatment 1

In the following experiment, we present a story in which a person is in a quandary.
Your training program requires you to individually collect the pro and con arguments for the protagonist's decision. You will have 20 minutes to do this. The experiment will automatically continue after this time has elapsed. Please collect as many strong arguments as possible. Please collect at least three arguments each for the pro and con sides. (Please ensure a balanced number of arguments for each side.)
You can enter the arguments one after the other. Please send each argument individually and then enter the next, as only one argument can be stored at a time.
All arguments are allowed, but no participant (or any other person) may be attacked or evaluated – not even positively.

Both these instructions and the story will remain available during the whole training. You can access them by clicking on the button marked, “Look into the story,” or, “Look into the instructions.”

Treatment 2

In the following experiment, we present a story in which a person is in a quandary.

Your training program consists of group assignment to collect pro and con arguments for the protagonist's decision. Your group has 20 minutes to do this. The experiment will automatically continue after this time has elapsed. Please collect as many strong arguments as possible, including at least three each for the pro and con sides. The group work will be done in writing and electronically. After the story has been presented, you will see a pro and con table in which you can enter all your arguments electronically.

In the group, you should take turns, one after the other. Enter one argument at a time. If you can't think of another argument, just click “continue” and it will be the next person’s turn. The group will continue in turn until it comes to you again. You must decide for each round whether you want to share a pro or a con argument. Try to keep the arguments as comprehensible as possible, using short sentences and focusing on the key points, so that the whole group can understand your thought process and everyone in the group can easily refer to the arguments of the others.

Inputting your argument should not take longer than two minutes, so the others in the group do not have to wait too long. If you have not entered and sent your argument or clicked “Next” within two minutes, it will automatically be the next person’s turn.

Once entered, (sent) arguments cannot be changed or deleted.

When collecting the arguments, ensure that the number of arguments is balanced (between pro and con points).

All arguments are allowed, but no participant (or any other person) may be attacked or evaluated – not even positively.

These instructions and the story will remain available during the whole training. You can access them by clicking on the button marked, “Look at the story,” or, “Look at the instructions.”

Treatment 3

In the following experiment, we present a story in which a person is in a quandary.

We will then present you with pro and con arguments for the protagonist's decision.

Your training program consists of reading through these arguments at your leisure and familiarizing yourself with both perspectives (pro and con). You have 20 minutes to do this. The experiment will automatically continue after this time has elapsed.

Both these instructions and the story are available during the whole training by clicking on the button “View the story” and “View the instructions”.

Treatment 4 (control group)

In the following experiment, we will present you with a text on cocoa cultivation.

Your training program consists of reading the text at your leisure and familiarizing yourself with the contents. You have 23 minutes to do this.

The experiment will continue automatically after this time has elapsed.

The following text was then displayed as a scrollable PDF: Holst, Herbert (1961). Kleine Kakao-Kunde [Knowledge about cocoa]. Reprint 2016, Berlin/Boston: De Gruyter, p. 17-30.

2.5.8 Dilemma Story (E-based)

Treatments 1, 2, and 3

1) Dilemma Story: Team leader distressed

Mr. Müller has successfully managed a small team of five people for several years. He is very satisfied with the performance of his team. However, there have recently been difficulties with one of his employees.

This long-standing, skilled member of the team is often late, and it is by anything from 15 to 75 minutes. As a result, the operational flow is considerably affected. Several times, important key accounts and colleagues have complained that the employee did not arrive or arrived late for an appointment and could not be reached. The employee concerned was recently left by her partner and is now looking after her two small children alone. She is also suffering from the pressure of having to pay off a loan for her house on her own.

Mr. Müller has spoken to her about the problem on several occasions. Nevertheless, the employee has had to be reminded several times about delays and has also received a written warning. After she repeatedly arrived at work 15 minutes late for appointments, management demands that Mr. Müller resolve the problem, finally and as quickly as possible. The customer complaint that has just been received requires a rapid response. Mr. Müller should seriously consider dismissing the employee. Management sets him a deadline of three days to make the decision. Mr. Müller receives advice from the legal advisor and is informed that a dismissal is at least possible under labor laws. Mr. Müller is unsure what he should do. He must act quickly. He is also very angry about the employee's behavior, but he feels bad when he thinks about dismissing her.

