Implications of corrective feedback on grammar in writing in EFL

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Abstract

Corrective feedback has been widely discussed and both praised and rejected, in this review recent research on the topic is collected, presenting an overview of what kind of feedback is most beneficial to language learners and their grammatical accuracy. Initially, a brief general theoretical background is summarized, followed by a short passage about the debate initialized by John Truscott with his claim that corrective feedback is potentially harmful for language learners. Furthermore, through the research it is concluded that direct corrective feedback is the most effective for increasing language learners' grammatical proficiency, and indirect corrective feedback is most effective for increasing learners' overall accuracy, as well as their non-grammatical accuracy. Moreover, methodological and ethical issues of the reviewed research are discussed, followed by a discussion about the importance of the learners' level of metalinguistic awareness. Lastly, some pedagogical implications are debated and a few suggestions for future research are made.

Contents

1. Introduction

In the following section the topic of formative corrective feedback will be introduced, starting with definitions of important terminology followed by a brief history of formative feedback. Lastly, this section includes the exceptional debate between John Truscott and Dana Ferris, discussing the possible effects of grammar correction.

1.1 Definitions

One could say that virtually all feedback is in one way or another formative, it is therefore important to state how it is referred to in this review. In this review formative feedback is defined as "information communicated to the learner that is intended to modify his or her thinking or behavior to improve learning" (Shute, 2008 p. 153). Furthermore it is also important to include that formative feedback ought to be supportive, precise, it should be presented at the right time and it is not aimed to be an evaluation of the student (Shute, 2008). There are several different subdivisions of formative feedback, for example corrective feedback, which will be defined and investigated shortly. In addition to formative feedback there is summative feedback, which in short is when the teacher gives a summative grade or mark to the student. Formative feedback is not to be confused with formative assessment, which includes for instance peer assessment and self assessment, in this review the term feedback will be used and it refers to feedback given from a teacher to a student.

  As mentioned earlier, there are several components of formative feedback. Firstly, there is the division between non-corrective and corrective formative feedback. Non-corrective formative feedback is when a teacher gives a student praise, encouragement and support, additionally, it is very general and does not provide the student with information about how to solve errors or mistakes. Corrective formative feedback, or CF as it will also be referred to in this review, refers to feedback that is in some way corrective, and that in turn entails various components. Secondly, there is the variable of focus, focused CF targets a specific error or problem area in language learning, for example nouns, articles or tense, whereas unfocused CF does not point out any specific area and may include several different error types (Kim, 2013). Thirdly, there is the issue of directness, whether or not the CF is indirect or direct. Direct feedback entails that the teacher points out what mistakes or errors are made and supplies the student with the correct answer. Indirect CF, however, does not entail giving the

correct answer, but the errors are still pointed out. The errors and mistakes can be underlined or crossed over, or in some cases teachers use some sort of coding system in order to hint to the student what kind of error they have made. Lastly, an important factor to consider is the presence or absence of revision, this part is not as widely discussed in this review, however it is an important part of students' learning and is not to be forgotten in the classroom.

1.2 Theoretical background

In the late 1990s Black and Wiliam (1998) stated that "[a]ll [classroom] work involves some degree of feedback between those taught and the teacher, and this is entailed in the quality of their interactions which is at the heart of pedagogy" (p. 16). Sadler (1998) discusses the importance of the quality of the feedback and how well the students understand the feedback given (Black & Wiliam, 1998). Sadler (1998) concurs with Black and Wiliam (1998) in that summative feedback may not be as effective as formative feedback, namely that summarized grades does not give the students as much useful information as receiving customized comments. Further, it is stated that summative feedback may even be to a disadvantage, primarily regarding earlier stages of language learning.

Chappuis (2015) refers to several researchers (Harlen & James, 1997; Sadler, 1998; Wiliam & Leahy, 2007; Shepard, 2008) and concludes that it is how the teacher uses information (about the students' progress) that is formative, not the way it is retrieved, i.e. it is not when the teacher teaches, but rather when the teacher gives the learner feedback. Regarding grades and marks, it is single-handedly referred to as summative when the information retrieved from a class activity is used to decide the proficiency-level of the student, not as a way of teaching. One could therefore conclude that different types of feedback, both summative and formative, are needed in order for the students to advance (Shute, 2008).

