Standardising Coaching of Preservice Teachers in the Classroom

Development and Trial of the Synchronous Online Feedback Tool (SOFT)

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Research paper

Standardising coaching of preservice teachers in the classroom: Development and trial of the synchronous online feedback tool (SOFT)

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HIGHLIGHTS

- This study presents a standardised tool for providing synchronous feedback to preservice teachers.
- Good interobserver reliability was observed for feedback cues on visible teacher roles.
- Teacher educators are positive about implementing the tool in vivo.
- The tool offers opportunities for providing adequate, timely feedback in teacher education.

ARTICLE INFO

ABSTRACT

Providing high-quality feedback is essential for improving preservice teacher performance. Rather than post-lesson feedback, immediate performance feedback while teaching is considered effective. This article reports on developing and piloting a standardised tool for synchronous feedback. Eight teacher educators from a Dutch higher education institution were trained to use the tool (based on accepted models of teacher roles, observation criteria and feedback levels) with pre-recorded lessons. Interobserver reliability was good for teacher roles and sufficient for feedback levels. Positive evaluations of the tool and educators' interest in its application, warrant further research into scalability and effectiveness of synchronous feedback delivery.

Teacher educators (TE) are faced with resource constraints (McCorkle & Coogle, 2020; Scheeler et al., 2012; Xu & Carless, 2016), resulting in challenges in the provision of quality, timely performance feedback to preservice teachers (PST). Teaching performance is a layered, multifaceted, and complex behaviour whereby this feedback can focus on different aspects of performance at any given time. Since it is through their coaching (providing feedback on PST performance) that TEs play a huge role in the development of PST performance and calibre (European Commission, 2013) it is essential they have the tools, training and means to provide quality performance feedback.

The definition of feedback understood here is that of information presented by an expert to a learner "with the purpose of allowing the learner to compare his or her actual outcome with a desired outcome to regulate or control the next attempt with this learning task" (Narciss, 2012, p. 126). This definition highlights the centrality of the learner or PST in making sense of the feedback within a specific context whereby the feedback is viewed as a process, not a product. The aim of this feedback is a reduction of the gap between being a student and becoming a competent professional (European Commission, 2013; Nicol & Macfarlane-Dick, 2006; Riordan & Loacker, 2009).

Feedback is one of the top ten influences on achievement, though not all feedback is equal (Hattie, 2011). It does not always translate into uptake (Coogle et al., 2020; Scheeler et al., 2012), does not automatically lead to improvement, and can be ineffective or even cause harm if ignored, not perceived as relevant, or not linked to current level and ability (Crisp, 2007; Hattie & Timperley, 2007; Sadler, 2010; Shute, 2008). In Kluger and DeNisi's (1996) meta-

analysis of 607 effect sizes, one third of the feedback interventions showed a deterioration in performance after feedback, because "if the [feedback] is not accompanied with cues helping to reject erroneous hypotheses, it may cause the recipient to … decrease performance" (p. 265).

Performance feedback involves the use of observation-based data to provide objective information to PSTs regarding their teaching practice (Coogle et al., 2020) in order to reinforce desired and to correct undesirable behaviours (Sayeski et al., 2019). In teacher education performance feedback is generally asynchronous, relying on PST memory for its implementation in subsequent teaching performance, or it is even absent, which may result in unchecked performance errors (Kretlow & Bartholomew, 2010; Scheeler et al., 2004; Wiggins, 2012; Wilkie & Liefeith, 2020).

In 2021 we find ourselves in the throws of discovering and implementing new ways of teaching, learning and providing performance feedback in both online and blended education. This provision of feedback in more blended-friendly environments is not new; indeed, there has been substantial research into the provision of immediate performance feedback for preservice and in-service teachers since the 1950s. Korner and Brown (1952) carried out research into the provision of feedback through the "mechanical third ear", later extended by other small scale research (e.g., Giebelhaus & Cruz, 1992; Hooreman et al., 2008; Rock et al., 2009; Scheeler & Lee, 2002; Wolff et al., 2017). In other iterations, synchronous feedback took the form of a two-way walkie talkie from within the classroom (e.g., Ottley et al., 2017) and developed further with technological advancement into a Bluetooth earpiece, or Bug-in-Ear device (BiE), allowing more discrete feedback. These BiE devices have been used in special education settings (e.g., Scheeler et al., 2006; Scheeler & Lee, 2002) as well as in preservice teacher education (e.g., Scheeler et al., 2012; Rock et al., 2009, 2014). BiE is an unobtrusive way of providing specific verbal synchronous feedback without disrupting the flow of the lesson (Rock et al., 2009, 2014; Scheeler et al., 2004, 2006; Scheeler & Lee, 2002).

Receiving performance feedback during the practicum may lead the PST to an increase in the implementation of desired teaching behaviours (Capizzi et al., 2010; Cornelius & Nagro, 2014). In order for this performance feedback on desired teaching behaviours to be consolidated "before it decays" (Sadler, 2010, p. 540), and for it to be perceived as relevant, the feedback message must provide useable information immediately during task processing, whereby the PST directly perceives the information within the context of the performance. To that end, the feedback message should be connected to a shared framework comprising teaching requirements and discourse familiar to both TEs and PSTs in order that all involved recognise the message within the given context. A simplification of feedback into a framework can also help guide both TEs and PSTs in the provision of feedback on particular domains which require more or less focus (Van de Grift et al., 2014). This provision of synchronous performance feedback, i.e. feedback that occurs immediately (within 3 seconds of the behaviour), appears most effective in acquiring and maintaining new teaching behaviours in the classroom (Schaefer & Ottley, 2018; Scheeler et al., 2018). Synchronous performance feedback enables the PSTs to make connections regarding the effectiveness of said performance in real time; to take control and change their behaviour, thus avoiding error repetition and bad habit forming (Narciss & Huth, 2006; Schaefer & Ottley, 2018; Van Houten, 1980). This is important, since understanding is best determined during performance in a regular teaching context (Beaumont et al., 2011; Narciss & Huth, 2004; Riordan & Loacker, 2009). This form of feedback has already proven to have a more rapid and positive impact on targeted preservice teacher skills (Coogle et al., 2015, 2020; Coulter & Grossen, 1997;

McCorkle & Coogle, 2020) and on effecting a lasting change (Scheeler et al., 2004).