2.5.9 Pro and Con Lists (E-based)

Treatment 1 (blank)

Button: Look into the story

Button: Look into the instructions

Collection of Arguments

No.	Pro Termination	Send	No.	Con Termination	Send
1		Button: Send	2		Button: Send
3		Button: Send	4		Button: Send
5		Button: Send	6		Button: Send

7	Button: Send	8	Button: Send
9	Button: Send	10	Button: Send
11	Button: Send	12	Button: Send
13	Button: Send	14	Button: Send
15	Button: Send	16	Button: Send
17	Button: Send	18	Button: Send
19	Button: Send	20	Button: Send
21	Button: Send	22	Button: Send
23	Button: Send	24	Button: Send
25	Button: Send	26	Button: Send
27	Button: Send	28	Button: Send
29	Button: Send	30	Button: Send

Treatment 2 (blank)

Button: Look into the story

Button: Look into the instructions

Collection of Arguments

No.	Pro Termination	Send	No.	Con Termination	Send
1		Button: Send Button: Next	2		Button: Send Button: Next
3		Button: Send Button Next	4		Button: Send Button: Next
5		Button: Send Button: Next	6		Button: Send Button: Next

7	Button: Send Button: Next	8	Button: Send Button: Next
9	Button: Send Button: Next	10	Button: Send Button: Next
11	Button: Send Button: Next	12	Button: Send Button: Next
13	Button: Send Button: Next	14	Button: Send Button: Next
15	Button: Send Button: Next	16	Button: Send Button: Next
17	Button: Send Button: Next	18	Button: Send Button: Next
19	Button: Send Button: Next	20	Button: Send Button: Next
21	Button: Send Button: Next	22	Button: Send Button: Next
23	Button: Send Button: Next	24	Button: Send Button: Next
25	Button: Send Button: Next	26	Button: Send Button: Next
27	Button: Send Button: Next	28	Button: Send Button: Next
29	Button: Send Button: Next	30	Button: Send Button: Next

Treatment 3

Button: Look into the story

Button: Look into the instructions

Collection of Arguments

No.	Pro termination	No.	Contra termination
1	The employee repeatedly disrupts operational processes. The delays are not just a few minutes; there are very long delays of up to 75 minutes and sometimes full cancellations.	2	The working atmosphere in the team will suffer if it is evident that Mr. Müller himself has doubts about the dismissal, as this will create the impression that this decision was “pushed through” by management.
3	The employee is paid for her work. The employer expects her to carry out her work as agreed. If she does not, she must expect to be dismissed. She must resolve her personal problems privately.	4	The employee is currently under great emotional and financial pressure, for which she is not to blame. The employer should understand this and not cause further problems.
5	The employee has not changed her behavior, despite many conversations, several admonitions, and a written warning.	6	The employee has done a very good job for many years, and she deserves to have this now taken into account.
7	The working atmosphere in the department suffers from the employee’s lack of punctuality. A team must be able to rely on the individual team members.	8	By dismissing the employee, he will also harm the employee’s children, who are not to blame for this situation. The employee and her children would lose their home, because she cannot pay back the loan installments without a job.
9	Customers are angry about the employee’s behavior, and dissatisfied customers are a threat to the company's existence. This could also affect other employees, whose jobs must be protected.	10	Mr. Müller can assert to management that he does not see his employees as machines and, instead, wants to work with them respectfully. Personal situations must therefore be taken seriously. For him, as a team leader, consistency and understanding are required: he must stand by his employees. This includes overcoming problems together, even if this takes a little more time and requires further discussions.
11	The image and reputation of the entire company could be	12	The other employees could see Mr. Müller as a cold, calculating manager who

	damaged by customers' annoyance.		keeps his employees only as long as they can "work," then throws them out if problems arise. There could be a snowball effect, with other employees quitting of their own accord.
13	The company management expects a quick solution to the problem. A dismissal would provide a rapid resolution (unlike further admonitions and warnings).	14	Mr. Miller could be left with a guilty conscience that will plague him for a long time if he has not tried everything to find a good solution and reach an agreement with the employee.
15	Mr. Müller must not allow his employee to walk all over him. He must act consistently as a leader, after all the admonitions and warnings, if he wants to maintain his credibility.	16	Dismissal should be the final resort. The company can certainly find another solution. This would be an investment in the future, as the employee could build a stronger bond with the company. In the future, she will perform better if she receives care from her employer in times of crisis.
17	The employee has been given enough opportunities for improvement. She has reached the end of the line.	18	Training a new employee for the position would cost the company a lot of time and money.
19	Mr. Müller must also protect and strengthen his own position. If he does not dismiss the employee, management might get the impression that he is not an adequate leader.	20	Until a replacement has been appointed and trained, there will inevitably be extra work for the team. The working atmosphere could suffer under this strain.
21	Dismissing the employee creates the opportunity to take on a more reliable employee.	22	The employee would find it difficult to find a new job under these conditions; and she has to provide for her family.

