A phenomenographic study to explore tutors' perceptions of the role of written feedback in promoting self-regulated learning at Durham University.

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Abstract

This thesis explored academics' perceptions of self-regulated learning and their perceptions of how their written feedback helps students develop self-regulated learning skills. Semi-structured interviews were used to collect data from thirty-seven academics from three academic faculties at Durham University; the Faculty of Science, the Faculty of Arts and Humanities and the Faculty of Social Sciences and Health. As the purpose of the study was to identify the variances in the perceptions and beliefs of the academics interviewed, the data was analysed according to phenomenographic principles.

According to the data analysis, four different categories emerged in relation to academics' perceptions of self-regulated learners: 'a self-regulated learner is a student who tries to understand concepts introduced in the degree program', 'a self-regulated learner is a student who connects concepts with each other to develop their own meanings', 'a self-regulated learner is a student who develops their content knowledge to be able to critically evaluate the evidence to develop their own perspective', and 'a self-regulated learner is a student who develops learning skills to change as a person to become a life-long learner'. As we move from the first to the fourth category, conceptions become increasingly sophisticated. That is, whilst the conceptions of self-regulated learners described by academics in the first category are the simplest, those described in the fourth category are the most sophisticated. In the four categories, conceptions of self-regulated learners described by academics in the fourth category seem to be the most in line with traditional definitions of self-regulated learning as found in the academic literature.

The findings in this study also indicate that there are important differences in academics' use of written feedback that are strongly related to their perceptions of what self-regulated learning is and how it might be developed. That is, whilst academics in the first category use their written feedback to help their students understand concepts, academics in the second category use their written feedback to help their students connect concepts with each other to develop their own meanings. While academics in the third category use their written feedback to support the development of students' critical thinking skills, academics in the fourth category use their written feedback to help develop their students' motivation because they think that students who have sufficient motivation are likely to take more responsibility for their own learning. Academics in the fourth category believe that students who have taken responsibility for their

own learning can develop their learning skills so that they are likely to become life-long learners.

The thesis concludes that while some academics' perceptions seem to align with the definition of self-regulated learning presented in the literature, most academics' perceptions do not seem to be in line with this definition. Such findings indicate that there are discrepancies between theory and academics' perceptions. The strong associations between academics' perceptions of self-regulated learning and beliefs about their use of written feedback have important implications for teaching and learning. Therefore, it is likely that only academics in category 4, and possibly some academics in category 3 are using their written feedback in ways that will actually support the development of self-regulated learning. Academics who hold category 1, 2 and 3 perceptions are likely to be promoting some forms of learning behaviour and skills but whether they are fully supporting self-regulated learning is unclear. The implications of such a finding are that academics see self-regulated learning as more complex in practice and there are variances in their perceptions about where self-regulated learning starts from. Thus, academics' perceptions present us with a more nuanced understanding of how self-regulated learning is viewed in practice. The findings also show that written feedback is used differently in all categories. We, therefore, need to acknowledge different functions and formats of written feedback and how these relate to different aspects of self-regulated learning.

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Declaration

The material contained within this thesis is the sole work of the author. It has not been previously submitted for any other award at Durham University, or any other institution.

Statement of copyright

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Chapter 1: Introduction

This thesis investigates academics' perceptions of self-regulated learners and how they believe they use their written feedback to help develop their students' self-regulated learning skills. In particular, it explores variation in academics' perceptions of self-regulated learners and their use of written feedback. The phenomenographic research method has been used to interpret the data collected because it gives the researcher an opportunity to gain deep insights into variances of participants' experiences and perceptions about a phenomenon. This research method also helps researchers structure a logical relationship between variances. Therefore, researchers can form a meaningful outcome space where these differences coexist together. First, I will provide my personal motivation to do the study, an overview of self-regulated learning theory, and an overview of formative assessment and written feedback. I will then introduce the research aims and questions. After that, I will provide an overview of the study design. Finally, I will conclude the chapter by presenting the structure of this thesis.

1.1 My personal motivation to do the study

I was interested in this topic because it seemed remarkably innovative to me. I completed my undergraduate degree in Mathematics Education in Turkey and worked as a Mathematics teacher for five years there. Formative assessment and written feedback are not often utilised in Turkey because exam results or summative assignments are generally used to support and guide students' learning. When I came to the UK to do my master's in Educational Assessment, I experienced a healthy dose of formative assessment and written feedback as it was used routinely, and effectively, in the programme. It was a new pedagogical practice for me. Therefore, I became intensely interested. After my master's education, I decided to research the effect of formative assessment and written feedback on student learning, because I thought that I could perceive and evaluate the assessment from different perspectives. When I started to do my PhD at Durham University, I read many articles about the effect of formative assessment and written feedback on student learning. I learned more about the importance of students' motivation, self-assessment, and student- and teacher-centered pedagogy. Although we learn these terms in higher education in Turkey, I realised that we learn and use them only

superficially. Therefore, I wanted to learn the depth of these terms. Finally, I explored self-regulated learning theory, which collects these terms under its umbrella. For this reason, I have been more interested in this theory.

Many researchers (e.g., Andrade, 2010; Clark, 2012; Hawe & Dixon, 2017; Panadero & Romero, 2014; Panadero, Jonsson & Botella, 2017; Pla-Campas, Arumi-Prat, Senye-Mir & Ramirez, 2016; Wylie & Lyon, 2015) have examined the impact of formative assessment on students' self-regulated learning skills. Tutors can provide formative feedback to their students as verbal and written. Although verbal feedback can help develop students' learning, it may not include detailed information about students' performance and how they can overcome their weaknesses. Hanh and Ramnath (2016) assert that tutors can provide detailed information through written feedback to their students to help develop their learning. If students know what they need to do to improve their learning, they will likely take more responsibility to regulate their own learning to achieve the goals they set. However, I noticed that there is still a gap in the literature about the effect of written feedback on student self-regulated learning skills in higher education. Tutors are a key source of written feedback for learners in higher education. They may use written feedback to help students develop their self-regulated learning skills. I, therefore, thought that the best sample to collect the data for my research study should come from tutors. I decided to design my research study to explore tutors' perceptions of self-regulated learners. Following those results, I focused on how tutors think they use written feedback to help develop their students' self-regulated learning skills.

1.2 An overview of self-regulated learning

Students' taking responsibility for their own learning is very important in higher education because they can set their own learning goals and then they can make an effort to achieve them. This is likely to help students develop their learning processes. Students developing their learning processes might learn the discipline they study in greater depth (Broadbent & Poon, 2015; Dinsmore, Alexander & Loughlin, 2008; Keyser & Viljoen, 2015; Khiat, 2019). If students do not take much responsibility for learning, they are less likely to develop their learning processes because they may predominantly focus on what their tutors teach them rather than the development of more sophisticated understanding of the discipline. This situation is

likely to cause students to learn the discipline superficially. Marton and Säljö (1976) argue that, broadly, there are two types of learning: deep and surface. Students should actively enter learning activities to improve their learning processes. Students improving their learning processes might deeply learn a topic because they can go beyond what tutors teach them to develop more sophisticated understanding of the discipline (Hancock, Bray & Nason, 2002; Kim, Wang, Ahn & Bong, 2015; Lee, Watson & Watson, 2020). So, it might be argued that students who actively enter learning activities will likely regulate their own efforts and environment to improve their learning processes and content knowledge of the discipline. Pintrich (2000) puts forward that students who can regulate their own effort and environment to develop the engagement with learning are self-regulated learners. Since self-regulated learning is related to deep learning, I will discuss their relationship in detail in the literature review.