Synchronous performance feedback provides opportunities for change within the context without loss of momentum (Scheeler et al., 2018) as long as it is provided in pre-defined chunks, in the form of cues, in order to avoid cognitive overload (Coninx et al., 2013; Hattie, 2012; Hooreman et al., 2008), which is defined as "the load that performing a particular task imposes on the learner's cognitive system" (Paas et al., 2003, p. 64). Working memory may be limited during the acquisition phase, that is to say when learning the basics of how to teach (Paas & Sweller, 2012; Scheeler & Lee, 2002); however, when dealing with familiar information from long term memory, working memory is less restricted. For PSTs, "the multidimensionality, simultaneity, and immediacy" (Wolff et al., 2017, p. 142) of teaching can already be cognitively overwhelming, so it is essential that synchronous feedback does not increase these challenges.

The provision of synchronous performance feedback to PSTs during this acquisition phase could have a negative impact on self-efficacy and performance if the PSTs are not yet able to relate the feedback to their current performance (Hattie & Timperley, 2007), since the timing of feedback is also dependent on their prior knowledge and performance skills (Kulik & Kulik, 1988; Shute, 2008). When the PST has accrued some theoretical knowledge and teaching skills and is at ease with educational discourse, for example after an extended period of observation and some practicum experience, synchronous feedback is generally preferred as it is timely and individualised and, as such, more beneficial to learning (Ferguson, 2011).

It is this provision of effective, timely, relevant and useable feedback that often proves problematic in teacher education where time and resource constraints pose a major problem (McCorkle & Coogle, 2020; Xu & Carless, 2016). From a behavioural perspective, the provision of synchronous feedback to PSTs may become more popular and prevalent as new teaching behaviours are reinforced directly in the context for which the PSTs are training (Scheeler et al., 2009). Recent technological developments, propelled by the current worldwide COVID-19 pandemic, have enabled education to move increasingly online and can thus help reduce some of these challenges by facilitating the provision of synchronous performance feedback from an alternate location. Technology-enhanced means of providing timely feedback are also positively received by students in higher education (Carless & Boud, 2018; MacMahon et al., 2019; Sharplin et al., 2016).

In a recent review, McCorkle and Coogle (2020) set a new agenda for the provision of effective synchronous performance feedback to preservice teachers whereby they proport that e-mail, text messaging, bug-in-ear and video-based feedback are all readily available media for the enhancement of PST knowledge and the application of evidence-based practices. They posit that the provision of technology-enhanced feedback can help decrease challenges of quality supervision. They further indicate that there is, to date, no empirical research comparing the effectiveness of various types of technology-enhanced feedback which could otherwise inform the decisions made by teacher education institutions regarding supporting preservice teachers when developing protocols for the provision of technology-enhanced feedback.

Teacher education institutions in many western countries are guided by nationally accepted teaching standards. These standards may be used to assess graduate teachers (see Department for Education, 2021) to provide proof of ability (see National Board for Professional Teaching Standards, 2016) and/or to demonstrate professional progress (see Australian Institute for Teaching and School Leadership, 2011). They generally comprise a tripartite focus on teaching practice skills, pedagogical skills and subject

knowledge. As such, they should also lead the feedback practices of teacher educators. A great deal of literature is available on feedback, but considerably less on the content of the feedback provided to PSTs during their practicum experiences. Although these standards bear many similarities, education is also deeply entwined with local culture (Gruenert, 2008) and it is conceivable, given the lack of standardisation of feedback, that many teacher educators base their feedback practices more on how they themselves were taught or what they learned in practice. Performance is an essential part of teacher education, so the feedback PSTs receive should be linked to accepted teaching standards and informed by research. Since PSTs have not yet reached mastery level, the message must be unambiguous (Regan et al., 2017), based on accepted educational discourse and on teaching standards. Teaching can be stressful for novice teachers and it is important that the feedback message does not distract from the classroom situation, whilst allowing the PST the opportunity to apply the feedback directly in the given context. Synchronous feedback is immediate and specific and allows for a "sophisticated learner-centred approach" (Sharplin et al., 2016, p. 120) but research is needed to discover whether it is possible to create a standardised framework of spoken feedback for PSTs in order to avoid cognitive overload whilst allowing for this possibility of instant implementation.

1. The present study

Although the value of synchronous feedback for PSTs has been established, we were unable to find research into the use of standardised feedback in the development of PST performance skills. This study aimed to investigate whether a standardised instrument could be developed which could become a curriculum option in teacher education. To this end, it was necessary to follow up the development of the tool with a small scale trial with teacher educators to ascertain its usability.

In this study, we report on the development and trial of a standardised tool for the provision of synchronous feedback in teacher education to PSTs in their second year of a four year Bachelor of Education in English at a Dutch university of applied sciences. The purpose of the present study was twofold; our first goal was a design study to ascertain if a concise feedback tool could be designed to take account of teacher roles, teaching discourse, teaching standards and feedback models with an aim to assist TEs in providing feedback to PSTs (Study 1). Our second goal was to investigate whether the tool could be used reliably by TEs: are the feedback cues from the newly developed framework (Study 1) used in a similar manner by TEs when observing PSTs in class and providing synchronous feedback on their performance. To that end, study 2 comprised an empirical test of the instrument whereby interobserver reliability was verified through its use in practice.

The main questions guiding these two studies were:

1. How can we integrate teaching standards, teacher roles, and feedback principles and levels into a tool for the purpose of providing synchronous performance feedback to preservice teachers?
2. How do teacher educators use and rate this tool?

1.1. Study 1

Though in its infancy in terms of empirical research, research into the provision of specific synchronous feedback cues in preservice teacher education is available (see Coninx et al., 2013; Giebelhaus, 1993). Giebelhaus (1993) determined a list comprising 14 feedback cues to be provided synchronously to PSTs to decrease

possible lesson disruption. These cues focussed on teacher clarity behaviours such as the use of examples, modelling, explanation, repetition, and questioning and included cues such as "repeat", "rephrase", "practice time" and "use board". Each cue was also accompanied by a short description; for example the cue "give objective" was accompanied by the description "informs students of the lesson objective". The cues were divided across four domains: the important points of the content, the content of instruction, student synthesis, and student understanding. Hooreman (2008) continued this line of research and linked feedback to seven teacher competences (Landelijk Platform Beroepen in het Onderwijs, 2010) using selected video fragments in which PSTs were asked to respond with how they would act in a similar situation. Coninx (2013) combined and consolidated these teacher clarity behaviours and competences, resulting in a taxonomy of feedback cues with a tripartite division across the main problem areas faced by preservice teachers, namely (1) effective classroom management, (2) activating pupil learning, and (3) catering to individual needs. Cues were not included that focus on subject content for fear the PST would not comprehend the behaviour indicator even though it forms a part of widely accepted teaching discourse and research (Maulana et al., 2017) and is, as such, an essential aspect of teaching performance. In Coninx' research (2013), feedback cues were kept as short as possible to facilitate PST recognition of educational discourse whilst avoiding issues with possible cognitive overload. This research was taken a step further by the Open University in the development of the EarCoach app (Crasborn et al., 2018), which sends computer-generated feedback to a Bluetooth earpiece, worn unobtrusively by the PST during the teaching performance. The keywords used for the app are agreed on in advance between the TE and the PST and are not directly nor explicitly linked to teacher roles, teaching standards nor prevailing feedback models.