As Shute (2008) presents, there is an overabundance of research on the effects of different types of feedback – how feedback affects students' proficiency and intake, researching both summative and many different types of formative feedback. One reason for this quantity of research might be that there is no common outcome of the many studies. For example, Black and Wiliam (1998) review results from a study, performed by Butler, where three groups of students were given different types of feedback on the same task. Black and Wiliam explain that the results from Butler's study showed that the scores increased in the

group which received comments only in comparison to both the group which received comments together with a grade and those exclusively given grades. However, these results show a significant difference between high- and low-achievers, hinting that motivation is of great importance in students learning, in fact Black and Wiliam forward Butler's thoughts by concluding that "even the giving of praise can have a negative effect with low-achievers" (Black & Wiliam, 1998, p. 13).

Furthermore, Black and Wiliam (1998) go on to state that "formative assessment is not well understood by teachers and is weak in practice" (p. 20). They also claim that the terminology is uncommon for teachers to use, which might have been true in 1998, however 17 years have come and gone, and teachers today may be well aware of the terminology.

1.3 The Truscott – Ferris debate

The discussion around the effectiveness of grammar correction became generally known in the late 1990s mainly because of a debate between Truscott (1996) and Ferris (1999). Initially, Truscott wrote an article where he claimed that all kinds of grammar corrections should be eliminated, and that grammar correction is ineffective, not natural and even downright harmful. He also stated that teachers are not to presuppose that correcting students' grammar is helpful for, and will work in favor for, the students. He also claimed that perhaps tradition is what keeps teachers correcting grammatical errors (Truscott, 1996). Truscott concludes that anything else but grammar correction is better that grammar correction, a statement that provoked Ferris enough to publish a response to Truscott's article. Ferris (1999) begins her article by stating that Truscott's thesis is *premature* and she proceeds to review the arguments stated by Truscott. Ferris also emphasizes the importance of knowing that there are different types of error correction, and in what way they are helpful for students. Further she questions Truscott's statement that because some students do not make progress through grammar correction it should be all together abandoned, Ferris states the opposite and argues that teachers ought to put even more effort into corrective feedback and grammar correction in order to be even more effective (Ferris, 1999).

Additionally, Truscott (1996) stated that most students want corrective feedback and that they consider it to be helpful, but he argued that the students may not know what is most beneficial for their learning. Ferris (1999), however, states that through her own and many teachers experience she can conclude that if grammar correction were to be absent it would

interfere with the students' motivation, which could be even more harmful than the actual grammar correction (Ferris, 1999). Ferris also touches on this subject in her 2004 article, agreeing with Truscott in that what the students want does not necessarily imply that it is the preferable alternative. However she emphasizes her previous statement concerning the students' interest in error correction, she concludes this statement by saying "[t]hus, the existing research on student views predicts that the presence of error feedback may be beneficial and its absence may be harmful" (Ferris 2004, p. 55). Ferris also questions the ethical element of studies which include a control group receiving no, or very little, feedback. She states that in order to include a control group not receiving any form of feedback, the researcher has to be certain that either CF is harmful for the students or that receiving no feedback also has a positive outcome, or the researcher is simply denying the students feedback with only the research in mind (Ferris 2004).

Van Beuningen et al. (2012) discussed the debate between Truscott and Ferris, and concluded that the debate generated in an "ever-expanding body of studies exploring the effects of CF on L2 learner's writing" (p. 3). This is illuminated in the following sections, where the effects of different types of feedback are discussed in reference to current research. The aim of this review is to investigate and get a better understanding of the effects of feedback on student's grammar accuracy and its relation to grammar correction, i.e. what effect does error correction have on students' grammar proficiency?

2. Research

In this section, some studies about the effects of different types of corrective feedback will be reviewed. Some of the studies are based on large groups of learners and include control groups, others are smaller with fewer participants. The studies target different issues and aim to address different parts of the research field, thus the different sections are divided as follows: *Focus of feedback* and *directness of feedback*, both within *corrective feedback*, and lastly *feedback on grammar and understanding the feedback*, reviewing research specifically targeting grammatical accuracy and how grammar correction may be interpreted by the learner.