Students should have sufficient motivation to take more responsibility to move their learning forward (Leenknecht et al., 2021; Pai & Mallya, 2016; Roick & Ringeisen, 2018; Zimmerman & Schunk, 2011). If students have an intrinsic interest in a topic, they are more likely to expend effort to learn it deeply (Ryan & Deci, 2017). Or if students have beliefs in what they think they can achieve, they will have higher motivation to develop their own learning (Bandura, 2006). Students having higher motivation set a goal to improve their learning. To achieve the goal they set, they develop a learning strategy. Then, students monitor their own learning progress whether they are on the right track to achieve the goals they set. If not, they change their strategies to be able to achieve their goals (Keyser & Viljoen, 2015; Long & Aleven, 2017). Having self-regulated learning skills is more likely to enable students to engage in the discipline they study (Khiat, 2019; Matsuyama et al., 2019). However, Roth, Ogrin and Schmitz (2016) assert that while some students may have advanced self-regulated learning skills in higher education, some students may not have. Therefore, tutors need to help their students develop these skills because if students develop these skills, they will go beyond what tutors teach them to develop more sophisticated understanding of the discipline (Geitz, Joosten-ten & Kirschner, 2016; Roick & Ringeisen, 2018; Sebesta & Bray Speth, 2017). Although tutors could use different ways to help develop students' self-regulated learning skills, formative assessment is most often used for this purpose because the purpose of formative assessment is to encourage students to take more responsibility for their own learning (Babo, Azevedo, Torres & Lopes, 2017; Baird, Andrich, Hopfenbeck & Stobart, 2017; Panadero & Alonso-Tapia, 2014). Formative assessment also aims to contribute to the development of students' learning

processes and learning skills. Long and Aleven (2017) assert that students taking responsibility for learning can improve their own weaknesses so that they are likely to develop learning processes and in turn self-regulated learning skills.

1.3 An overview of formative assessment and written feedback

Assessment is broadly discussed under two main headings, which are summative and formative assessment (Brown, 2011; Guskey, 2005). While summative assessment aims to measure students' knowledge gain according to predetermined criteria, the purpose of formative assessment is to help students develop their learning processes with time (Butler, 2010; Taras, 2005). In other words, while summative assessment focuses on how well students have learned the content set by the degree programme, formative assessment aims to contribute to students' learning process and skills (Carless & Boud, 2018; Dann, 2014; Sadler, 2013). Although summative assessment measures students' learning gain, it might also help students see their weaknesses to improve them (Brookhart, 2001; Dawson et al., 2019). Students could also use the knowledge that they received from formative assessment to improve their own weaknesses to get higher grade from summative assessment (Fook & Sidhu, 2013; Taras, 2005). It might be argued that summative assessment is related to formative assessment because formative assessment is likely to lead students to improve their learning processes and in turn receive higher grade in their summative exams or tests. I, therefore, focused on formative assessment to explore the effect of assessment on the development of student learning processes. Feedback is given to students in formative assessment. Students who receive feedback from their tutors are supposed to correct their mistakes. This is likely to lead students to develop their engagement of the discipline. There are two types of feedback: verbal and written. Verbal feedback is very useful for students to correct their mistakes immediately because tutors can see their students' mistakes and give very quick feedback to their students. In addition, if students do not understand their feedback, they can ask to their tutors to clarify the meaning of it. Yet, tutors may not give detailed information to their students about their performance and how they overcome their weaknesses in verbal feedback. Students can also forget their verbal feedback after the lecture.

Written feedback can fill these gaps as tutors can give detailed information to their students in written feedback. Students can read their written feedback whenever they need to better understand their tutors' instructions. Hanh and Ramnath (2016) argue that tutors are able to use written feedback to give detailed and beneficial instructions to their students so that they can develop their learning processes and learning skills by taking more responsibility for their own learning. This is more likely to lead students to go beyond the course content or lecture materials to develop more sophisticated understanding of the discipline. Written feedback should have some specific features to positively affect students' learning processes (Grosas, Raju, Schuett, Chuck & Millar, 2016; Winstone, Nash, Rowntree & Parker, 2016). For example, written feedback should be as transparent as possible for students because some research (e.g., Hyland, 2013a; Nicol, 2010) shows that students do not properly understand what written feedback tells them. In this case, students may think that written feedback is useless so that they do not even read it. Additionally, written feedback should not include harsh language because it may damage students' motivation (Dawson et al., 2019; Hawe & Dixon, 2017; Henderson, Ryan & Phillips, 2019). Students do not strive to improve their weaknesses in this case. Some research (e.g., Hughes & Hargreaves, 2015; Li & De Luca, 2014; Mulliner & Tucker, 2015; Price, Handley & Millar, 2011) indicates that written feedback should tell students what they need to do to improve their weaknesses. If students perceive what they need to do, they are more likely to make an effort to improve their learning (Ferris, Liu, Sinha & Senna, 2013; Roth et al., 2016; Teng & Zhang, 2020; Winstone et al., 2016). Since written feedback can be crucial for students to develop their self-regulated learning skills, I aim to investigate how tutors think they use their written feedback to help students become more effective self-regulated learners.

1.4 The research aims and questions of the study

This research aims to explore tutors' perceptions of self-regulated learners. I applied my study in higher education because students in higher education need to take responsibility for their own learning to go beyond what tutors teach them to develop more sophisticated understanding of the discipline. Tutors may encourage their students to take more responsibility through written feedback to help develop their students' self-regulated learning skills (Dawson et al., 2019; Hanh & Ramnath, 2016; Price, Handley, Millar & O'Donovan, 2010). However, exploring self-regulated learning in practice is difficult so that the purpose of this research is to

explore tutors' perceptions of self-regulated learning because it might lead us to get a deeper insight into it. I also aim to explore how tutors think they use their written feedback to help students develop their self-regulated learning skills. I collected this research data from a UK institution, Durham University, rather than an institution from Turkey, because tutors do not often utilise written feedback to help develop their students' learning in Turkish universities. I hope that this study's results help researchers evaluate self-regulated learners from a variety of perspectives. Moreover, I hope that the results aid researchers in perceiving variances in the use of written feedback, leading to understanding how diverse types of written feedback can support students' self-regulated learning skills in various ways. This may provide an overview of the use of written feedback to academics so that they can benefit from it practically. In effect, it can be said that this study aims to contribute to the field theoretically and practically. The research questions of the study are:

1. How do academics conceptualise self-regulated learners?
2. What are academics' perceptions about how their written feedback enables their students to become self-regulated learners?