In order to ensure uptake, it is important that these performance feedback cues are linked to educational discourse already familiar to PSTs. To that end, accepted models of teacher education and teaching standards, which take account of both theory and practice, can be used. It is important to note, however, that there is, to date, insufficient information on how TEs use feedback cues and the extent to which they have a shared understanding of the provision of feedback in practice.

Our synchronous feedback tool is tailored to the individual performance of the PST and focusses on desired teacher behaviour as represented in the International Comparison of Analysis of Learning and Teaching (ICALT). This latter is an internationally validated observation instrument for teacher performance (Van de Grift, 2007; Van de Grift et al., 2014) implemented around Europe as a means of benchmarking the quality of aspects of teaching and learning to aid national educational policy and, as such, represents accepted teacher standards. This instrument has been consistently linked to international research on teacher effectiveness, teaching discourse, and internationally accepted teacher requirements (Inspectie van het Onderwijs, 2009; OECD, 2013; Van de Grift, 2007; Van de Grift et al., 2014; Van der Lans et al., 2017).

The ICALT forms a good base for the development of feedback cues to ensure the six main teaching domains are covered. These six domains comprise evidence-based effective teacher behaviour, namely (1) safe and stimulating learning climate; (2) efficient classroom management; (3) clarity of instruction; (4) activating learning; (5) adaptive teaching; and (6) teaching learning strategies. It has more recently been used in research to measure effective teacher behaviour of PSTs (Maulana et al., 2017) whereby it was demonstrated that the majority of PSTs struggle in domains 1, 2 and 3. The more complex areas can be mastered by some PSTs but many fully qualified teachers never develop these more complex skills

(Van de Grift et al., 2014). Feedback provided to PSTs must therefore take account of their different performance level and needs, such as represented in the ICALT.

The six ICALT domains are reflected in the five roles an effective teacher embodies during a lesson (Slooter, 2019), namely the host (responsible for making contact with the pupils), the presenter (who takes charge and shows leadership), the subject specialist (who promotes learning of knowledge, skills and attitudes), the pedagogue (responsible for creating a safe environment) and the evaluator or closer (who evaluates learning). This division of roles is a simplification in order to provide more insight into the complexity of teacher behaviour and to aid with understanding of particular problem areas or strengths. Each role comprises a particular skill set or knowledge, which together describe a teacher's role within a school and help create a common discourse and understanding of the strengths and weaknesses of a given performance. In essence, these roles comprise core elements of teacher skills, recognisable to TEs from various education contexts regardless of the local curriculum. The role of the host, for example, comprises the skill of creating a safe and supportive environment; the pedagogical role is one in which the teacher sets clear lesson goals, shows an ability to treat pupils with dignity, tolerance and respect (see Australian Institute for Teaching and School Leadership, 2011; Department for Education, 2021). The presenter role encompasses the ability to teach in accordance with accepted teaching methodology; whilst the role of the methodologist involves having sufficient knowledge of the subject content (see Australian Institute for Teaching and School Leadership, 2011; Department for Education, 2021; National Board for Professional Teaching Standards, 2016). Finally, the role of the closer comprises evaluating the pupils' process and progress and providing formative feedback (see Australian Institute for Teaching and School Leadership, 2011; Department for Education, 2021; National Board for Professional Teaching Standards, 2016).

In order to be accessible to both TEs and PSTs, the tool must also reflect and be organised in accordance with the five visible roles of the teacher (Slooter, 2019). Finally, Hattie and Timperley's (2007) four levels of feedback can then be used as a means of labelling the feedback utterance, namely, feedback on the self (FS), feedback on the task (FT), feedback on the process (FP), and feedback on self-regulation (FR).

2. Method

In an iterative process, we developed a list of feedback cues to be provided synchronously to PSTs. Step one comprised the analysis of sources to ascertain the appropriate professional discourse level. To that end, we started with an analysis of empirical research on synchronous feedback (see Coninx et al., 2013; Giebelhaus, 1993; Hooreman, 2008; Rock et al., 2009, 2014; Scheeler et al., 2002, 2004, 2006, 2009, 2012, 2018; Sharplin et al., 2016; Stahl et al., 2018), the Dutch National Teaching Standards (Ministerie van Onderwijs en Wetenschappen, 2017) and the ICALT (Inspectie van het Onderwijs, 2009), and cross-checked the resulting discourse with an analysis of written post-lesson performance feedback provided to second year PSTs in order to ensure the resultant feedback cues were exhaustive. This resulted in an initial pool of 50 items, which, on further analysis was reduced due to redundancy or lack of clarity of certain items. Following the removal of unclear cues (such as "instruct what" and "why correct") and cues that were considered redundant for second year PSTs (such as "stimulate pupil thinking" and "give hints"), we finished with a list of 20 cues, evenly divided to cover the full spectrum of typical feedback that might be given to a second year PST. Hattie and Timperley's (2007) feedback model provided a useful framework for the labelling of

these synchronous feedback cues, for example the cue "wait for silence" which comprises a clear direct instruction, was labelled as FT, whereas "noise check" requires the PST to think about how to implement the feedback, was labelled as FP.

In step two, we ascertained that the focal areas of the cues should be on the main problem areas faced by PSTs, namely creating an appropriate learning climate, classroom management and clear instructions (Coninx, 2013; Maulana et al., 2017; Wolff et al., 2017). Indeed, it has been suggested (Van der Lans et al., 2018) that the development of classroom management and quality of instruction go hand in hand and that teacher development is cumulative (Fuller, 1969). To that end, the lower level (FT) feedback cues should resemble direct instructions focussing more on pupil behaviour, such as "instruct how long", in order to help acquisition and reproduction of accepted teacher behaviours. Higher level (FP) cues require the PST to think about how to respond, such as "check understanding"; these encourage the PST to notice the gap between the current and desired situation. FR cues should focus on decisions the PST has made during self-monitoring, such as altering the timing of a lesson phase during the performance. The cues should thus be tailored to the expected prior knowledge and current performance levels of the PSTs whereby the main focus is on helping them to detect errors in their own performance, i.e. to "overcome obstacles, and apply more efficient strategies for solving the learning tasks" (Narciss, 2012, p. 137).

