

RESEARCH IN PROGRESS

TRAINING ORAL COMMUNICATION- SKILLS USING AN AVATAR

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Training participants to give quality feedback requires them to receive feedback themselves on the feedback they have given to someone else. Such training is time-consuming and anxiety-inducing. Nevertheless, the reception of feedback is primarily dependent on its perceived quality, therefore training is essential. In the present study, an AI-driven Avatar was used as the recipient of feedback, generating a feedback report concerning the feedback given. 200 participants will train themselves using the Avatar, in which their purported findings on perceived value/usefulness of the training, their competence and confidence will be measured (pre and post) using questionnaires based on IMI scales. Additionally, Learning Analytics will be exploited to measure the number of times students logged in, and the duration of their sessions. The overall results should show the effects of using an Avatar on students' perceptions and confidence on feedback-giving. A future study may show how this affects students' professional practice.

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1 Introduction

Professionals need to be competent in oral communication, such as providing quality oral feedback. Repeatedly practising oral feedback-giving, one-on-one with a critical trainer, thereby receiving feedback on the feedback given, is necessary to improve its quality (Carless & Boud, 2018), but impractical and highly time-consuming (Chow, 2024), hence barely undertaken in higher (vocational) education. Additionally, training feedback-giving skills with a human agent may induce anxiety (Sichterman et al. 2025), hence inhibiting the learning process.

An AI-driven Avatar could help by taking the role of a one-on-one critical trainer that could be adaptable to different scenarios in which oral communication is necessary. Accordingly, anxiety would be reduced as practising can take place in privacy whilst remaining anonymous. Moreover, since such a training can be done in the user's own home, the practical implication of time-consumption would become obsolete. To this extent, an Avatar would interact with the provider using verbal and visual responses, followed by a feedback report on the method of feedback given.

Furthermore, said design can be used for training oral feedback-giving for professionals as most higher vocational training programmes focus on peer-feedback only (Van der Stap, 2025). Focussing solely on peer-feedback is insufficient for training feedback-giving as this requires the presence of a one-on-one recipient, not as a peer, but as a critical trainer (Chow, 2024). Whilst some studies have implemented AI-technology on feedback training, these are related to peer-learning processes (Noroozi et al. 2023; Ouyang et al. 2021; Darvishi et al. 2024; Zheng et al. 2024), not to differing feedback-giving scenarios using the Avatar as a critical trainer. Consequently, there are no studies on training and practising oral feedback-giving, applicable to different situations, using an Avatar as critical trainer. This results in a scientific gap.

A major concern of using an AI-driven Avatar is users' wariness as AI-technology is becoming increasingly autonomous (Zhai et al. 2024; Skulmowski, 2023) resulting in concerns of how this may influence experiences and viewpoints (Van der Stappen & Van Steenberghe, 2020). These concerns affect users' confidence in AI-technology (Glikson & Wooley, 2020), inhibiting adoption of the Avatar (Soulami et al. 2024). Accordingly, users need to be confident that the interaction with the

Avatar does not affect their privacy and autonomy (Zhai et al. 2024; Golgeci et al. 2025), hence the Avatar design needs to be conducted using a structured approach (Nguyen et al. 2023; Markauskaite et al. 2022). One such structured approach is the Value-Sensitive-Design (VSD) approach. This approach in particular structurally collects human values, potential harms and benefits, relevant for developing a skill through the use of AI (Van der Molen et al. 2025). This should leverage users' adoption of the Avatar as it increases the confidence that such interaction does not affect autonomy and privacy (Zhai et al. 2024; Golgeci et al. 2025).

In the present study, the Avatar was designed through the implementation of the VSD approach. As a result, the Avatar's features include the systematic capture of the perspectives of different stakeholders on the potential harms and benefits of AI-use, making the Avatar itself sensitive in its responses to avoid potential harms whilst maintaining the benefits. The present study is a follow-up from said study, and examines the effects of the AI-driven Avatar that incorporates given human values and design principles.

1.1 Aim

Training oral communication skills is important for professionals, but impractical for higher vocational training programmes, leaving professionals ill-prepared or risking early resignations, for example in education (Golubtchik, 2024), resulting in a practical gap. There are studies on using an Avatar in feedback-giving, however, these focus on peer-feedback only, leaving a scientific gap. The aim of this study therefore is to fill said gaps by using the Value-Sensitive-Design method to structurally collect professionals' values and concerns into the Avatar-design as a one-on-one critical trainer. The research question therefore is:

What is the effect of AI feedback training on participants' perceived competence, and confidence to give quality feedback, and to what extent do participants find the training valuable and useful.