1.5 An overview of the study design

Since I aimed to identify variances in tutors' perceptions about self-regulated learners and identify variances in their perceptions about how they think they use their written feedback to help develop their students' self-regulated learning skills, I used the phenomenographic research method to collect and analyse my data. The phenomenographic research method gives the researcher a chance to identify differences in people's perceptions and understandings of a specific phenomenon (Forster, 2013; Harris, 2011; Marton, Dahlgren, Svensson & Säljö, 1977; Marton & Svensson, 1979; Säljö, 1979). Since I needed to interpret tutors' understandings and perceptions, the semi-structured interview seemed a more suitable data collection method, and became the method used. Ashworth and Lucas (2000) also put forward that the primary data collection method of phenomenography is a semi-structured interview because the researcher can gain a deep insight into an individual's opinions about a particular issue through it. To keep my data analysis manageable, I interviewed forty participants but three of them participated in

a pilot study. It can be said that this is a large enough number of participants for the phenomenographic research (Kettunen & Tynjälä, 2018; Khan & Markauskaite, 2017).

I selected the research participants from one university, Durham University, because I aimed to select the same number of participants from different Faculties at one UK institution to be able to identify variances of tutors' perceptions in the context of their disciplines. At the time of my data collection, there were three Faculties at Durham University. Subsequently, the Business School separated from the Faculty of Social Sciences and Health and became an independent faculty. Therefore, I did not use the Business School as a separate faculty when I collected the data. I interviewed tutors from these three Faculties including seven tutors from the Faculty of Arts and Humanities, nineteen tutors from the Faculty of Social Sciences and Health and eleven tutors from the Faculty of Science. I considered the ethical issues to protect participants' dignity and rights. The School of Education ethics committee approved the ethical form in 2018. I informed participants that the interviews would be anonymised and coded to protect their confidentiality. I also informed participants that only the researcher and the supervisors can listen to the recordings and read the transcripts. I then provided the participant information sheet and consent form to them. From the results of the data analysis, I identified four different categories and characterised the outcome space. I will provide an in-depth overview of how I analysed the data to identify the categories and outcome space in the methodology chapter to present a logical relationship between the categories.

1.6 Structure of the thesis

This thesis is divided into six chapters. The literature review is covered in chapter 2 and chapter 3. I will start Chapter 2 defining and applying "deep" and "surface" learning. First, I will provide information about student learning and what factors may help students deeply engage in learning. Then I will discuss student- and teacher-centered learning. For students to get a deeper insight into the discipline they study, they should be at the centre of their own learning (Czajka & McConnell, 2019; Ryan & Deci, 2000). In other words, students should take more responsibility in regulating their learning environment and efforts to improve their learning (Kang & Keinonen, 2018; Sebesta & Bray-Speth, 2017). Therefore, following this, I will

explain the self-regulated learning theory and its phases. I will discuss the role of motivation, self-efficacy, and self-assessment in making the student more effective self-regulated learners in detail in later sections.

Chapter 3 is about educational assessment and its relationship to student self-regulated learning skills. First, I will discuss the differences between formative and summative assessment. Then, I will focus on the impact of written feedback on students' self-regulated learning skills, because it is often used to help develop student learning. Afterwards, I will examine the relation between written feedback, motivation, and self-assessment using recent studies from the literature. In the end, I will present a summary of the literature review.

Chapter 4 provides information about methodology. First, I will discuss the philosophical perspective of the study. Then I will give information about interpretivism because I will use this paradigm to interpret the participants' interviews. Next, I will explain the phenomenography in detail to show the steps of how I analysed the data. After that, I will describe how I selected the sample and collected the data. Finally, I will present the categories and the outcome space.

Chapter 5 places findings and discussion chapters together because I thought that if I did so, I could present variances of categories and the logical relationships between them better to the reader. Therefore, I will present each category, and the use of written feedback and implications of the category, respectively. I will process the interpretation of each category in the same way. For instance, I will interpret the conception in Category 1 and academics' use of written feedback and then discuss the implication to provide a holistic view of Category 1. I will do the same for Category 2, Category 3, and Category 4. As a final step, I will discuss the relationships between the categories.

Chapter 6 presents the conclusion of the thesis. I will begin by briefly answering the research questions. Then, I will explain contributions of the research study to theory and practice. Thereafter, I will talk about the limitations of the study and propose the kind of work researchers might do in the future that may contribute to this field. I will end up the thesis by giving final thoughts.

Chapter 2: Literature Review I

2.1 Introduction

One of the aims of this study is to explore how academics perceive self-regulated learners but it is also important to understand from the literature how self-regulated learning has been defined and explained so far and why it is considered to be so important to learning. Handoko, Gronseth, McNeil, Bonk and Robin (2019) argue that students who have advanced self-regulated learning skills are more likely to deeply engage with learning because they can take responsibility to set their own goals, develop learning strategies and monitor their own progress to achieve their goals. These students can develop more sophisticated understanding of the discipline. If students do not have advanced self-regulated learning skills, they are less likely to set their own goals to go beyond the content knowledge to extend their learning. So, these students are likely to superficially engage with learning. In this chapter, I discuss deep and surface learning first because understanding the difference between deep and surface learning is likely to help us understand which learning environment is suitable to support student deep learning and self-regulated learning skills.

Then, I analyse self-regulated learning and its phases since discussing which steps students need to follow to become more effective self-regulated learners will present a more explicit picture to the reader. Next, since students' having high motivation is likely to help them become more effective self-regulated learners, I discuss key research studies that indicate the importance of motivation on student self-regulated learning skills development. Self-regulated learners take responsibility for their own learning so that they are able to set their own learning goals to improve their learning. Geitz et al. (2016) argue that for students to set their own learning goals, they need to have sufficient self-efficacy. Some researchers (e.g., Honicke & Broadbent, 2016; Lee et al., 2020; Panadero et al., 2017) assert that if students achieve the goals they set, they tend to set more challenging goals for themselves. Thus, next, I examine the reciprocal relationship between goal-setting and self-efficacy. For students to understand whether they have achieved the goals they set, they need to assess their own learning progress (Panadero & Romero, 2014). For this reason, having self-assessment skills is important for students to become self-regulated learners. Then, I discuss the impact of self-assessment skills

on student self-regulated learning. At the end of the chapter, I explain why I ask the first research question.