In step three we reduced the feedback cues to the bare minimum wording in order that they could be easily used by the TEs and understood by the PSTs in a synchronous situation. Previous research (see Coninx et al., 2013; Hooreman et al., 2008) has demonstrated that cognitive load can be increased if the message is too long. The longer the message comprised in the feedback cue, the longer the PSTs have to divide their attention between the pupils' needs in the classroom and the feedback received. This state of competition between the two sources of information (the audible and visible classroom versus the audible feedback cue) could cause cognitive overload, as the provision of lengthy synchronous cues might cause the PST to stop in order to process the message, resulting in a loss of valuable lesson time. To prevent this, the cues were limited to the bare essential (Bangert-Drowns et al., 1991).

In order to verify the cues represented the expected performance requirements of second year PSTs, step four comprised a consultation with three experts with years of experience of practicum observations and assessments of PSTs ($M = 17$, $SD = 7.6$). The 20 cues were consistently linked to the teacher roles (the host, the presenter, the pedagogue, the methodologist, and the closer) (Slooter, 2019) and the ICALT and were clarified with "behavioural criteria". These behavioural criteria were added in much the same way as vocabulary explanations are provided, in order that the TEs could understand the meaning of the reduced cues (Nicol & Macfarlane-Dick, 2006), and that they were precise enough to be recognised by the TE and PST in order to increase the rate of learning (Van Houten, 1980). It was important to ensure the behavioural criteria remained general enough to be applied prospectively to a new situation in order to facilitate and encourage self-regulation. Together with the three experts we ascertained there was no overlap in the cues and that the behavioural criteria were clear and distinguishable from each other.

The cues were finally translated into Dutch using a standard forward-backward procedure, involving two forward translators and two backward translators (Zee et al., 2016).

2.1. Results: development of the tool

In Table 1 we present the cues established after analysis of

Table 1
Synchronous online feedback tool (SOFT).

Role	Cue	Behavioural criteria	ICALT	Levels
	0. No feedback	Everything seems fine — I would not provide synchronous feedback at this point.		
Host	1. Be the host	At the start of the lesson, greet pupils (e.g. at the door, or walk around talking to individuals) to welcome them and indicate what needs to be done when entering your classroom. Ensure an open upright **posture**. Make sure pupils sit down, bags on the floor, books on the desk (to the end of the lesson), work on **relatedness** but ensure the class is calm.	2.7	FT
	2. Mind your posture	When giving instructions, walking around: stand up/don't lean/unfold your arms and assume an open posture.		FS
Presenter	3. Wait for silence	**Stop your instruction** (it is clear some pupils are not yet listening or unable to hear because of the noise) and only continue with the lesson once the class has become totally silent.	2.5 & 2.7	FT
	4. Lower your volume	Drop your volume for instruction and when talking to small groups/individuals		FS
	5. Get attention	For example, **after an assignment or discussion and/or before your instruction**, ask the pupils to put their books down and pay attention with all eyes on the teacher	2.5 & 2.8	FP
	6. Noise check	The class is too noisy - do something (this may be during a switch in activities, during **independent or group work** or when handing things out but the level is not conducive to work).	2.5 & 2.7	FP
Pedagogue	7. Good	We notice you are **nervous** (behavioural signals such as speaking fast, wobbly voice) and want to put your mind at ease. You're doing a good job so far. Well done.		FS
	8. Relax	Take a deep breath/calm down/**wait**/take a seat. Generally visible during the instructions and when monitoring answers. We see you fidgeting or talking too fast and maybe not giving pupils enough **uptake**/thinking time.	3.11 4.19	FS
	9. Walk around	When the pupils are busy **working**, walk around the class (check on pupils, answer individual questions, work on relatedness)		FS
	10. Give encouragement/ compliment the pupil(s)	A pupil has given a correct answer, has tried their best, is working (unusually) well: give him or her a thumbs up/smile/give the pupil a compliment (e.g. on work attitude)	1.2	FT
	11. Show disapproval	Teacher **sees** pupil **misbehaving** or **hears** pupil say something out of place: give the pupil a disapproving "teacher look" or disapprove with an "I" message	2.5	FT
	12. Check on pupil (specify where e.g. back left)	Maybe the teacher has **not seen** a pupil with their hand up: do you see what the children are doing? There may be a group working particularly hard or a pupil who needs a correction for misbehaving.	2.5 & 2.7	FP
Methodologist	13. Use English	You should provide a **model** by using the target language where possible.		FS
	14. Check understanding	Just **after an instruction** or part of an instruction, check the pupils have understood (a) what it is they need to do and (b) they understand the explanation the teacher has just given.	3.12	FP
	15. Instruct how long	When giving **instructions** and setting pupils to work, indicate how long they have for this assignment.	2.5 & 5.25 & 5.26	FT
	16. Ask pupil for explanation/ let pupil define	Make sure to not accept the simple route all the time: ask the pupil to **explain** their answer, ask questions to encourage the pupil to think more deeply. Do the pupils have the right answers and understand why — don't just give them all the answers or let them guess.	4.16	FT
	17. Encourage English	Where appropriate try to make sure the pupils use the **target language** (e.g. for simple questions and answers)	6.30	FT
	18. Good choice/good decision	We see you start instruction at the back of the class, stop yourself and continue from the centre front or you have decided to adapt your instruction due to questions from the class. You may have decided to stop and wait for pupils to pay attention before continuing i.e. **you are self-regulating** (applied the theory, for example, correctly; you've made **changes on the spot**)		FR
	19. Good timing	We notice you have **adjusted your timing on the spot** e.g. you indicate it's time to stop an assignment even though you may have planned more time, or you give extra time because you see it's necessary — a clear signal you are regulating the lesson and adapting your planning "on the fly"	2.8	FR
Closer	20. Evaluate the lesson	Recap on the lesson aims: evaluate the **process** and the **product** (and how they have worked).	5.23	FP

Note. Role = teacher role; ICALT = International Comparative Analysis of Learning and Teaching; Levels = feedback levels; FS = feedback on the self; FT = feedback on the task; FP = feedback on the process; FR = feedback on self-regulation. For further information on the ICALT: https://pure.rug.nl/ws/portalfiles/portal/166159465/Noben2021_Article_MeasuringUniversityTeachersTea.pdf.

empirical research on synchronous feedback, national teaching standards, the ICALT observation instrument, written performance feedback provided to second year PSTs, labelled according to feedback levels (Hattie & Timperley, 2007) and organised according to the teacher roles (Slooter, 2019) (for more information on the link with the Dutch national teaching standards, see https//doi.org/10.21943/auas.14,706,231). Our cues touched on all six ICALT domains and allowed for the differentiated performance levels of second year PSTs. The tool (see Table 1 for categories) comprises six FS cues, seven FT cues, five FP cues and two FR cues. There are only two cues labelled as FR, since self-regulation is generally an internal process which is seldom made visible. A visual or audible change in planned lesson timing during the lesson can be considered a signal that the PST is self-regulating in the same way as a deliberate change in instruction tactic during the lesson. These behaviours are then represented by the two FR cues "good timing" and "good decision".