2 Methodology

In this research, we are interested in the impact that practising giving feedback-giving has in an Avatar feedback practice system, in particular on perceived usefulness of feedback-giving training, perceived competence in feedback-giving, and confidence

in feedback-giving. In short, in order to provide powerful, quality feedback as outlined above (Hattie & Timperley, 2007; Van Ginkel, 2019), being confident in giving feedback (Mukhia & Tenzin, 2025), perceiving competence in feedback-giving (Ryan & Deci, 2000), as well as seeing the usefulness of training in feedback-giving (Boud & Dawson, 2021), it is essential that training is provided in an anxiety-reduced environment such as AI (Sichterman, et al. 2025). Training is an essential element of providing quality feedback, hence experiencing the usefulness of such training may increase perceived competence and confidence. As explained by Wong et al. (2023), perceiving an AI training as useful increases engagement and learning effectiveness of the training.

The Avatar environment incorporates the criteria of quality feedback as outlined above, and provides feedback on feedback given to an Avatar, ensuring the minimalisation of anxiety. Participants can practise giving feedback as often and as long as they like and receive feedback on the feedback provided by them based on aforementioned criteria, in order to improve their perception of the three aspects as given. Our main research question is:

Does AI training in feedback-giving contribute positively to the perceived usefulness, perceived competence, and confidence of giving quality feedback?

In order to seek an answer to this question, the following sub-questions are posed:

1. How useful do participants find the training?
2. How does the training effect participants perceived competence?
3. How does the training effect participants confidence?

2.1 Research Setting

Whilst feedback is an essential element of professional growth in any work-related setting as an essential element of learning, most of the research setting will take place in an educational environment, namely a graduate teacher-trainer programme of HU University of Applied Sciences (HU) in which giving oral feedback is a critical component of professional training. Likewise, the students at the teaching-trainer programme at the Utrecht University (UU) will need to be competent in giving oral feedback as part of their professional practice training.

2.2 Participants and data collection

The participants at the HU consist of graduate students ($n=50$) in said teacher-trainer programme, participants at the UU comprise of graduate students in a teacher-training programme ($n=15$). In both groups a convenience sampling method was used, recruiting participants in professional development courses as these groups were larger and most likely to apply oral feedback giving in their professional practice. As the participants are from two different universities, sampling bias is limited. Nevertheless, the sample may not be fully representative of the broader population, limiting generalisability. Social desirability bias is lifted as all the surveys are fully anonymous. Prior to the main part of the empirical study, a pilot study was conducted to validate the questionnaire and method. This pilot took place at a revalidation institute and consisted of managers and doctors ($n=17$), followed up by retrospective interviews ($n=3$) to ascertain whether the answers given were in fact the answers they had intended to give. The pilot study served to assess the proposed data analysis techniques, and to uncover potential problems (Holloway, 1997). Whilst it was not the aim of the pilot to measure the Avatar's effectiveness, participants voluntarily commentend on the usefulness of the Avatar, ranging from *»this should be standard in any professional educational programme«*, or *»great way of practising communication skills without anyone looking over my shoulders«*, to *»very helpful, I wish I had known of this earlier«*, and *»this should form part of training in coaching as it improves communication skills without judgments«*.

2.3 Questionnaires

All participants will receive two sets of identical questionnaires, focussing on the elements of perceived competence and usefulness, both constructed from the Intrinsic Motivation Inventory (Ryan, 1982), and the element confidence, taken from the Course Interest Survey (Keller, 1987). One questionnaire will be distributed prior to the AI training, the other will be conducted after the training. The questions consist of 21 items, based on existing scales, and contextualised to the context of the present study (providing quality feedback). A 5-points Likert scale will be used ranging from 'rarely or never true' (1) to 'always or almost always true' (5). The elements will be measured by multiple items distributed throughout the questionnaire (see Appendix A). To avoid social desirability bias (Nederhof, 1985), the questionnaires will be conducted anonymously.

The questionnaires include several elements of which the first element, Value/Usefulness, has seven items, e.g.: I find practising giving feedback using an Avatar an important activity, the second element, Perceived Competence, also has seven items, e.g.: I think I'm good at giving feedback. The third element, Confidence, has seven items as well, e.g.: As I take this training, I think I can successfully complete (the final session of) giving feedback. The questionnaire, made by Van Dongen (2020), had been validated twice prior this present study and used in a multi-measured study among law students in the years 2020-2021 and 2023 (Van Dongen, 2024). Said questionnaire has subsequently been adapted by Van der Stap (2025) and validated in a pilot case study, in order to suit the present study aimed at students in a teacher-trainer college during the years 2025-2026.

2.4 Data Analysis

After all the questionnaires are received, the results will be analysed using SPSS (descriptive analysis, correlations, repeated measures ANOVA). Additionally, the AI programme has a Learning Analytics (LA) construct that measures the number of times students logged into the programme, and how long they stayed in the AI environment. The LA results, i.e. the amount of times logged in and the duration of each practise session will be compared to student reactions in surveys, which will be coded to guarantee anonymity. To this extent, a full picture will emerge through which the usefulness and effectiveness of the avatar training can be assessed.

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