Corrective feedback is often discussed in reference to writing proficiency, regarding for instance vocabulary or grammar, yet teachers can use different types of corrective feedback in

all types of classroom work. In this review, however, corrective feedback on writing, and especially in reference to grammar proficiency, will be the focus area.

2.1 Corrective feedback

Previously mentioned definitions, i.e. focused, unfocused, direct and indirect corrective feedback, are all different types of corrective feedback. Corrective feedback can thus be given in many different ways, but is always, as the name suggests, corrective. Non-corrective feedback, e.g. giving praise, can also be given in different ways, but it is not the focus area of this review. Corrective feedback, and the different subdivision of it, can be expressed in various ways, for instance focused direct corrective feedback in writing proficiency, focused indirect corrective feedback in vocabulary knowledge or unfocused indirect corrective feedback in grammar proficiency, etc.

2.1.1 Focus of feedback

As presented in section *1.1 Definitions*, the matter of focus in CF refers to feedback being either focused or unfocused. Focused corrective feedback is when the feedback is focused on a particular problem area, e.g. English articles or pronouns. Unfocused corrective feedback is when there is no specific area of errors or mistakes targeted, the teacher corrects all errors. Exploring the effectiveness of focused vs. unfocused CF many researchers have found that focused CF appears more effective than unfocused CF (Bitchener, 2008; Ellis et al., 2008; Sheen, 2007). It is found that students may understand focused CF to a greater extent than unfocused CF, resulting in a higher proficiency among the students receiving it (Kim, 2013). As previously mentioned, however, there is no generalizable outcome from the research (Hyland & Hyland, 2006).

Van Beuningen et al. (2012) stated in their article, that the great stir up in the world of CF has created an ample amount of research, but without any real common outcome (Shute, 2008). Van Beuningen et al. thus pose a number of questions to be answered through their research, their general focus area being *comprehensive* CF, i.e. unfocused CF as used in this review. The research questions they originate from are all on the topic of unfocused corrective feedback, and they seem to strive to contradict Truscott's (1996) earlier statements on the topic (Van Beuningen et al., 2012). Firstly, they ask the question whether or not unfocused

written CF helps the learners to improve their accuracy during revision, thus, if it is beneficial as an editing tool. Furthermore, they go on asking if it also leads to improvement in new texts written at a later point after the learner has received CF. Moreover, they also discuss the factor of directness and make a distinction between grammatical and non-grammatical errors, which will be more thoroughly discussed in the following sections. Lastly, they reconnect to Truscott's bold statement, about CF being potentially harmful, by asking if correction of errors would lead to avoidance of complex structures (Truscott, 1996; Van Beuningen et al., 2012).

The study performed by Van Beuningen, De Jong and Kuiken included two experimental treatments as well as two control groups (2012). All groups were given four tests during four different sessions, the first session included a pretest, the second was a treatment session, the third included a posttest and the last a delayed posttest. In addition they aimed to test the claim made by Truscott (1996) that CF might be more beneficial with non-grammatical errors than with grammatical errors, so they "broke down [their] overall accuracy measure into a measure of grammatical accuracy and a measure of non-grammatical accuracy" (Van Beuningen et al., 2012, p. 17). This led to findings showing overall accuracy as well as both grammatical and non-grammatical accuracy. Their findings dividing direct and indirect CF will be discussed in section 2.1.2.

The results regarding the overall effects on the students' written proficiency of unfocused CF compared to the two control groups not receiving CF showed differences between the groups. The results from the first session showed that all four groups started out with indistinguishable proficiency levels, however the groups receiving CF showed a higher proficiency level and fewer errors in following tests. Van Beuningen et al. thus concluded that unfocused CF is of profitable use and does help learners to increase their proficiency level, both in the revised text and in further work (2012). They also conclude that Truscott's claim therefore is untrue and that unfocused CF does not show the side effects stated by Truscott (1996; 1999; 2007).

Furthermore, Van Beuningen et al. found that receiving unfocused corrective feedback (both given indirectly or directly to the learner) was more beneficial than not receiving any corrective feedback or being urged to self-correct, showing that corrective feedback in any form is helpful for the learner (Van Beuningen et al., 2012). However, their research did not include a control group receiving focused CF, leaving the research field with an unanswered

question: is unfocused or focused CF more effective in increasing language learners' proficiency?