This study resulted in a taxonomy for the provision of synchronous feedback to preservice teachers: the Synchronous Online Feedback Tool (SOFT). There are a number of cues in this taxonomy

(cues 2, 7, 8, 18 & 19) which are more non-corrective or pedagogical and do not focus on changing visible teacher behaviour but can serve a purpose during a lesson observation, for example to help calm nerves or provide confirmation.

2.2. Study 2

Following development of the SOFT framework we piloted the feedback cues in a second study with experienced teacher educators in order to ascertain the interobserver reliability. In addition, we also explored the extent to which these TEs thought the instrument might be feasible for their own practice.

3. Method

3.1. Participants and materials

The eight participants in this study all worked as teacher educators and practicum supervisors at the time of the study for an average of 12 years (*SD*: 6.8) at a Dutch University of Applied

Sciences that offers a four year Bachelor of Education in English. These TEs were recruited from an initial pool of fifteen. One TE who started the study was unable to complete the sessions and was discounted from the final analysis.

We collected 14 complete lesson recordings from a total of 12 English PSTs ranging from second to fourth year students, including one recording of an online lesson, all of which we had permission to share internally for training purposes. From these lessons we selected typical problematic teaching behaviours faced by second year PSTs. This population was chosen, since the feedback given to PSTs is more likely to result in uptake when they are in their second year of teacher education and have therefore not yet achieved expert status but already have some familiarity with teaching discourse, i.e. the academic language necessary for understanding and interpreting the complex ideas within their chosen field (Carless & Boud, 2018). This means they have mastered much of the professional discourse found in the ICALT, have observed and/or taught a number of lessons and are, as such, familiar with lesson phasing, as can be found in the five roles of the teacher. Whilst undergoing practicum experience, it is important that PSTs receive systematic feedback on all of these familiar roles and using familiar discourse.

Preservice teachers granted permission for the use of their lesson recordings for the purpose of this study. In consultation with the three experts from study 1, we distilled a total of 42 short clips with 57 possible cue choices from the 14 lesson recordings. These clips comprised seven example clips, three "zero" clips for which no feedback was deemed necessary, 17 FS clips, 17 FT clips, 20 FP clips and three FR clips. Some clips showed two possible feedback triggers in rapid succession. The number of FR clips was considerably smaller since self-regulation is generally an internal process and only when a PST externalised this, such as by verbalising a change in lesson timing, was it possible to visualise self-regulation in the clips.

After removal of a number of clips, due to low audio or video quality and clips which did not focus on visible teacher behaviour, we were left with 28 clips for the final analysis. These were spread across all five teacher roles (five clips for the host, seven clips for the presenter, seven clips for the pedagogue, seven clips for the methodologist, and two clips for the closer) and showed examples of visible teacher behaviour for which feedback could be provided.

3.2. Procedure

The feedback cues resulting from the expert consultation were tested in a pilot study to examine if the TEs provided the same feedback cues to the PSTs on the same behavioural trigger. Together with the experts, we selected short clips (1 min or less) of recorded English lessons from PSTs representing a behavioural trigger that corresponded with each of the cues developed in the previous study. The behaviour was time-stamped and the relevant cue noted. For each cue in Table 1 we selected two different recordings. A second cue was added for some clips, where the experts agreed that the behaviour was complex and could merit two feedback cues in rapid succession such as "get attention" and "lower your volume". These were later labelled as the "gold" score (first choice) and "silver" score (second choice). In order to check the TEs also agreed on desirable as opposed to undesirable behaviour, we added three additional "zero" clips for which the experts agreed no feedback was required.

One week prior to the pilot, the TEs were provided with the list of cues and behavioural criteria obtained from study 1, and a link to a short film clip in which the first author explained the aim and how we would collect data, and in which the TEs were asked to carefully study the list of cues and behavioural criteria in much the same way as students are asked to study vocabulary lists. In two separate groups, the TEs then watched the clips using a shared screen in Microsoft Teams in two rounds of approximately 1 h each, moderated by the first author. In the first session they were shown the seven example clips and were asked to note down their individual feedback at the point where the clip stopped and there was a pause in the lesson. This was then followed by discussions of their chosen cues and the clarity of the behavioural criteria. Then they were presented with one third of the clips with no further discussion. The TEs were given a 30 seconds limit to note down their individual feedback choices from the list of cues provided prior to the session (see Table 1) whereby the options were no cue, only one cue or two cues in order of preference. The TEs' shared their results via email with the first author immediately following the session. For the second hour long session, no further example clips for discussion were provided and the TEs were immediately presented with the remaining two thirds of the clips, with some minimal context in order to better understand the school and classroom situation, such as "the teacher has just instructed the pupils to work quietly in groups". Again, they were asked to note down their feedback within 30 seconds and subsequently to share their results directly with the first author.

3.3. Measures

The feedback cue or cues for each of the 28 clips was linked to a specific teacher role and labelled using Hattie and Timperley's (2007) feedback levels. The TEs noted their chosen cue or cues from Table 1, using the numbers in the table whereby their first choice was seen as the gold score, and second choice as the silver score. This meant it was possible to analyse the reliability of the chosen cues, the corresponding teacher roles and the corresponding feedback levels.

After the final online session with each group, the first author asked the TEs to comment on their first impressions of the feedback cues and the feasibility of using them in teacher education for the provision of online synchronous feedback to PSTs in their second year of a Bachelor of Education in English.

3.4. Data analysis

The reliability was calculated using Krippendorff's α (Hayes & Krippendorff, 2007) to quantify the extent of agreement between each TE with the score pre-determined by the four experts (the "gold" score). An advantage of this measure is that it handles missing data and produces a single chance corrected coefficient. Confidence intervals (95% CIs) were achieved with 2000 bootstrap samples. The reliability was calculated across all TEs, the clips, the teacher roles and the feedback levels.

It was agreed that the most commonly used feedback cues provided by the experts and by at least three TEs would be considered as a "gold score" on which to carry out the reliability calculations. There were missing data for TE1 (clip E2) and TE5 (clips E2 and F2) due to audio and connection issues during the livestream.