2.2 Student learning in higher education

Improving student learning in higher education is a consistently important research topic for educational researchers (Alotaibi, Tohmaz & Jabak, 2017; Khiat, 2019; Ramsden, 1992). Education aims to enhance student learning and understanding in a particular subject matter (Birjandi & Rahimi, 2012; Kim et al., 2015; Kippers, Wolterinck, Schildkamp, Poortman & Visscher, 2018; Marton & Säljö, 1997). Students' deep understanding of a specific domain of a subject is more likely to lead to higher quality learning outcomes (Biggs & Tang, 2007; Carless & Boud, 2018; Lee et al., 2020; Marton & Säljö, 1997; Prosser & Millar, 1989; Ramsden, 1992; Trigwell & Prosser, 1991; Van Rossum & Schenk, 1984). Marton and Säljö (1976) argue that there are two types of student learning approaches. These are the surface learning approach and the deep learning approach. In the surface learning approach, students try to satisfy external expectations such as getting a minimum grade to pass an exam or completing an assignment that meets some specific criteria to get a 'pass' for a module (Biggs & Tang, 2007; Czajka & McConnell, 2019; Matsuyama et al., 2019; Putwain, Sander & Larkin, 2013). For this reason, it can be said that students may not understand the topic that they study in the university because they might want to make the minimum effort to meet external criteria (Czajka & McConnell, 2019; Ramsden, 1992; Veenman, 2017). Students may describe their learning journey as boring and meaningless, and they may have low-quality learning outcomes (Prosser & Trigwell, 1998). On the contrary, in the deep learning approach, students do not only study to get a high grade to pass their exams, but they also make a great deal of effort to understand the subject matter in detail because they have a passion for engaging in their topics in-depth (Alotaibi et al., 2017; Biggs & Tang, 2007; Kang & Keinonen, 2018). This situation is more likely to lead this type of student to satisfy their curiosity and interest, and as a consequence, they might have higher quality learning outcomes (Broadbent & Poon, 2015; Chen, Björkman, Zou, & Engström, 2019; Fong, Patall, Vasquez & Stautberg, 2019; Kettunen, Kairisto-Mertanen, & Penttila, 2013).

Research suggests that the learning environment is highly likely to affect student learning approaches (Geitz et al., 2016; Long & Aleven, 2017; Matsuyama et al., 2019; Ramsden, 1992). For example, if students are expected to learn only the content knowledge that tutors teach them, or receive a particular grade to pass the exam, they are less likely to go beyond what tutors teach them to develop more sophisticated understanding of the discipline. This environment may cause students to adopt a surface learning approach so that they may memorise the content knowledge or superficially learn it (Pai & Mallya, 2016; Ramsden, 1992; Wylie & Lyon, 2015). Students' learning outcomes are more important than the development of their learning processes in this environment. But, if students are expected to take responsibility for their own learning, they are more likely to go beyond what tutors teach them to develop more sophisticated understanding of the discipline. Priority of this learning environment is to help develop students' learning process rather than only content knowledge. Students' setting their own goals, developing learning strategies, monitoring their own learning progresses are very important in this learning environment. This is, therefore, more likely to lead students to adopt a deep learning approach (Chen et al., 2016; Kang & Keinonen, 2018). Trigwell, Prosser and Taylor (1994) analysed learning approaches in five categories as follows:

Approach 1: A teacher-focused approach that aims to transmit information to students.
Approach 2: A teacher-focused approach that aims to have students gain the concepts of the discipline.
Approach 3: A teacher-student interaction approach that aims to assist students to gain the concepts of the discipline.
Approach 4: A student-focused approach with the intention that students develop their conceptions.
Approach 5: A student-focused approach with the intention that students change their conceptions.

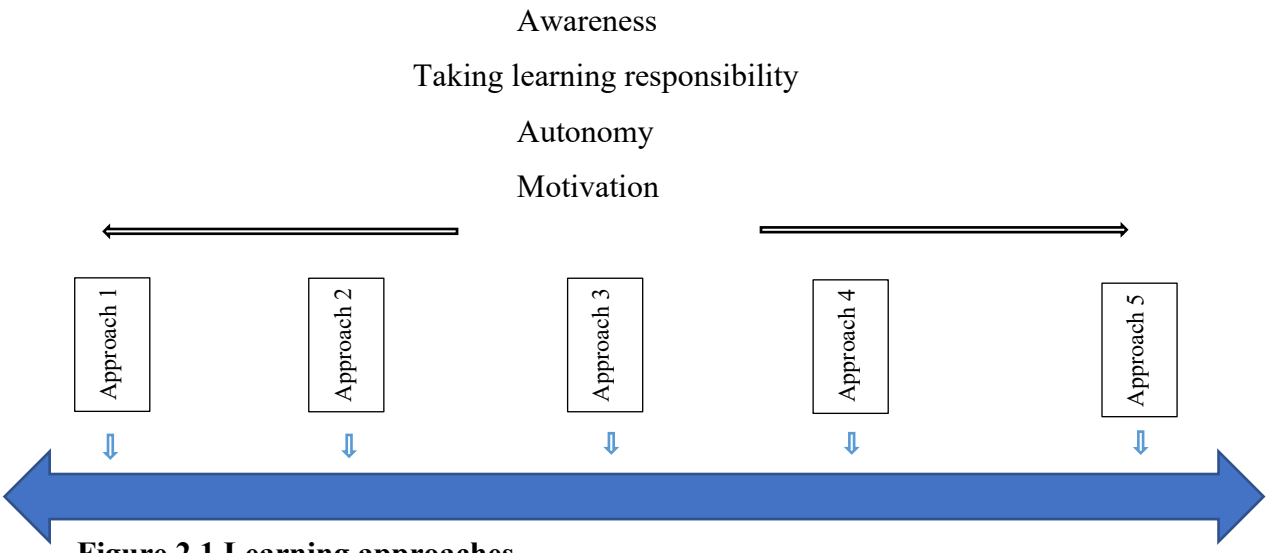

Figure 2.1 Learning approaches

According to the learning approaches presented in figure 2.1, if we go from left to right on the diagram shown above, we move from a teacher-centered approach to a student-centered approach. That is, while students in Approach 2 are more at the centre of their learning than students in Approach 1, students in Approach 3 are more at the centre of their learning than students in Approach 2, and so on. Tutors may help their students take responsibility for their own learning. For instance, tutors can give assignments and projects to their students to structure their own works by themselves or they can help their students work together to solve problems offered in the lecture. Thus, students might be more at the centre of their learning in that case (Alotaibi et al., 2017; Black & Wiliam, 2018; Patrick, 1992) because they will likely be active in their learning (Broadbent & Poon, 2015; Dawson et al., 2019; Roick & Ringeisen, 2018). If students have a chance to manage their own learning, it can be said that they are given autonomy (Fong et al., 2019; Geitz et al., 2016; Teng & Zhang, 2018). So, students may possess sufficient autonomy. Besides these, students should also have enough motivation to be active to construct their own knowledge within the curriculum (Dweck & Master, 2009; Handoko et al., 2019; Hanh & Ramnath, 2016; Kettunen et al., 2013; Trigwell et al., 1994). Students who make an effort to construct their own knowledge need to be aware of their own learning progress to identify their own weaknesses to improve upon them (Cassidy, 2012; Khan, Bibi & Hasan, 2016). So, when we go from left to right on the diagram, it may be said that students' autonomy and motivation will increase. Students who have more motivation are likely to take more responsibility to improve their own learning (Dweck & Elliott-Moskwa, 2010; Honicke & Broadbent, 2016; Khan & Markauskaite, 2017; Kim et al., 2015). Students taking more

responsibility for learning are more likely to be aware of their own strengths and weaknesses (Cassidy, 2012; Kippers et al., 2018; Lee et al., 2020; Leenknecht, Wijnia, Loyens & Rikers, 2017). In other words, they are able to monitor their own learning progress. As a result, students can organise their own learning environment to manage their learning. However, if we move from right to left on the diagram, all of these skills mentioned above are expected to decrease. Thus, we can say that if the closer the learning environment is to the fifth approach, the more likely the student will take responsibility for learning. In other words, the more student-focused approach to learning is, the more opportunity there is for students to take responsibility for their own learning.