There have been a small number of researchers examining the difference in the effectiveness between focused and unfocused CF, these indicate an advantage for focused corrective feedback (Bitchener, 2008; Ellis et al., 2008; Sheen, 2007). For example Sheen (2007) stated that "CF alone could be seen as responsible for the acquisition of English articles. Therefore, the findings of this study provide evidence that the focused written CF resulted in improved accuracy" (p. 275).

Further, Kao and Wible (2014) refer to a study performed by Rouhi and Samiei (2010) which concluded that whilst the students who received focused CF outperformed the control group, they did not show any improvement regarding accuracy in simple past tense. Sheen (2007) also touches on the topic of metalinguistic awareness, meaning that a learner's ability to think about the learning and feedback or correction given, affects the effect of the CF. Shute (2007) claims that in spite of the fact that focused CF showed an improvement in the learners accuracy, he suggests that "focused linguistic CF is more effective when it incorporates both provision of the correct form and metalinguistic explanation" (p. 278). It can be assumed that learners require a certain amount of metalinguistic awareness, however it can be questioned whether or not it is needed in order to execute revision. Kao and Wible (2014) took the presence or absence of revision into account when analyzing data and results showed "no significant difference between correction with learner's revision and corrections without learner's revision" (p. 54). This tells us that despite metalinguistic awareness and despite the presence or absence of CF, revision may not play an important role in student's learning.

Kao (2013) investigated the effects of focused corrective feedback on English article errors, and concluded that it is very beneficial and effective in the learning process. Kao also sheds light on the fact that "[t]he reason that focused feedback is effective might be that the feedback is systematically given to correct the binary division between indefinite and definite article errors" (p. 8).

Moreover, although there is no overwhelming common ground in the research regarding focus, it can be concluded that both focused and unfocused CF are effective for increasing learners proficiency level and accuracy.

2.1.2 Directness of feedback

When discussing corrective feedback, the term directness refers to the corrective feedback being presented either direct or indirect to the learner. As defined earlier in this review, direct corrective feedback is when a teacher corrects the errors made by the learner and also giving the learner the correct form. Indirect corrective feedback is similar, errors and mistakes are still pointed out, however no correct form is given. Whether direct or indirect CF serves as most effective for a student's proficiency level, especially in grammar, is yet unclear. Kao and Wible (2014) claim that it may be a possibility that students given direct CF solely correct the errors with the provided correct form, which does not increase the student's accuracy in future tasks. However, other researchers argue in favor for direct CF, arguing that direct corrective feedback is useful in learners' proficiency in the present as well as future tasks.

Returning to the study performed by Van Beuningen et al. (2012), showing that both direct and indirect corrective feedback is effective in learners' proficiency, one can see some differences in learners' improvement between the two methods. As mentioned, Van Beuningen et al. divided the participants of their study into four different groups, a division was also made between higher and lower level of education, the following results are derived from the group of participants of higher education. Firstly, the overall accuracy test showed a pretest result of 1.52 errors (the mean result of linguistic errors per ten words) in the direct CF group and 1.25 errors in the indirect CF group. Both groups decreased their number of errors in all upcoming sessions, resulting in 1.32 in the delayed posttest (the fourth and last session) for the direct CF group and 0.89 in the indirect CF group. The two control groups, one which was asked to self-correct and the other which was only given additional exercises, both increased their number of errors. The self-correction group started at 1.39 in the pretest and increased the number of errors to 1.50. The last group started at 1.29 and increased the number of errors in the posttest to 1.41, this concludes that regarding overall accuracy both direct and indirect corrective feedback proves to be effective, however indirect CF is more effective than direct CF (Van Beuningen et al., 2012).

The researchers also investigated the effects of corrective feedback for non-grammatical accuracy and the results showed that the group receiving direct CF showed a pretest result of 1.09 and 0.93 in the delayed posttest. The indirect CF group showed a pretest result of 0.95 and 0.52 in the delayed posttest, again concluding that both direct and indirect CF are beneficial for the learner, yet indirect CF proves to be the more effective of the two. The two

control groups revealed a pretest result of 1.01 and 0.93 and the results in the delayed posttest were 1.04 and 0.97 respectively, demonstrating similar effects as from the overall accuracy results. These results indicate that in both overall accuracy and non-grammatical accuracy corrective feedback is more effective than self-correction without CF, and additional writing without CF. And in both cases indirect corrective feedback is proven more effective than direct corrective feedback, at least concerning the delayed posttest. The results from the second and third session indicate that direct corrective feedback is more effective in both the learners' overall accuracy and non-grammatical accuracy. However, one can argue that it is the long term gains and learning that matters the most and indicates what the learner actually retrieved from the feedback (Van Beuningen et al., 2012).