2.5.10 Final Task – "Best Argument" (E-based)

Display of the table in each case (for T1 and T2, the list created by the individual or group; for T3, the completed, predefined list)

The control group is still reading the cocoa text during this time.

<u>Treatment 1</u>

Your pro and con collection is now complete.

Please nominate one argument for the pro and one for the con side that you find most convincing, noting the respective numbers in the

input field. You have three minutes to do this.

	Number
The most convincing pro argument for me:	_____
The most convincing con argument for me:	_____

Treatment 2

Your joint pro and con collection is now complete.
Each person should now choose the pro argument and the con argument that you find most convincing, noting the respective numbers in the input field. You have three minutes to do this.

	Number
The most convincing pro argument for me:	_____
The most convincing con argument for me:	_____

Treatment 3

Once you have read the collection of arguments, we would like you to nominate one argument for the pro side and one for the con that you find most convincing, noting the respective numbers in the input field. You have three minutes to do this.

	Number
The most convincing pro argument for me:	_____
The most convincing con argument for me:	_____

2.5.11 Final Survey with Moral Competence Test (MCT) Posttest (E-based)[18]

This second survey at the end of the experiment serves as the basis for the final evaluation of the training program.
The survey, like the baseline survey, is anonymous. Please do not note your name anywhere.
To assign it to the baseline survey without your name, we need the following four details.
First two letters of your mother's first name: ___ ___
(e.g., M A for MAria)

[18] Questionnaire taken from Lind (2018), modified by the author.

First two letters of your father's first name: ___ ___

(e.g., P E for PEter)

Birthday (two digits for the day only; not month or year): ___ ___

(e.g., 0 5 for 05.04.64)

The first two letters of your birthplace: ___ ___

(e.g., E R near ERfurt)

For each question in the following questionnaire, you should either tick one of the answers or enter something into the appropriate field.

Part of this final survey questionnaire is identical to the basic survey. This will allow us to compare the responses. Please answer all questions as carefully as you did the first time.

Your age: _____

Your gender: ☐male

☐female

☐diverse

What are the most important things that you have learned during this training program?

Click or tap here to enter text.

Please tell us about your experience with this training program.

	Not at all								Very much
Did you enjoy the training program?	0		1		2		3		4

	Much less								Much more
How much have you learned so far during this training program … compared to what you expected?	-4	-3	-2	-1	0	1	2	3	4
… compared to other teaching or seminar lessons?	-4	-3	-2	-1	0	1	2	3	4

	Not at all								Very strong
How much do you think you will benefit in a professional context from what you have learned here?	0	1	2	3	4	5	6	7	8

	Much less								Much more
Was the training more or less useful than other training programs and teaching or seminar lessons?	-4	-3	-2	-1	0	1	2	3	4

I would voluntarily participate in the training program again.

☐ Yes ☐ No

What did you particularly like about this training program?*

Click or tap here to enter text.

What are your suggestions or ideas for improving the training program?*

Click or tap here to enter text.

** Added open questions collected from the evaluation sheets for university courses (University of Erfurt).*

Now, what do you think about the following two stories?

Please answer the questions again as carefully as you did the first time.

Note: Here the participants were shown the MCT to fill in, again. It is not legally permitted to publish the MCT, but it can be requested for research purposes from Georg Lind (Georg.Lind@uni-konstanz.de).

2.5.12 Closing Slide (E-based)

Thank you very much for your participation in our study.

You will now receive payment of your remuneration from the supervisor of the experiment.

Please open your cabin. You will be called in turn.

2.5.13 Information after the Experiment (Oral)

1. The experiment is now complete. (Cabins should all be open.)
2. I will now give you receipts for the payment (two per person).
3. Please fill in the receipts. I will call you right after the cabin number and you will receive your payment. Please bring the filled-out receipt and your cabin number card and, if necessary, the ballpoint pen. One copy of the receipt is for your own records.
4. If you are interested in further information about this experiment and would like a debriefing, you can fill out a form here (on the table in the middle of the room) and hand it in to me. You will then receive a debriefing by email after completion and evaluation of all experiments.
5. Thank you very much for your participation and have a nice day!

2.5.14 Debriefing (Mailing 2020)

Dear participants,

In November 2019, you participated in a study designed to measure the effectiveness of various training-program designs.