The last approach gives excellent opportunities to students to be at the centre of their learning activities (Long & Aleven, 2017; Patrick, 1992). In other words, tutors expect their students to be active in the learning environment. In this approach, although tutors' behaviours still matter, how students are learning matters more than what tutors do and cover (Leenknecht et al., 2021; Matsuyama et al., 2019; Prosser & Trigwell, 1998). Tutors encourage their students to discuss the problems they have, change their conceptions, and question their own ideas to develop better arguments about the subject matter (Li & De Luca, 2014; Muwonge, Schiefele, Ssenyonga & Kibedi, 2017; Ramsden, 1992). However, in approach 1, tutors transmit information to their students. As a result, students are diminished in their autonomy, becoming a passive learner in the class. The tutor assumes that students have little or no prior knowledge of the subject that they are teaching. Tutors prepare a lot of information in advance to be transmitted in the class and enable students to make notes. It can be said that tutors' perception of learning is very important because if a tutor describes 'learning' as information gaining to follow the structured programme rigidly and describes 'teaching' as information transmission to students, they prefer to use teacher-focused strategies in classes (Mahlberg, 2015; Pai & Mallya, 2016; Prosser & Trigwell, 1997; Teng & Zhang, 2020). Yet, if a tutor describes 'learning' and 'teaching' as helping students to develop and change their own conceptions, they expect their students to take more responsibility to set goals and make an effort to achieve them, which is related to 'Approach 5' in this case (Prosser & Trigwell, 1998; Putwain et al., 2013; Roth et al., 2016).

It can be concluded that while the teacher-focused approach relates to the surface approach to learning, the student-focused approach is related to a deep approach to learning because it is assumed that in the former approach, students only memorise or recall what they are taught, but

in the latter approach, students try different strategies to get a deep insight into the subject matter they study (Czajka & McConnell, 2019; Teng & Zhang, 2020; Trevino & DeFreitas, 2014; Yan, 2020). Although memorising and recalling some fundamental concepts may become a pioneering step to lead students to learn the subject matter deeply, a teacher-focused approach is less likely to offer a learning environment that helps students to be active in constructing their own knowledge within the context (Birjandi & Rahimi, 2012; Chen et al., 2016; Zhao, Wardeska, McGuire & Cook, 2014). Thus, memorisation and recall are generally attributed to surface learning and the teacher-focused approach (Czajka & McConnell, 2019; Geitz et al., 2016). In the literature, there is substantial research comparing the student- and teacher-focused approaches. For example, as a seminal work, Patrick (1992) divided school history teachers into three groups for his study to help them create different learning environments for students in their classes. In the first group, teachers used teacher-focused strategies such as presenting the content knowledge prepared in advance by teachers, and they do not discuss the topic with their students. Teachers in the second group gave a presentation about the topic to students and discussed with them to enable them to develop and express their own idea according to their understanding. The third group of teachers asked questions to their students to get them to think, reason, connect and change. The research results indicated that students in the third group got the deepest understanding of history topics while the first group showed a surface-level understanding. Even though students in the second group showed deeper learning than students in the first group, the level of deep understanding was lower than students in the third group.

Trigwell, Prosser and Waterhouse (1999) conducted similar research in higher education. This research is vital because there were many participants from chemistry and physics disciplines from different institutions in this study. Their study includes 48 first-year chemistry and physics classes, 3956 students and 46 lecturers. The research results indicated that while the information transmission/ teacher-focused approach leads to lower quality learning outcomes, the conceptual change/ student-focused approach results in higher quality learning outcomes. Consequently, we can say that the learning approach is more likely to affect students' learning processes, so it leads them to get higher or lower quality learning outcomes.

More recently, Kang and Keinonen (2018) carried out a study to investigate the effect of student-centered learning approaches on students' interest and achievement in science-based courses. Researchers analysed a large-scale data set derived from PISA 2006 by using the structural equation modelling. According to their research result, guided inquiry-based and

discussion-based approaches enabled students to take more responsibility for their own learning so that they improve their learning and interest in science-based courses. They also concluded that students who participated in the study showed high motivation. Even though it is a school-based study, the results may be applicable for students in higher education. In other research, Czajka and McConnell (2019) helped tutors to implement student-centered learning activities to support their lectures and teaching in eight geoscience faculties at different US universities. The tutors implemented student-centered learning activities for three semesters. According to the result, student-centered activities had a positive effect on student learning as it indicated that students who participated in student-centered activities took more responsibility to engage with learning. The tutors in the study said that they would continue to use student-centered learning activities because they found that students developed better learning skills in such an environment.

However, while researchers argue (e.g., Broadbent & Poon, 2015; Carless & Boud, 2018; Handoko et al., 2019; Hawe & Dixon, 2017; Kang & Keinonen, 2018) that the student-focused approach, particularly approach 5 of Prosser and Trigwell's model, is the most beneficial method for student learning, it is still unclear how students are encouraged to take entire responsibility for learning. Moreover, it is complicated to understand why some students take more responsibility for their own learning whereas others are unwilling to take it. Researchers often discuss this issue in detail overall under two pedagogies: student and teacher-centered pedagogy (Heikkila & Lonka, 2006; Kettunen et al., 2013; Kim et al., 2015; Matsuyama et al., 2019).

2.2.1 The use of student- and teacher-centered pedagogy in higher education

There is much research regarding the distinction between student- and teacher-centered pedagogy in higher education (e.g., Barber, 2007; Czajka & McConnell, 2019; Kang & Keinonen, 2018; Pai & Mallya, 2016). These two pedagogies are differentiated in terms of the distribution of expertise and authority in the classroom. In teacher-centered pedagogy, teachers have the most authority in the class, so that they tend to transfer knowledge to their students rather than sharing learning responsibility with them (Hancock et al., 2002; Pai & Mallya, 2016;

Roick & Ringeisen, 2018). The knowledge is often seen as one-directional, transmitted from the teacher to the student. Metaphorically, it is a transmission from a relatively fixed body of knowledge from the teacher's mind to the student's mind (Sebesta & Bray Speth, 2017; Teng & Zhang, 2018). The purpose of the classroom is to disseminate the relatively fixed body of knowledge determined by the teacher to the students. In other words, while teachers are active in the classroom, students are passive receivers (Al-Hattami, 2019; Czajka & McConnell, 2019; Trevino & DeFreitas, 2014).