According to the study by Van Beuningen et al. (2012) both indirect and direct CF proves to be beneficial for language learners' writing in overall accuracy and non-grammatical accuracy. However, when in comes to grammatical accuracy Van Beuningen, De Jong and Kuiken's study shows that only direct CF has a positive effect on student's proficiency level (2012). Regarding both overall accuracy and non-grammatical accuracy indirect CF was proven to be most effective, whereas in regards to grammatical errors the results showed a pretest level at 0.43 in the direct CF group, decreasing to 0.39 in the delayed posttest, which is a small improvement, but an improvement nonetheless. The indirect CF group started with 0.30 in the pretest, and in the delayed posttest actually performed worse, 0.37. The same goes for the two control groups, both going from 0.37 to 0.46 and 0.45. The indirect corrective feedback *did* help to improve the students' grammatical accuracy levels in sessions two and three, however only direct corrective feedback yielded in long term effects. Thus, the researchers concluded that both indirect and direct CF are effective, but they target different problem areas, and different errors require different methods of feedback.

In addition, even though the error correction had been made several weeks prior to the delayed posttest, student's who received either indirect or direct CF still performed better than the student's who either engaged in self-correction or writing practice. The researchers concluded that "the fact that receiving CF proved to be more beneficial than self-correction without any available feedback furthermore also shows that CF has an added value above revision as such" (Van Beuningen et al., 2012, p. 32). Further the researchers also discussed that CF should be given on a regular basis in order for the learner to acquire the most from it.

However, they claim that CF is clearly beneficial even from one session and still show to have a positive long term effect on students' proficiency level.

Recently Mohammad Jokar and Ali Soyoof (2013) performed a case study comparing the effects of direct and indirect corrective feedback (which they refer to as explicit and implicit feedback respectively) on grammatical accuracy on two learner's of English. Their aim with the study is to investigate which of the two ways of providing feedback is more effective for increasing learners' proficiency in English articles and prepositions. Not unlike Van Beuningen et al. (2012), Jokar and Soyoof divided their study into four sessions, each session a new topic was revealed. The two participants, who started at the same level of proficiency, were either given direct CF or indirect CF and the results indicated differences between the learning of prepositions and that of articles. Firstly, regarding prepositions the learner given direct CF had an accuracy level of 71.4% in the first session and an astonishing 94.4% in the fourth, thus, the results showed that the direct corrective feedback had been very effective. The learner receiving indirect CF started at an accuracy level of 76% in the first session and resulted in a decrease of accurate prepositions in the fourth, with 72.7% accuracy. These numbers are clearly in advantage for direct corrective feedback, at least regarding English prepositions. Secondly, article use was investigated, the direct corrective feedback learner had an accuracy of 40% in the first session and increased his accuracy level to 86.2% in the fourth session. The indirect corrective feedback learner started with an accuracy level of 73% regarding articles in the first session, however dropped to 68.7% in the fourth, showing that the feedback the learners were given had important impact on their grammar proficiency and learning. The results tell us that regarding both prepositions and articles, direct corrective feedback is far more effective that indirect corrective feedback, and that indirect corrective feedback actually had a negative effect on the learner receiving it. Similar to results from previously presented studies, in this case study the results from the two middle sessions showed other results than in the fourth session, namely that the indirect corrective feedback learner performed with higher accuracy level than the direct corrective feedback learner, however these results do not indicate the long term effect.

2.2 Feedback on grammar and understanding the feedback

Ji Hyun Kim (2013) discussed the relation between learner's understanding of the feedback they are given and how they process it, i.e. how well the learner understand the feedback. The

matter of directness is also discussed in the article and it is stated that written corrective feedback is highly accessible for the recipient, and that direct corrective feedback is most easily spotted. Moreover it is questioned whether or not the students understand the feedback or whether the students "undergo cognitive processing at the level of understanding" (Kim, 2013, p. 122). The metalinguistic awareness will be discussed more in section 3.2.