3.5. Results: reliability of the tool

Interobserver reliability across the TEs is presented in Table 2. Interobserver reliability between the TEs was good for the teacher roles and sufficient for the feedback levels. We saw that the scores for TE1, a researcher with a focus on teaching practice, were highest across the total cues, the teacher roles and the feedback levels and that the remaining TEs scored slightly lower but consistently across all three aspects. Further analysis of the feedback levels (see

Table 2
Cue, Role and Level Reliability per TE (Krippendorff's α with Confidence Interval).

TE	Cue Reliability	95% CI		Role Reliability	95% CI		Level Reliability	95% CI	
		LL	UL		LL	UL		LL	UL
TE1	.85	.69	.96	.91	.78	1.0	.84	.63	1.0
TE2	.73	.54	.89	.78	.60	.96	.68	.47	.89
TE3	.66	.47	.85	.69	.47	.87	.69	.48	.90
TE4	.70	.51	.85	.87	.69	1.0	.67	.45	.89
TE5	.65	.45	.84	.68	.49	.86	.62	.35	.84
TE6	.77	.62	.93	.77	.59	.95	.73	.45	.95
TE7	.66	.47	.81	.78	.61	.96	.54	.28	.80
TE8	.77	.58	.92	.86	.73	1.0	.78	.57	.95
Mean (*SD*)	.72 (7.0)			.79 (8.3)			.69 (9.3)		

Note: N = 28 clips.

Table 3
FT and FP Reliability per TE (Krippendorff's α with Confidence Interval).

TE	FT	95% CI		FP	95% CI	
		LL	UL		LL	UL
TE1	.63	.36	.91	.89	.66	1.0
TE2	.66	.41	.92	.59	.28	.90
TE3	.66	.41	.92	.57	.25	.90
TE4	.50	.25	.75	.79	.46	1.0
TE5	.46	.19	.73	.65	.30	.88
TE6	.74	.48	.10	.58	.27	.90
TE7	.58	.24	.83	.68	.36	1.0
TE9	.58	.24	.83	.89	.66	1.0
Mean (*SD*)	.60 (9.1)			.71 (13.4)		

Note. N = 28 clips; FT = feedback on task; FP = feedback on process.

Table 3) showed good reliability for process-level feedback and sufficient for task-level feedback. Individual TE analysis for the feedback levels showed a larger disparity than for the teacher roles. This disparity was discussed with the TEs in order to ascertain their thoughts on the provision of synchronous feedback and their opinions on the possible implementation of the SOFT in their daily practice.

3.6. Teacher educators' thoughts on the SOFT

Three of the TEs indicated a lack of familiarity with the SOFT at the start of the first session as they had not had time to study the cues and behavioural criteria. They experienced problems initially getting to grips with the cues during the first session. Due to their lack of familiarity with the behavioural criteria, they faced some difficulties in the interpretation of some cues. After the initial practice clips and subsequent discussion with each other and the first author, they felt they had already warmed up sufficiently, although prior knowledge of the behavioural criteria would have strengthened their responses. Two TEs (TE2 & TE4) indicated that what worked well for them was to think about the feedback they would normally give the PST before looking for the appropriate behavioural criteria. For the second session all TEs indicated they had studied the SOFT and felt better prepared. They found it easy to select the cue or cues from the SOFT within 30 s.

Generally speaking, the TEs were positive about the future implementation of the SOFT in their daily practice as a means of providing location-independent, timely feedback and working together with schools to form a shared vision and benchmarking on desired PST feedback and performance. TE3 was concerned about the effect of PST nerves with regards to synchronous online feedback on their performance but was, together with TE7, positive about the possibilities of using the clips and cues for benchmarking

feedback and desired teacher behaviour with school practicum supervisors and PSTs. TE2 was positive about the possible use of the SOFT in vivo ("This is very interesting. I think it would help a nervous student to have someone next to them to help. It's like instant coaching", TE2). When asked whether there were cues that they missed, both TE1 and TE3 indicated the SOFT would be of value for coaching second year PSTs and could be useful for higher year PSTs if there were more subject-specific or methodological cues focussed, for example, on the use of questioning techniques in the classroom. The organisation of the cues into the five teacher roles was accepted by all TEs as it is a familiar model in the Netherlands and comprises the basic teaching behaviour expected of novice teachers. The addition of a general section would be considered helpful for such cues as "good", which the TEs felt could not be linked to one specific role. TE7 referred to this division into teacher roles as a "useful hook for the teacher behaviour" and TE1, TE3 and TE4 indicated it provided an extra layer for the cues, making the instrument much more user-friendly. TE1 and TE8 indicated that during the sessions they confused some cues as they were not yet familiar enough with the behavioural criteria and suggested that some more time in the training with more example clips and discussions would have been useful. An issue several TEs agreed on was the fine line between the cues "good", "good timing" and "good choice", especially as they were not privy to the lesson plans. Three TEs (TE1, TE6 and TE7) suggested amalgamation of these three cues into one, "good call" as they felt it would be clear from the context what cue was being provided to the PST.

The majority of the feedback given by the TEs focussed on behaviour management, in line with expectations regarding the main problem areas faced by PSTs (Coninx, 2013). Suggestions to split the cue "relax" into three separate cues were made as well as adjusting the wording of the cue "walk around" and adding some more subject-specific cues. All TEs were positive about the organisation and labelling of the SOFT, although they indicated a desire for further discussions in order to become more familiar with its application.

4. Discussion

The purpose of this study was to develop and pilot a valid, useable tool for providing synchronous feedback to PSTs with a link to accepted paradigms of teacher roles, teaching standards and feedback levels. The SOFT, comprising a concise set of cues with behavioural criteria, may be useful for the provision of online synchronous feedback in preservice teacher education during the practicum experience. The focus of our study has been on the provision of these cues in a face-to-face practicum experience but it would be interesting to test the tool in an empirical study with online teaching. Our study enhances existing research with the use

of a standardised tool of feedback cues. The use of teacher roles in our tool, linked to the lesson phasing, is a structure that can be applied to the wider field of education as it is easily recognisable for teachers. The SOFT is linked to all six domains of the ICALT with more focus on the three main problem areas faced by PSTs and should therefore provide familiar discourse for secondary education.