The study sought to measure the impact of the e-based training in terms of improvement in participants' moral competence. For this purpose, the dilemma method was used, in which a protagonist in a story must make a difficult decision and training participants must assess the morality of a possible decision.

There were three treatment designs, and the groups of participants were given the following tasks:

- working individually, collect pro and con arguments for the protagonist's decision (T1: active design, without interaction) or
- working in a group, collect pro and con arguments for the protagonist's decision (T2: active design, with interaction) or
- working alone, read through a given list of arguments (T3:passive design).

Finally, all participants were asked to individually choose the most convincing arguments for the pro and con sides.

The story was developed using the guidelines of the Konstanz method of dilemma discussion (KMDD; Lind, 2016). The story and

the training program were checked by two independent, certified KMDD teachers for its suitability, then adjusted on the basis of their advice.

A fourth group acted as a control group and received a text about cocoa.

The effectiveness of the training was measured by asking the participants to fill out the moral competence test (MCT) before and after the training measure. This test was developed for intervention studies in research institutions and is widely used in the scientific community to measure moral competence (e.g. Hummel, Pfaff, Rost, 2018). To measure other aspects of the training program, such as whether the participants had enjoyed the treatment, additional questions about the training program were asked after the test.

Thank you again for your participation.

Kind regards

Dominic Kreismann

2.6 Evaluation

2.6.1 Examining the Randomization (Group Differences)

Variable	Scale of Measurement	Test	Statistics	P-value
Age	Interval	ANOVA	F =.811	.489
Gender	Nominal	Fisher's Exact	P = 5.580	.393
Education	Ordinal	Kruskal-Wallis	H = 2.139	.544
Is_studying	Nominal	Fisher's Exact	P = 5.177	.510
Major field of study (faculty)	Nominal	Fisher's Exact	P = 2.806	.847
Minor field of study (faculty)	Nominal	Pearson Chi-square	Chi^2 = 4.315	.634
Years_working	Interval	Kruskal-Wallis	H = 6.313	.097

Pretest (group differences)

Variable	Scale of Measurement	Test	Statistics	P-value
C-score	Interval	ANOVA	F =.890	.447

2.6.2 Descriptive Statistics

Overview Frequencies

		N
Treatment	1	50
	2	50
	3	50
	4 (control)	50
Age	18	3
	19	28
	20	47
	21	36
	22	34
	23	25
	24	12
	25	8
	26	1
	27	3
	28	1
	29	1
	35	1
Gender	Male	42
	Female	156
	Diverse	2
Education	A-level/High school	157
	University degree	40
	Not applicable	3
Is_studying	Bachelor	160
	Master	39
	Not applicable	1
Major field of study (faculty)	Not applicable	1
	Pedagogy	116
	Philosophy	18
	Law, economics, and social science	65
Minor field of study (faculty)	Not applicable	17
	Pedagogy	51
	Philosophy	73
	Law, economics, and social science	59
Years_working	0	188
	2	2
	3	2

4	1
5	2
6	1
7	1
8	2
10	1

Age

	TREATMENT		Statistics	Std. Error
AGE	1	Mean	21.42	.301
		Median	21.00	
		Std. Deviation	2.129	
		Minimum	19	
		Maximum	27	
	2	Mean	21.68	.264
		Median	22.00	
		Std. Deviation	1.867	
		Minimum	18	
		Maximum	26	
	3	Mean	21.08	.388
		Median	20.00	
		Std. Deviation	2.747	
		Minimum	19	
		Maximum	35	
	4	Mean	21.66	.272
		Median	21.00	
		Std. Deviation	1.923	
		Minimum	18	
		Maximum	29	

Gender

*GENDER*TREATMENT crosstabulation*

			TREATMENT				
			1	2	3	4	Total
GENDER	1	Count	8	12	8	14	42
		%	16	24	16	28	21
	2	Count	42	37	42	35	156
		%	84	74	84	70	78
	3	Count	0	1	0	1	2
		%	0	2	0	2	1
Total		Count	50	50	50	50	200
		%	100	100	100	100	100

Note. Gender 1= Male, Gender 2 = Female, Gender 3 = Diverse; Treatment 1 = Ethics training, active without interaction; Treatment 2 = Ethics training, active with interaction; Treatment 3 = Ethics training, passive; Treatment 4 = Control group (text about cocoa)

Education

	TREATMENT		Statistics
EDUCATION	1	Median	3.0
	2	Median	3.0
	3	Median	3.0
	4	Median	3.0