Jokar and Soyoof (2013) conclude direct corrective feedback to be the most effective in grammar learning, coinciding with Van Beuningen, De Jong and Kuiken's study (2012). However, since the individual learner's understanding plays an important role, a teacher only giving learners direct corrective feedback can not expect the learners' proficiency level to increase without the learners' having understood the feedback given. Indirect corrective feedback, although showing inferior results in comparison to its direct counterpart, may be beneficial for some students, but not all. Relating the understanding of the feedback a learner receives to the proficiency level, it may be thought that learners need a certain level of metalinguistic awareness or maturity in order to benefit from indirect corrective feedback (Kim, 2013).

Moreover, Jokar and Soyoof (2013) also conclude after conversing with the indirect corrective feedback learner that he did not understand all of the feedback, i.e. he did not understand what the error he had made was. This is consistent with Kim's (2013) statement about grammar instruction and the connection between the learner's understanding of grammar instruction and his or her level of proficiency, learner issues will be discussed more in section 3.2.

Kao (2013) suggest in the previously mentioned study that CF does have a positive effect on student's grammatical proficiency, in that case referring to focused CF on English articles. Kim (2013) raises the question of grammar instruction and states that how well the students understand grammar instructions may be an important factor in the student's accuracy level. It is concluded that only one third of the corrective feedback given was understood correctly by the students, resulting in a lower accuracy level.

One could thus imagine that a learner with an existing high level of grammar proficiency may benefit from receiving direct corrective feedback, and a learner with difficulties in the area may not. It could seem possible that all teachers know, or should know, their students well enough to know what type of feedback that particular student would benefit from, but this may not be the case. In many classroom situations the teacher may

know how the classroom activity will be reciprocated, but it is not as easy to be aware of what goes on inside the mind of the students. That is, a teacher can easily notice if a certain practice or task is appreciated or rejected by the students, but not as easily notice whether or not a certain type of feedback was beneficial or harmful for a student. Another factor to consider is that a student may not understand the fact that he or she does not understand, so even giving the students the opportunity to ask questions in order to clarify the feedback given, they may not do so. One could therefore deem that teachers should be aware of how their instructions are understood, as well as how their feedback is understood. Pedagogical issues and issues regarding the learner will be further discussed in section 3.2.

In addition, Shute (2008) states the importance of efficiency in relation to the understanding of feedback, in order for the learner to draw something from the feedback the feedback needs to be efficient:

> *Although more specific feedback may be generally better than less specific feedback (at least under certain conditions), a related dimension to consider is length or complexity of the information. For example, if feedback is too long or too complicated, many learners will simply not pay attention to it, rendering it useless. Lengthy feedback can also diffuse or dilute the message. Feedback complexity thus refers to how much and what information should be included in the feedback messages. (Shute, 2008, p. 159)*

3. Discussion and conclusion

This section includes methodological issues concerning the previously mentioned studies, as well as general methodological issues in the research field, these issues include some ethical dilemmas which are also discussed. The importance of teacher awareness and learner differences are discussed, followed by a short conclusion and suggestions for further research.

3.1 Methodological and ethical issues

There are a number of issues regarding research of written corrective feedback, referring to the method used, number of participants or the ethical issues. Most of the studies about CF include a control group of some sort, however it is not a universal phenomenon. There are studies including one or more control groups, and those not including any. A control group is

usually a group of individuals with similar preconditions as the test group(s), this group does not receive the same type or amount of feedback, if any, as the test group(s). Ferris underlines the issue of this by stating that

> *While there are a number of studies which compare the effects of different methods of error correction with one another, it is, in fact, extremely rare for researchers to compare 'correction' versus 'no correction' in L2 student writing. The reason for that is likely fairly obvious: Most teachers feel that they have an ethical dilemma. Unless they are already sure that error feedback does not help students and may in fact harm them, it feels unethical to withhold it from their students simply for research purposes (Ferris, 2004, p. 51).*

Thus concluding that unless the researcher is doubtful in the outcome, using control groups is clearly an ethical dilemma. In the study performed by Van Beuningen et al. (2012), they include two control groups receiving no feedback from the teacher, one group only being urged to self-correct and the other only given new tasks. This is somewhat problematic in connection to ethics. It can be questioned whether or not this should have been done, however if the control groups were absent, the same conclusion could not have been made, that is that CF is better than no CF.