In contrast, in student-centered pedagogy, students are supposed to be active to complete the learning task (Alotaibi et al., 2017; Baird et al., 2017; Broadbent & Poon, 2015; Pai & Mallya, 2016). For this reason, teachers are not expected to become the primary source of knowledge because teachers strive to organise a suitable learning environment for their students to encourage them to construct their own knowledge within the curriculum (Chen et al., 2016; Grosas et al., 2016; Fosnot & Perry, 2005; Handoko et al., 2019). Since students are supposed to construct their own knowledge, the constructivist developmental theory may be related to student-centered pedagogy on that point (Keyser & Viljoen, 2015; Mascolo, Fischer & Pollack, 1997; Scager, Akkerman, Pilot & Wubble, 2014). Kang and Keinonen (2018) argue that the constructivist approach to knowledge creation is an essential factor in being able to develop student-centered pedagogy in higher education.

Constructivism is defined as learners constructing their understanding of the world as a consequence of their experience of the world (Alt, 2017; Fosnot & Perry, 2005; Franco & DeLuca, 2019; O'Connor, 2020). Yet, although the constructivist approach assumes that learners construct their own knowledge, it does not mean they create the knowledge from scratch. Piaget (1985) claims that it is impossible to learn anything totally new; all new knowledge depends on existing knowledge. Therefore, it can be said that learners construct their own original knowledge using existing knowledge that they learned before. The constructivist approach is essential for learning and teaching because if learners actively construct their knowledge, they will likely develop their learning processes and learning skills so that they can manage to develop more sophisticated understanding of the discipline (Dagar & Yadav, 2016; Lizzio, Wilson & Simons, 2002; Mallon, 2007; Van Bergen & Parsell, 2019). Therefore, teachers' creating a student-centered environment in the classroom is more likely to help learners engage in the specific task. As can be seen, according to the research, student-centered pedagogy leads to the application of the constructivist approach, and the constructivist

approach, in turn, stimulates students' learning abilities to actively participate in their learning process (Asamoah & Oheneba-Sakyi, 2017; Fischer & Hänze, 2019; Sharan, 1990).

In this pedagogy, since students are expected to construct their own knowledge within the curriculum, teachers' role in the class may be often ignored in pedagogical activity (Jang, Kim & Reeve, 2016; Mallon, 2007; Zumbrunn, McKim, Buhs & Hawley, 2014). However, the idea behind the student-centered approach is learners' constructing their understanding of the world through action 'for themselves', not 'by themselves' (Alt, 2015; Kang & Keinonen, 2018). In other words, students are not expected to construct their knowledge alone without the assistance of experts; they are expected to co-construct their understanding with the help of their teachers or peers who have more expertise than themselves (De Clercq, Galand & Frenay, 2014; Gauvain, 2001; Vermunt, Bronkhorst & Martinez-Fernandez, 2014; Vygotsky, 1978). In that pedagogy, teachers should be coaches for students when they actively attempt to co-construct their learning (Baeten, Struyven & Dochy, 2013; Price, 2014; Stone, 1998). Therefore, it can be said that Vygotsky's (1978) concept of the zone of proximal development is a useful tool for student-centered pedagogy, in that perspective. Vygotsky's concept assumes that when a pupil can solve a problem with the help of an adult or a more accomplished peer, he might attain desired learning goals because there is social interaction between individuals (Trevino & DeFreitas, 2014). And that social interaction that occurs within the zone of proximal development increases a pupil's level of understanding from not being able solve a problem to being capable of solving the same problem independently (Alt, 2017; Freeman et al., 2014; Jang et al., 2016; Mascolo et al., 1997). Although the zone of proximal development originally focuses on children, the ideas are also applicable to higher education so that it is also useful to help develop students' learning processes.

So, learning occurs between a less expert student and a more expert student or an adult (Barrett, Hoadley & Morgan, 2018; Biggs & Tang, 2011; Fosnot & Perry, 2005). A student cannot form the zone of proximal development alone, but a teacher or a more knowledgeable peer is needed to help them reduce the gap between their current and proximal developmental level (Mascolo et al., 1997; Wiemer, 2013). In other words, students require support from their teachers or more capable peers to improve their own academic capacity. Students' co-constructing their own knowledge within the curriculum for themselves are more likely to lead them to set their own goals, apply metacognitive learning strategies to achieve the goals they set and assess their own performance at the end of learning processes (Ashwin, 2014; Gupta, 2011; Mallon, 2007;

O'Connor, 2020). In the literature, it is described as self-regulated learning (Chen et al., 2019; Khiat, 2019; Lee et al., 2020; Panadero, 2017; Zimmerman, 2000). Thus, we can say that student-centered pedagogy is highly likely to enable students to develop self-regulated learning skills since the capacity of a student's ideas, feelings and actions move from regulation by others to self-regulation under this learning environment.

Matsuyama et al. (2019) conducted their research to examine the effect of student-centered learning activities on students' self-regulated learning abilities in a Japanese university. There were two groups which are control and experimental. They used student-centered learning activities and formative feedback with thirteen medical students in the experimental group while they continued to use teacher-centered traditional activities with seven students in the control group. At the end of the study, they investigated the effects of those respective activities on students' motivation and learning strategy use. According to the research results, students in the experimental group increased their use of effective learning strategies and were more motivated to regulate their own learning. It was suggested that even students who had come from teacher-centered traditional classes developed their self-regulated learning skills after they were involved in the experimental group. The research result showed that student-centered learning activities were more likely to help students develop their self-regulated learning skills even if they were accustomed to the teacher-centered pedagogy. Students in the experimental group also indicated deeper engagement with learning at the end of the study. It means that students entered learning activities resulted in deep learning. Therefore, it may be argued that students' having advanced self-regulated learning skills are more likely to lead them to get a deep insight into the subject matter they study (Khiat, 2019; Roick & Ringeisen, 2018; Veenman, 2017; Yan, 2020).

2.3 Self-regulated learning

Many educational researchers have proposed theoretical models to explain self-regulated learning. For example, Zimmerman and Schunk (2011) describe self-regulated learning as students systematically using self-generated thoughts, feelings, and actions to attain their own learning goals. On the other hand, Winne (1995) defines self-regulated learning as students'

self-directed processes that are inherently constructed. However, most scholars agree that self-regulated learners are able to set their own learning goals, develop more effective learning strategies and evaluate their own performance as to whether they reached the goals they set or not (Broadbent & Poon, 2015; Chen et al., 2016; Roick & Ringeisen, 2018; Veenman, 2017; Zimmerman, 1995). They use these steps in order and cyclically. There is considerable information about how self-regulated learners obtain new knowledge and which educational environment is the most suitable for them to support their self-regulated learning skills (Pintrich, 2000; Roth et al., 2016; Sebesta & Bray Speth, 2017; Tseng, Chang & Cheng, 2015; Zimmerman & Schunk, 2011).

Self-regulated learning is a theory that explains how students take responsibility for their own learning to engage with the discipline they study (Geitz et al., 2016; Teng & Zhang, 2018). It offers various components which are part of successful and optimal learning (Alotaibi et al., 2017; Hsieh & Schallert, 2008; Yan, 2020). There are reciprocal and recurrent interactions between and among these components (Jungert & Rosander, 2010). As a result of this interaction, learning and achievement are directly linked to a person's goal structure, motivation, volition, and emotion (Chen et al., 2019; Handoko et al., 2019; Keyser & Viljoen, 2015; Randi & Corno, 2000). Many researchers are interested in this topic and have conceptualised self-regulated learning in their own ways (Pintrich, 2000; Schunk, 2003; Zimmerman, 1995). As a result of their studies, self-regulated learning is broadly constructed by three items: research on learning approaches; research on metacognition and regulation styles; and theories of the self. These indicate that self-regulated learning is a process that students can develop (Boekaerts, 1999; Kim et al., 2015; Lee et al., 2020; Long & Aleven, 2017; Muwonge et al., 2017).