*EDUCATION *TREATMENT crosstabulation*

			TREATMENT				
			1	2	3	4	Total
EDU-CATION	3	Count	39	36	42	40	157
		%	78	72	84	80	78,5
	4	Count	9	14	8	9	40
		%	18	28	16	18	20
	5	Count	2	0	0	1	3
		%	4	0	0	2	1,5
Total		Count	50	50	50	50	200
		%	100	100	100	100	100

Note. Education 3 = A-level / High school; Education 4 = University degree; Education 5 = Not applicable; Treatment 1 = Ethics training, active without interaction; Treatment 2 = Ethics training active with interaction; Treatment 3 = Ethics training, passive; Treatment 4 = Control group (text about cocoa)

Is_studying

*IS_STUDYING *TREATMENT crosstabulation*

			TREATMENT				
			1	2	3	4	Total
IS_STUDY-ING	1	Count	41	37	43	39	160
		%	82	74	86	78	80
	2	Count	9	13	7	10	39
		%	18	26	14	20	19.5
	4	Count	0	0	0	1	1
		%	0	0	0	2	0.5
Total		Count	50	50	50	50	50
		%	100	100	100	100	100

Note. Is_studying 1 = Bachelor, Is_studying 2 = Master, Is_studying 4 = Not applicable; Treatment 1 = Ethics training, active without interaction; Treatment 2 = Ethics training active with interaction; Treatment 3 = Ethics training, passive; Treatment 4 = Control group (text about cocoa)

Major Field of Study (Faculty)

*MAJOR FIELD OF STUDY *TREATMENT crosstabulation*

		TREATMENT				
		1	2	3	4	Total
PE	Count	30	28	31	27	116
	%	60	56	62	55.1	58.3

MAJOR FIELD OF STUDY	PH	Count	3	5	3	7	18
		%	6	10	6	14.3	9.0
	LES	Count	17	17	16	15	65
		%	34	34	32	30.6	32.7
Total		Count	50	50	50	49	199
		%	100	100	100	100	100

Note. Major PE = Field of study of the faculty of pedagogics; Major PH = Field of study of the faculty of philosophy; Major LES = Field of study of the faculty of law, economics, and social sciences; Treatment 1 = Ethics training, active without interaction; Treatment 2 = Ethics training, active with interaction; Treatment 3 = Ethics training, passive; Treatment 4 = Control group (text about cocoa)

Minor Field of Study (Faculty)

*MINOR FIELD OF STUDY *TREATMENT crosstabulation*

			TREATMENT				
			1	2	3	4	Total
MINOR FIELD OF STUDY	PE	Count	16	12	9	14	51
		%	35.6	28.6	18.4	29.8	27.9
	PH	Count	14	17	23	19	73
		%	31.1	40.5	46.9	40.4	39.9
	LES	Count	15	13	17	14	59
		%	33.3	31	34.7	29.8	32.2
Total		Count	45	42	49	47	183
		%	100	100	100	100	100

Note. Minor PE = Field of study of the faculty of pedagogics; Minor PH = Field of study of the faculty of philosophy; Minor LES = Field of study of the faculty of law, economics, and social sciences; Treatment 1 = Ethics training active without interaction; Treatment 2 = Ethics training active with interaction; Treatment 3 = Ethics training passive; Treatment 4 = Control group (text about cocoa)

Years_working

Treatment 1

		Count	%
Years_working	0	46	92
	3	1	2
	4	1	2
	6	1	2
	8	1	2
	Total	50	100

Note. Treatment 1 = Ethics training, active without interaction

Treatment 2

		Count	%
Years_working	0	49	98
	2	1	2
	Total	50	100

Note. Treatment 2 = Ethics training, active with interaction

Treatment 3

		Count	%
Years_working	0	49	98
	10	1	2
	Total	50	100

Note. Treatment 3 = Ethics training, passive

Treatment 4

		Count	%
Years_working	0	44	88,0
	2	1	2,0
	3	1	2,0
	5	2	4,0
	7	1	2,0
	8	1	2,0
	Total	50	100,0

Note. Treatment 4 = Control group (text about cocoa)