Another issue regarding methodology is the number of participants involved in a study. In order to achieve the most accurate result from a case study it is preferable to include as many participants as possible. Regarding the study performed by Jokar and Soyoof (2013) only two learners were included, the results showed interesting data, however it can be questioned if the results had been the same if more learners participated.

Lastly, the duration of a study can be an important determiner in the outcome of it. Some studies have a delayed posttest session four weeks after the first session while others two, or even ten, months later (Bitchener, 2008; Bitchener & Knoch, 2009; Lee, 2008; Van Beuningen et al., 2012). This may not have an effect on the actual study or the amount of feedback the learners receive, however, it can be an indicator of how effective different types of feedback are and how they yield a long term learning.

3.2 Learner issues and pedagogical implications

An important factor to consider when discussing corrective feedback, and the effects it may have on students' grammar proficiency, is that all learners are different and may require different methods of feedback. Despite results from studies showing one type of feedback to be more effective than another, this may be true for some learners but not all. Hyland and Hyland (2006) conclude that what is effective for one learner in a particular setting is less so in another. Further, the level of metalinguistic awareness in one student may be different than the one in another, resulting in different levels of understanding their own errors and being able to correct them accurately.

Moreover, it seems as if students prefer to receive written feedback rather than not receiving it, at least when it comes to grammatical errors (Ferris, 1999; Hyland & Hyland, 2006; Liao & Wang, 2009). However, it can be questioned whether or not the students are the best to decide what is most beneficial for the actual learning. Gamlem and Smith (2013) go on to state that "[s]tudents are receivers of feedback, and they are the ones who decide whether or not to use it" (p. 166). In this particular case Gamlem and Smith discussed feedback from peers, however it may be applicable to different types of feedback, including feedback from a teacher to a learner. This tells us that even though a teacher has done the very best in order for the learner to enhance their accuracy levels, some learners are not willing to do so.

In addition, there are some important factors to keep in mind as a teacher giving feedback to a learner. For example, in order for a teacher to give the most suitable type of feedback to each individual learner the teacher might have to spend a generous amount of time doing so. Teachers already spend a sufficient amount of time giving their students feedback, thus, it can be questioned whether or not there is time to individualize the feedback even more.

In sum, these learner issues imply that there are several areas where a teacher needs to be attentive and understand that every learner is different and require different methods of learning as well as feedback given. Lee (2008) concluded that most of the feedback given by teachers were focused on grammatical errors and that the teachers' idea of feedback is based on the context, which according to Lee might derive from a lack of adequate teacher training. With this in mind, giving feedback, or rather the right kind of feedback, should perhaps play a greater part in teacher education. However, the fact that feedback is based on each context

might be positive, since all learners are different, even so teacher trainees might still benefit from studying the giving of feedback.

3.3 Conclusion and further research

In conclusion, many researchers agree that Truscott's (1996) claim about corrective feedback being potentially harmful is false (e.g. Bitchener et al., 2005; Ferris, 1999; Kao, 2013; Van Beuningen et al., 2012). To answer the previously asked question, i.e. what effect error correction has on students' grammar proficiency, it can be concluded from the reviewed studies, that direct corrective feedback is the only long term effective tool in increasing a learners grammar proficiency. Indirect corrective feedback shows effectiveness in other areas, however in relation to grammar it shows no evidence of effectiveness. There are very few researchers investigating the effects of focused corrective feedback in comparison to unfocused corrective feedback, leaving this field open for future research being done.

Additionally, it is important to mention that even though a certain type of feedback is more effective in one problem area and another type of feedback in others, variations of feedback may be needed in order for the learners to improve in different areas (Shute, 2008).

Further investigation is needed in order to determine to what extent the level of metalinguistic awareness is of importance, and if this correlates with age, level of education or other factors. Another open field in the research is the geographical aspect, although a plethora of research has been done on this topic, the geographical aspect is to be considered. In order to know that the research is applicable to e.g. Swedish learners of English more research needs to be done.

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