2.3.1 Phases of self-regulated learning

In the literature, self-regulated learning is described as students taking responsibility to plan, monitor and control their own cognition, motivation and behaviour to reach their goals (Panadero & Jonsson, 2016). To improve this skill, students should identify goals, develop more effective learning strategies and observe their own progress towards the goals they set

(Broadbent & Poon, 2015; Clark, 2012; Schunk, 2003; Wolters, 2003; Yan, 2020). It is considered an important skill for learners as Zimmerman (2000) argues that learners with self-regulated learning skills are more likely to engage with learning and have higher levels of academic satisfaction than those who do not have this skill.

Models of self-regulated learning consist of three phases summarised below: forethought and planning; performance monitoring; and reflection on performance (Zimmerman, 2002). In the forethought and planning phase, students analyse the learning objectives of a particular task and set their own goals. In the performance monitoring phase, students implement strategies to improve their learning and monitor the effectiveness of strategies they used; whether their learning develops as well as they have adequate motivation to complete the task. In the last reflection on performance phase, students assess their performance and outcomes to assess whether the strategies they selected worked or not. Students also manage their emotions about the outcomes of their learning effort. Self-evaluation and self-reflection will affect their future planning, strategies and goals by applying these three phases in order. In other words, this diagram works as a loop (Zimmerman, 2002). If learners see something is not going well, they can go back and reorganise their phases from the beginning or go back to the phase they identify as needing to be redeveloped to continue their ways towards the goals they set.

Research shows that self-regulated learners spend more time learning topics, willingly answer questions in lectures, seek help from their peers, teachers, or additional resources to achieve their learning goals (Broadbent & Poon, 2015; Handoko et al., 2019; Long & Aleven, 2017; Matsuyama et al., 2019; Panadero, Jonsson & Strijbos, 2016). Additionally, self-regulated learners create the most suitable learning environment for themselves to develop a deep understanding of the subject matter (Khiat, 2019; Nelson Laird, Shoup, Kuh & Schwarz, 2008; Nett, Goetz, Hall & Frenzel, 2012; Sebesta & Bray Speth, 2017). Therefore, briefly, students who follow the diagram drawn below in Figure 2 are a self-regulated learner.

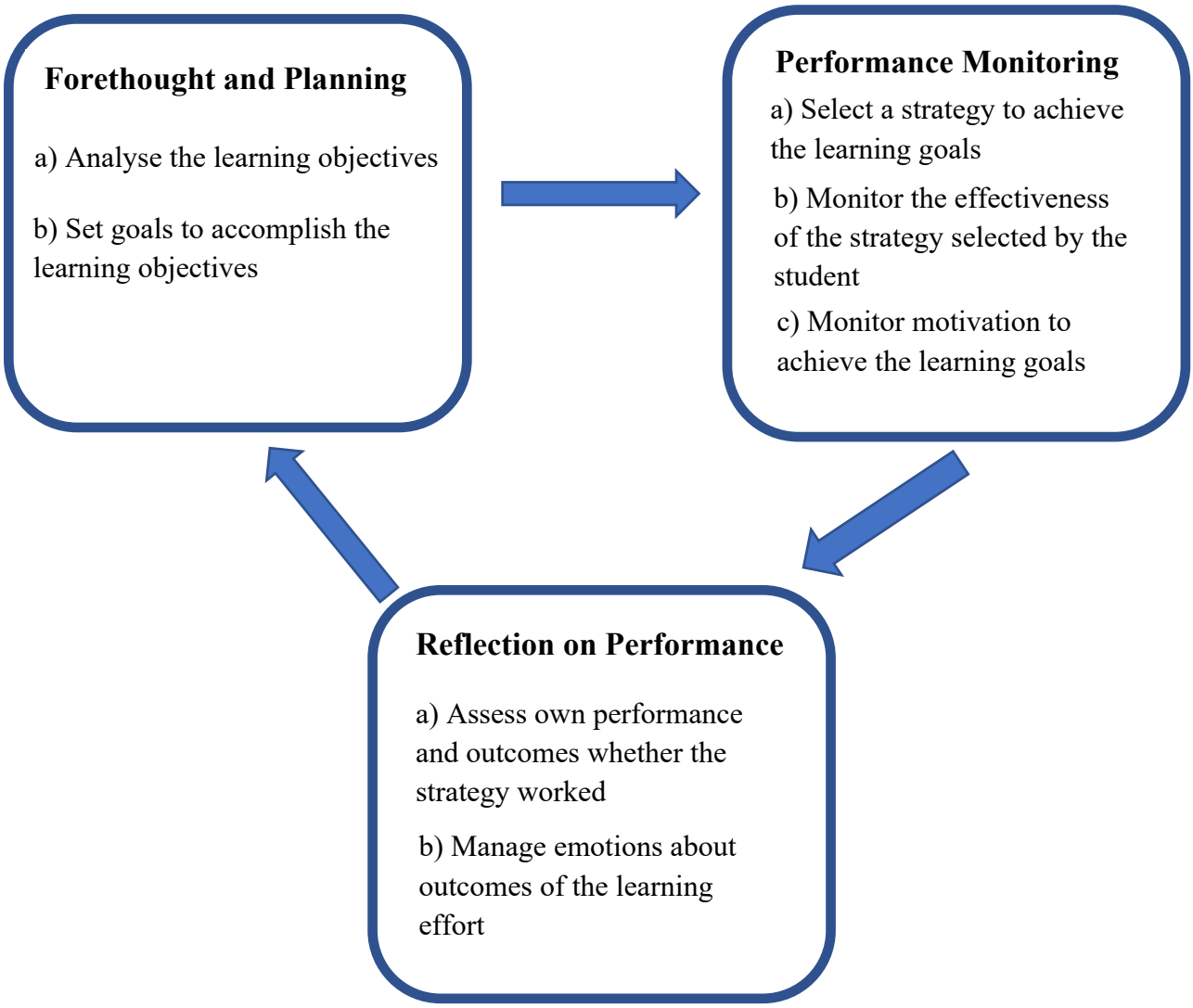

Figure 2.2 The phases of self-regulated learning based on Zimmerman (2002)

For students to become a self-regulated learner, they first need to take responsibility for their own learning (Kim et al., 2015). It can be said that students who accept responsibility for learning most often have sufficient motivation as well. In the literature, it is argued that motivation generally comes from students' self-efficacy and intrinsic interest (Deci & Ryan, 2002; Dinsmore et al., 2008; Komarraju & Nadler, 2013; Wang & Wu, 2008). While self-efficacy refers to the student's belief in their ability to succeed at a specific task, intrinsic interest refers to the knowledge the student really wants to learn (Baird et al., 2017; Lee et al., 2020). If students have sufficient motivational beliefs, they are more likely to set learning goals to

increase their learning. Students who do so try to develop a suitable and powerful strategy to reach the goals they set. Learning strategies are described under three main headings, which are cognitive, metacognitive and resource management strategies, respectively (Nbina & Viko, 2010; Nett et al., 2012; Zhao et al., 2014). While cognitive strategies refer to the students using thinking skills, metacognitive strategies refer to the students regulating their own cognition to improve their learning (Zimmerman, 1995).