Teacher educators play a huge role in the development of pre-service teacher performance and quality (European Commission, 2013) and there is an ongoing need for more supervision of PSTs during their practicum experience, yet teacher education institutions face challenges due to time and resource constraints (McCorkle & Coogle, 2020; Xu & Carless, 2016). The SOFT was designed to be used by experienced and trained TEs when providing performance feedback to PSTs with prior knowledge of professional teaching discourse and some basic practicum experience. It validates the notion that it is feasible to provide PSTs with synchronous feedback on their performance. TEs were able to use the SOFT after minimal training, which bodes well for its application on a larger scale. For this purpose, our tool can be coupled with unobtrusive BiE technology to serve as an appropriate means of communicating effective teaching methods during the practicum experience, irrespective of location. As such, it has positive implications for teacher education since it contributes to empirical understanding of standardised feedback practices and promises to be cost-effective whilst possibly decreasing the practice of incorrect teacher behaviour and increasing the practice of correct teacher behaviour through the provision of quality, timely feedback. Since it uses short cues, the synchronous online feedback tool (SOFT) also takes account of the cognitive load faced by PSTs in the multidimensionality of the classroom (Wolff et al., 2017). Future studies should explore whether the provision of synchronous online feedback within the context of the practicum experience using a BiE device is feasible for TEs and effective for PSTs.

Since this provision of effective, timely, relevant and useable feedback often proves problematic in teacher education due to the aforementioned time and resource constraints, it would be interesting in future research to determine the extent to which peers can give comparable synchronous online verbal prompts using these standardised cues. It is critical that our PSTs receive appropriate and timely feedback, but this feedback does not necessarily need to come from a TE. It is conceivable that, with appropriate training, the SOFT can be used for the provision of peer feedback such as implemented by Coninx (2013), as it is important that PSTs learn to "produce their own feedback since this ability is at the core of learning how to learn" (Van Houten, 1980, p. 59), and the provision of peer feedback can help PSTs' development of a better understanding of professional requirements and lead to more self-regulatory learning (Nicol & Macfarlane-Dick, 2006; Sadler, 2010; Xu & Carless, 2016). The standardised SOFT can contribute to a joint understanding of teacher performance requirements by both TEs and PSTs. By extension, it lends itself to application with more experienced PSTs and a wider set of educational contexts by the addition of a number of cues with a more teaching methodological or subject-specific focus.

It is not yet mainstream in secondary education to provide or receive this type of innovative synchronous feedback, though there have been some recent studies such as Coninx et al. (2013) and Hooreman et al. (2008) into the use of feedback cues during the practicum experience. Coninx et al. (2013) in particular was able to show how the use of short cues was a valid means of providing feedback whilst limiting the impact on cognitive load. In light of ongoing technological advancement, the move to more immediate, synchronous feedback will likely persist as it has been shown to be more effective than deferred feedback (Scheeler et al., 2006;

Scheeler & Lee, 2002) and students seem to welcome technology-enhanced timely feedback (Carless & Boud, 2018). If schools are to experience more closures such as during the COVID-19 pandemic, or move towards more location-independent teaching, then the ability to provide this type of innovative synchronous online feedback can be extended to online classes in order that PSTs are still able to be given sufficient, timely feedback, linked to accepted models and standards.

4.1. Limitations

There are several limitations to consider in this study; the first is that we discounted the clips focussing on self-regulatory behaviour. Hattie and Timperley's (2007) model of feedback operates at four levels whereby feedback on self-regulation and feedback on process are most likely to lead to uptake and, therefore, performance improvement. To that end, the removal of the self-regulation feedback cues means the feedback provided to PSTs is not optimal. When applying the SOFT in the context of the practicum experience, it is important that the TE has prior access to the lesson plan in order to understand the timing and pedagogical choices. The two FR cues in the SOFT can then be given more directly to ensure feedback on the PST's self-regulatory choices.

Another limitation is that the post-pilot discussions with the TEs was carried out by the first author, also a direct colleague of the TEs, which renders the discussion sensitive to socially desirable answers. In addition, structured interviews would have enriched the quantitative data and deepened understanding of the TEs' choices for particular feedback cues and their experience with working with the SOFT using pre-recorded clips. Furthermore, with these technology-enabled approaches to feedback, the risk remains that the process will be dominated by the TEs rather than by learner agency and needs. It is essential, therefore, that TEs are not only trained in the use of the SOFT, but that they are also trained to first and foremost ensure they take note of the specific development and feedback needs of the PST for whom they are providing performance feedback, and adapt their feedback accordingly. The SOFT allows for this individualised approach. Further validation is needed with a larger sample of TEs and PSTs from a broader range of school subjects and in a different phase in their teacher education.

Another issue is that in our study the TEs were asked to provide feedback within 30 seconds due to the novelty of this approach for them, rather than the 3 seconds suggested in the literature for the provision of timely synchronous feedback (McCorkle & Coogle, 2020; Scheeler et al., 2004). It is, however, important to note that a tool such as the SOFT makes great demands on TEs' experience and understanding of professional discourse and teacher practicum experience as well as teaching standards. The training received by the participants in our study was relatively brief, with only seven example clips and a short discussion after each example clip before they were asked to provide feedback. This may have affected the results in spite of the slightly extended time TEs were given for providing their feedback. This brings another limitation to the fore, namely the 30 seconds TEs had in which to provide their feedback. In a live performance, they would be expected to provide feedback within 3 seconds of the observed behaviour. The provision of more training with more example clips and further discussions may have improved the TEs familiarity with the SOFT, and this additional practice should enable the reduction in time between observing the behaviour and providing the feedback to the desired 3 seconds limit posited in the literature.

It is also apparent from our findings that some of the cues needed more explication or further separation as they encompassed too much information. The cue "walk around" has been

replaced in the second iteration of the SOFT with the less culturally directive "monitor". This allows the PST to keep an eye on the pupils from a standing, walking or sitting position depending on the class and school climate (Gruenert, 2008). The behavioural criteria have been adjusted accordingly to allow the PSTs to choose how they interpret the word. The cue "relax" has been separated into two cues "give thinking time" (which then encourages the PST to think more about questioning techniques) and "take a seat/relax" with the behavioural criteria also being separated into two. The TEs suggested amalgamation of the cues "good", "good timing" and "good choice" into one cue "good call" as they felt the feedback would be clear from the context. This cue would, however, lean on feedback on self-regulation and we would be missing a cue for feedback on the self with the focus of putting the PST at ease when showing signs of stress. Upon further analysis we felt that the cue "good" is still relevant as feedback on the self, in order to help a nervous PST, but that "well done/good call" could replace "good timing" and "good choice" as an affirmation of a good decision i.e. feedback on self-regulation. The total number of cues then also remains similar and, therefore, has no added cognitive load. The organisation of the cues into the five roles of the teacher (Slooter, 2019) was accepted by the TEs but cues such as "good" and "posture" could better be moved to a separate more general section as they do not fit with one particular teacher role. In the second iteration of the SOFT, the cue "good" has therefore been moved to a separate general category. The cue "posture" was felt to still be related to the role of the host so has not been adapted.