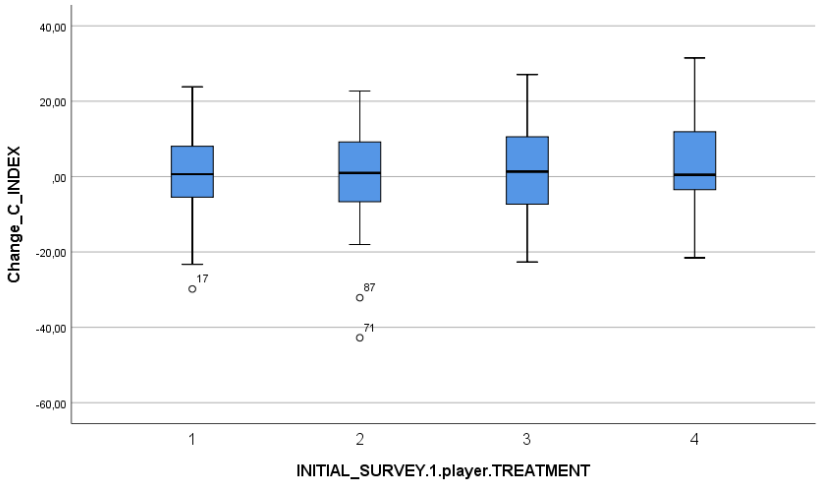
2.6.3 Gain Score ANCOVA

Dependent variable: gain score C-score (posttest C-scores minus pretest C-scores)

Variable	F	p	p.η²
Intercept	0.217	.642	.001
Treatment	0.547	.651	.009
Gender	0.387	.680	.004
Education	0.130	.878	.001
Is_studying	0.265	.607	.002
Major field of study (faculty)	1.552	.215	.017
Minor field of study (faculty)	1.423	.238	.024
Years_working	0.613	.767	.027
Age	0.490	.485	.003

Note: I also checked the data for outliers and calculated a gain score ANCOVA without the outliers found. This produced no significant results.

2.6.4 Boxplot



2.6.5 Coding Instructions

1. What are the most important things that you learned during this training program?

- Free space to answer – therefore, the answers should be categorized
- Separate evaluation for the different treatments.

1.1 Reference to training program

- First, it must be verified that the statement refers to the training program.
- Yes / No / Mixed / Not evaluable

1.2 Learning effect

- The next step is to verify that the respondent has reported a learning effect.
- This is a subjective statement; so, it includes anything that the respondent considers a learning effect or will "take with them" (could also be an unintended effect).
- What is a learning outcome? "Learning outcome/success in learning research means a change of experience and/or behaviour under certain conditions; means the extent or the amount of such change. In a narrow empirical-psychological version, learning outcome is the difference between the posttest and the pretest after the subject's 'learning activity' (treatment) has occurred in the meantime – this is measured by learning

diagnostics; the term ‘learning outcome’ tends to denote an evaluation of such changes (changes in experience and/or behaviour) with regard to a teaching or learning objective” (Funke, J. (2017); In: Dorsch – Lexikon der Psychologie, keyword: learning success).

- “Learning refers to processes that lead to a relatively long-term change in the behavioural potential of an organism and are the result of experience. An essential question in current learning research is whether learning is bound to consciousness. The findings suggest that learning can take place implicitly (or unconsciously) because the person's behaviour reflects knowledge, but not a sensitive knowledge test” (Haider, (2017); In: Dorsch – Lexikon der Psychologie, keyword: Learning, learning research).
- Characteristics:
  Yes / No / Mixed / Not evaluable

1.3 Category

- The type of learning effect reported by the respondent must then be categorized using the categories below.
- A participant can report more than one learning effect, and some may have addressed several categories (a maximum of three or four for the control group).

  <u>Categories for Treatments 1, 2, and 3</u>
  - Argumentation, Decisions, reflection, and change of perspective
  - Nothing
  - Other (learning effects not intended by the training)

  <u>Categories in Treatment 4</u>
  - Cocoa – information
  - Test – referring to the test as a subcategory. We then check whether anyone has taken something from the test that they see as an effect of other categories.
  - Argumentation, decisions, reflection, and change of perspective

- Nothing learned
- Other (learning effects not intended by the training)

2. What did you particularly like about this training program?

2.1 "Well liked" in relation to the training program

- First, does the statement actually refer to the training program?
- Yes / No / Mixed / Not evaluable

2.2 "Well liked" (statement, yes/no)

- The next step is to verify whether the statement concerns something the respondent found particularly pleasing.
- Yes / No / Mixed / Not evaluable

2.3 Categories

- Here, it is necessary to categorize what the respondent reports as being particularly good. This is divided into the categories below. A participant may address several categories.