5. Conclusion

In summary, this study contributes to feedback literacy through the development and trial of a synchronous feedback tool for pre-service teacher education, rooted in theory and empirical research.

The results show that experienced TEs are able to use a standardised feedback tool for synchronous feedback with only minimal training. The cues in the tool were considered appropriate for second year PSTs although there is a wish for some additional teaching-methodology or subject-specific cues. Aligning the feedback cues with the teacher roles (Slooter, 2019) seen in lesson phasing was appreciated by the TEs. The interobserver reliability for these teacher roles was good.

The SOFT comprises the core elements to be found in various international teacher education contexts such as Australia (Australian Institute for Teaching and School Leadership, 2011), the UK (Department for Education, 2021), and the USA (National Board for Professional Teaching Standards, 2016). It is based on the internationally validated ICALT, however it would need alignment with international criteria before being adapted to a specific national context. It can be used in initial teacher education, though it is not suited for continuing professional development contexts without further empirical research.

Taken together, our findings suggest the SOFT is a useful tool for teacher education, when those providing feedback are given sufficient training, although more empirical research is needed. We believe it has the potential to enrich feedback practices for pre-service teacher education in both online, face-to-face and blended teaching. Our study highlights the possibilities for synchronous feedback in teacher education in order to ensure the provision of timely, quality, less obtrusive, performance feedback.

Funding

Synchronous Online Feedback Tool (SOFT).

Role	Cue	Behavioural criteria	Standards	ICALT	Levels
	0. No feedback	Everything seems fine — I would not provide synchronous feedback at this point.			
Host	1. Be the host	At the start of the lesson, greet pupils (e.g. at the door, or walk around talking to individuals) to welcome them and indicate what needs to be done when entering your classroom. Ensure an open upright **posture**. Make sure pupils sit down, bags on the floor, books on the desk (to the end of the lesson), work on **relatedness** but ensure the class is calm.	P: skill	2.7	FT
	2. Mind your posture	When giving instructions, walking around: stand up/don't lean/unfold your arms and assume an open posture.	P: skill (b)		FS
Presenter	3. Wait for silence	**Stop your instruction** (it is clear some pupils are not yet listening or unable to hear because of the noise) and only continue with the lesson once the class has become totally silent.	P: skill (a)	2.5 & 2.7	FT
	4. Lower your volume	Drop your volume for instruction and when talking to small groups/individuals	M: skill (b.iii)		FS
	5. Get attention	For example, **after an assignment or discussion and/or before your instruction**, ask the pupils to put their books down and pay attention with all eyes on the teacher	M: skill (b.i)	2.5 & 2.8	FP
	6. Noise check	The class is too noisy - do something (this may be during a switch in activities, during **independent or group work** or when handing things out but the level is not conducive to work).	M: skill (a; d)	2.5 & 2.7	FP
Pedagogue	7. Good	We notice you are **nervous** (behavioural signals such as speaking fast, wobbly voice) and want to put your mind at ease. You're doing a good job so far. Well done.	Sub, M, P - general		FS
	8. Relax	Take a deep breath/calm down/**wait**/take a seat. Generally visible during the instructions and when monitoring answers. We see you fidgeting or talking too fast and maybe not giving pupils enough **uptake**/**thinking** time.	M: skill (b.v)	3.11 4.19	FS
	9. Walk around	When the pupils are busy **working**, walk around the class (check on pupils, answer individual questions, work on relatedness)	P: skill (b)		FS
	10. Give encouragement/compliment the pupil(s)	A pupil has given a correct answer, has tried their best, is working (unusually) well: give him or her a thumbs up/smile/give the pupil a compliment (e.g. on their work attitude)	P: skill (b; c; e; f) M: skill (b.vi)	1.2	FT
	11. Show disapproval	Teacher **sees** pupil **misbehaving** or **hears** pupil say something out of place: give the pupil a disapproving "teacher look" or disapprove with an "I" message	P: skill (a; b; d) M: skill (b:i)	2.5	FT

(*continued*)

Role	Cue	Behavioural criteria	Standards	ICALT	Levels
	12. Check on pupil (specify where e.g. back left)	Maybe the teacher has **not seen** a pupil with their hand up: do you see what the children are doing? There may be a group working particularly hard or a pupil who needs a correction for misbehaving.	P: skill (a)	2.5 & 2.7	FP
Methodologist	13. Use English	You should provide a **model** by using the target language where possible.	M: general, (c.i)		FS
	14. Check understanding	Just **after an instruction** or part of an instruction, check the pupils have understood (a) what it is they need to do and (b) they understand the explanation the teacher has just given.	M: skill (b.iii)	3.12	FP
	15. Instruct how long	When giving **instructions** and setting pupils to work, indicate how long they have for this assignment.	Sub: skill (2.6 b) M: skill (a:ii)	2.5 & 5.25 & 5.26	FT
	16. Ask pupil for explanation/let pupil define	Make sure to not accept the simple route all the time: ask the pupil to **explain** their answer, ask questions to encourage the pupil to think more deeply. Do the pupils have the right answers and understand why — don't just give them all the answers or let them guess.	M: skill (b.vii)	4.16	FT
	17. Encourage English	Where appropriate try to make sure the pupils use the **target language** (e.g. for simple questions and answers)	M: skill (b.iii)	6.30	FT
	18. Good choice/good decision	We see you start instruction at the back of the class, stop yourself and continue from the centre front or you have decided to adapt your instruction due to questions from the class. You may have decided to stop and wait for pupils to pay attention before continuing i.e. **you are self-regulating** (applied the theory, for example, correctly; you've made **changes on the spot**)	M: skill (2.4:c)		FR
	19. Good timing	We notice you have **adjusted your timing on the spot** e.g. you indicate it's time to stop an assignment even though you may have planned more time, or you give extra time because you see it's necessary — a clear signal you are regulating the lesson and adapting your planning "on the fly"	Sub: skill (2.4: c) M: skill (a; b.v)	2.8	FR
Closer	20. Evaluate the lesson	Recap on the lesson aims: evaluate the **process** and the **product** (and how they have worked).	M: general (c.iii)	5.23	FP

Note. Role = teacher role; Standards = national teaching standards (the letters and Roman numerals refer to subsections of the standards, for further information see: https://zoek.officielebekendmakingen.nl/stb-2017-148.html); P = pedagogy; M = methodology; Sub = subject-specific; ICALT = International Comparative Analysis of Learning and Teaching; Levels = feedback levels; FS = feedback on the self; FT = feedback on the task; FP = feedback on the process; FR = feedback on self-regulation.

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