  Categories in Treatment 1-3

  - Situation/content/subject/case study
  - Argumentation, decisions reflection, and change of perspective
  - Nothing
  - Other (anything that cannot be assigned to other categories)
  - Test – with reference to the test as a subcategory. We then identify whether anyone has taken something from the test that they see as an effect from other categories.
  - Activity (design of the treatment)

  Categories in Treatment 4

  - Cocoa – information
  - Argumentation, decisions , reflection, and change of perspective
  - Nothing
  - Other (anything that cannot be assigned to other categories)
  - Test - with reference to the test as a subcategory. We then identify whether anyone has taken something from the test that they see as an effect from other categories.
  - Activity (design of the treatment)

3. Do you have any suggestions or ideas for improvement of the training program?

3.1 Suggestions for improvement of the training program

- First, does the statement actually refer to the training program?
- Yes / No / Mixed / Not evaluable

3.2 Suggestions for improvement (negative criticism, if applicable)

- The next step is to verify that the respondent has actually made a statement that contains suggestions for improvement (negative criticism, if applicable).
- Yes / No / Mixed / Not evaluable

3.3 Categories

- Next, the respondent's improvement suggestion is to be categorized (possibly negative criticism). This is done using the following categories:

  Treatment 1-3

  - Time / duration
  - Nothing
  - Situation/content/subject/case study
  - Activity (design of the treatment)
  - Media design, technical possibilities & rules
  - Learning goals, connections, and benefits
  - Test
  - Other

  Treatment 4

  - Time / duration
  - Nothing
  - Situation/content/topic (cocoa)
  - Activity (design of the treatment)
  - Media design, technical possibilities & rules
  - Text length
  - Learning goals, connections, and benefits
  - Test
  - Other

The following applies to all steps: if you are unsure and absolutely do not know whether or how to assign the contents, please write this in the column titled “Remarks,” with reasons, and mark it red (filling the function of the cell). We can then talk about this again.

2.6.6 Overview Statements from the Self-Report (Examples) – Treatments 1-3

Category	Statements (Examples)
What are the most important things you have learned during this training program?	
Argumentation, decisions, reflection and change of perspective	Looking at arguments or behaviors from both sides. Clarifying my own opinion to identify the right action. It is not always easy to make decisions. You should question your own decisions. Most of all, you should think about why others have made their decisions. Building structured arguments. Putting myself into different situations to see from other perspectives. Looking at situations from different angles. Creating arguments that do not correspond to my own opinion. The first impulse when evaluating a situation is often moral weighing, and this point of view should be questioned more than once. Collecting arguments, entering into discourse with a group, perceiving the points of view of different people. Changing sides of an argument to try and understand the views opposite to my own. Dealing with another side in a discussion gives you new insights, but it can also strengthen your own opinion. Both are possible. What is certain, however, is that a more differentiated view of the facts of the case will result; and that is certainly advantageous for all parties involved and for the matter itself. A detailed study of a topic and the related moral issues requires a multi-perspective approach. It is good to be forced to deal with this for a longer period or to invest time beyond that required to read the facts. It is important to put oneself in the shoes of other people.

	It is important to look at both sides when there are good and meaningful arguments for both the pros and cons of an action. For a decision of this magnitude, you should take sufficient time to think about it.
Nothing	./.
Other (other learning effects not intended by the training)	exact reading
	be patient
	Concentration
	To read attentively
What did you particularly like about this training program?	
Situation/content/subject/case study	The given situation was relevant to everyday life, complex, and interesting.
	It was relevant to professional everyday life.
	I liked the subject matter very much.
	The subject involved both morality and law.
Argumentation, decision, reflection and change of perspective	Collecting arguments for both sides of a debate, rather than taking a one-sided perspective.
	Taking different perspectives, sensitization, empathy.
	Seeing from the different perspectives.
Nothing	./.
Other (any statement that cannot be assigned to other categories)	Clear and easy to understand (structure).
	No pressure to perform, as I had enough time.
	I could have completed it from anywhere, unlike a standard lecture.
Activity (design of the treatment)	To actively collect arguments myself and to adjust them to the reactions and opinions of colleagues unknown to me.
	It seemed like a real discussion. Everyone got a chance to speak and

	nobody over the others. Everybody was allowed to finish speaking, to think. It was a very pleasant and objective discussion.
	Joint brainstorming of the pro and con list.
	One was obliged to deal with many arguments – far more than if one had only been faced with the problem definition.
What are your suggestions or ideas for improvement of the training program?	
Time / duration	Give less time.
	The waiting times between your own entries were very long.
	Ten minutes would have been sufficient to read through the pro and con arguments.
Nothing	./.
Situation/content/subject/case study	Include other pedagogical fields of work in the analysis. In these professions, too, very difficult decisions are often made.
	More detailed information about the people in the story to make decisions easier.
	Slightly fewer arguments to allow a clearer overview.
Activity (design of the treatment)	More interaction
	The option to develop own arguments
Media design, technical possibilities, & rules	The option to correct mistyped arguments.
	Temporarily hide the arguments of the others.
Learning goals, connections, and benefits	A more detailed explanation of the purpose of the training (what should be trained, why it is helpful, etc.).
	I didn't really understand the purpose or what exactly was being taught here.
	It would be nice to know the purpose of the training program, its goals, what it was intended to achieve. You might also mention the steps needed to reach these goals.

Other (any statement that cannot be assigned to other categories)	I would be very interested in a small evaluation of the other participants' results. More questions would have been good.

Erklärung

Ich erkläre hiermit, dass ich die vorliegende Arbeit ohne unzulässige Hilfe Dritter und ohne Benutzung anderer als der angegebenen Hilfsmittel angefertigt habe; die aus fremden Quellen wörtlich oder inhaltlich übernommenen Stellen habe ich kenntlich gemacht, bei Verwendung eigener Vorarbeiten (Veröffentlichungen und Qualifikationsarbeiten) habe ich auf diese hingewiesen.
Teile des Kapitel 2 basieren auf Inhalten eines in Co-Autorenschaft mit Prof. Dr. Till Talaulicar verfassten Aufsatzes (siehe Fußnote im Kapitel). Die Verteilung der nicht gemeinsam durchgeführten Arbeiten bei der Erstellung dieses Aufsatzes mit dem Titel „Business ethics training in human resource development: A literature review" ist im Folgenden aufgeführt:

Dominic Kreismann	Till Talaulicar
Festlegung und Begründung der Methodik und Suchkriterien	Vorgabe einer ersten Struktur (Gliederung) für das Paper
Literaturrecherche und -beschaffung	Input zur Ausformulierung, Schärfung und Überarbeitung des Manuskripts
Umfangreiche Datensammlung und Aufbereitung einer umfassenden Synopse der in den Review einbezogenen Studien	Anleitung und Finalisierung der Korrespondenz mit Editor & Reviewern
Weitere Literatur- und Datenauswertung	
Erstellung der Entwürfe von Text, Tabellen und Abbildungen	
Angeleitete Überarbeitung verschiedener Manuskriptfassungen	
Sammlung von Informationen, um geeignete Journals zur Einreichung zu identifizieren	

Bei der Auswahl und Auswertung des Materials sowie bei der Herstellung des Manuskripts habe ich Unterstützungsleistungen von folgenden Personen erhalten:

- David Lucius – Programmierung des Experiments in oTree
- Fabian Kleine (Labormanager eLab) – Beratung, welches Programm sich zur Durchführung der Experimente eignet; Einpflegen des Experiments und Versenden der Einladungen via ORSEE; finanzielle Unterstützung für Probandengelder (sog. Überbuchungsgelder)
- Ute Winter (Datenschutzbeauftragte Universität Erfurt) – Hinweise und Feedback zur Erstellung von Datenschutzerklärungen
- Prof. Dr. Georg Lind – Vorstellung der KMDD sowie Erläuterung des Ausbildungskonzepts für KMDD-Lehrer
- Sieglinde Eichert – Kollegiales Feedback zur Nutzung und Modifikation der KMDD; Teilnahme am Experteninterview
- Dr. Kay Hemmerling – Workshop zur Nutzung und Auswertung des MKT (Einführungstraining); kollegiales Feedback zur Nutzung der KMDD; Teilnahme am Experteninterview
- Hannah Brand – unabhängige Codierung
- Martin Fehse – unabhängige Codierung
- Mentorium AG – Statistik-Training/Coaching (Nutzung von SPSS)
- Scribbr B.V. – Korrektorat/Lektorat, Layout-Check (APA), Plagiatsprüfung

Weitere Personen waren an der geistigen Herstellung der vorliegenden Arbeit nicht beteiligt. Insbesondere habe ich nicht die Hilfe eines Promotionsberaters in Anspruch genommen. Dritte haben von mir weder unmittelbar noch mittelbar geldwerte Leistungen für Arbeiten erhalten, die im Zusammenhang mit dem Inhalt der vorgelegten Dissertation stehen. Die Arbeit wurde bisher weder im Inland noch im Ausland in gleicher oder ähnlicher Form einer anderen Prüfungsbehörde als Dissertation vorgelegt.

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Erfurt, den 07.12.2020

Unterschrift:

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