Case (2002) describes how, while cognitive strategies are implemented to enable a learner to achieve the goal, learners implement metacognitive strategies to ensure that they achieved the goals. For instance, if students want to understand a task, they will use cognitive strategies, but students' questioning themselves as to whether they understand the task requires them to use metacognitive strategies. Therefore, it is apparent and appropriate that metacognitive strategies are often used after cognitive strategies (Birjandi & Rahimi, 2012; Chen et al., 2019; Nett et al., 2012; Veenman, Van Hout-Wolters & Afflerbach, 2006). After using metacognitive strategies, learners are able to understand whether cognitive strategies worked or not. By using cognitive and metacognitive strategies, learners are empowered to control and monitor their learning progress, helping them to achieve the goals they set (Chemers, Hu & Garcia, 2001; Dinsmore et al., 2008; Kallay, 2012; Keyser & Viljoen, 2015; Leenknecht et al., 2017).

Resource management strategies are also crucial to help students organise their own learning environment, according to their goals, to efficiently and effectively use the aforementioned cognitive and metacognitive strategies (Putwain et al., 2013). This allows students to manage and control their effort, time and material with the help of resource management strategies (Geitz et al., 2016; Hawe & Dixon, 2017; Zimmerman & Moylan, 2009; Zusho, Pintrich & Coppola, 2003). Students who monitor their learning processes can diagnose their weaknesses and self-identify that they may need to seek help from more skilled peers or tutors to receive support in overcoming their weak areas (Honicke & Broadbent, 2016; Kitsantas, Reiser & Doster, 2004). Students who can use those strategies are able to regulate their resources, to tighten the efficiency of their processes and attain the goals they set (Jungert & Rosander, 2010; Kahrizi, Farahian & Rajabi, 2014; Pintrich, 2000).

In the end, students need to be able to evaluate their learning outcomes to see whether they achieved their learning goals (Geitz et al., 2016; Nett et al., 2012). If students managed to achieve their own goals, they are more likely to have higher motivation (Orsmond & Merry,

2013). This situation may lead students to set more challenging goals for the next time. However, if students failed to reach their own goals, they will likely change their learning strategies or set easier goals to complete their tasks. Therefore, student's success or failure in achieving their goals does not prevent them from increasing their learning because self-regulated learners know that learning is their own responsibility and learning is not simply a product, but also a process (Roth et al., 2016). This is more likely to lead them to make an effort to construct an individualistic knowledge structure within the curriculum (O'Connor, 2020; Franco & DeLuca, 2019; Vermetten, Vermunt & Lodewijks, 1999). Nevertheless, for students to continue learning, they need to have sufficient motivation. Thus, it is fitting to discuss the effect of motivation on student learning, as it is necessary to understand how a student regulates their own learning to engage with the subject matter they study.

2.3.2 The relation between motivation and using self-regulated learning strategies

Motivation for learning is a complex concept generated by various psychosocial factors internal to the individual and yet drawing from their social and natural environment (Dinsmore et al., 2008; Hancock et al., 2002; Keyser, 2015). Psychologists define motivation, showing its complexity, as "the conditions and processes that account for the arousal, direction, magnitude and maintenance of effort" (Katzell & Thompson, 1990, p. 144). Pintrich (2004) argues that the 'will to learn' is at the centre of the learning process, and is closely associated with the concept of motivation. The will to learn stimulates individuals to act on what is meaningful for them. Therefore, individuals are motivated to make sufficient effort to improve their learning over time. Intrinsic interest is one of the 'will to learn' components that gives students the enthusiasm to attain the goals they set (Andrade, 2010; Liu, Bridgeman & Adler, 2012; Pai & Mallya, 2016).

Students' enthusiasm might also foster their motivation to use cognitive and metacognitive strategies to develop their learning (Broadbent & Poon, 2015; Panadero, 2017; Ryan & Deci, 2017). Nota, Soresi and Zimmerman (2004) argue that if students have intrinsic interest in the task, they have a real interest in the task. Therefore, they consider their tasks important, and they can utilise the task in the future. Pintrich (1999) examined in his research the relation between intrinsic interest and the use of self-regulated learning strategies and the effect of those

strategies on student academic performance in colleges by analysing a full three-thousand cases. According to the research results, students who have intrinsic interest were willing to use cognitive and metacognitive strategies, which led them to increase their academic performance and their exam scores in their courses. Therefore, if students are willing to understand their tasks, they are likely to set more challenging goals for the next step.

It has been observed that students having an intrinsic interest may lead them to have sufficient motivation for learning (Trevino & DeFreitas, 2014; Weinstein, Acee & Jung, 2011; Wolters, 2003; Zimmerman, 2008). Students with intrinsic motivation are more likely to set their own goals to be achieved. They are also more likely to develop a learning strategy and monitor their own learning progress to confirm they are approaching their goals. In the end, students will likely evaluate their own outcomes to check whether they reached their goals. If students managed to reach their goals, their motivation is likely to increase as they see that they are able to succeed. Therefore, students may believe in themselves more for success (Bandura, 1986; Fong et al., 2019; Kim et al., 2015; Mok, Lung, Cheng, Cheung & Ng, 2006). Researchers describe this situation as self-efficacy, and they argue that students' having high self-efficacy is likely to lead them to develop their learning processes because they tend to take their own responsibility for learning (Komarraju & Nadler, 2013; Lee, Lee & Bong, 2014; Tseng et al., 2015; Zhao et al, 2014). Furthermore, these researchers argue that self-efficacy is one of the most important motivation resources that students need to have to be able to engage in learning deeply.

Van Dinther, Dochy and Segers (2011) argue that students becoming confident to complete a learning task is described as developing self-efficacy in education literature. Bandura (1997) defines self-efficacy in detail as a motivational orientation that enables students to study persistently, increases deliberate actions, encourages self-regulation and enables students to seek help when needed. Several studies state that self-efficacy is a reliable predictor of students' academic performance and motivation (Geitz et al., 2016; Honicke & Broadbent, 2016; Jungert & Rosander, 2010). In addition to this, Bandura (2006) argues that students' being successful or unsuccessful may be related to their level of self-efficacy. Geitz et al. (2016) claim that students who have high self-efficacy are more likely to take greater responsibility to accomplish more challenging tasks. Additionally, Kim et al. (2015) assert that this type of student might have less anxiety than those who have less self-efficacy because students with high self-efficacy can use their resources more efficiently.

Meanwhile, students possessing enough self-efficacy are more likely to monitor their learning processes to identify their weaknesses and improve them because they are persistent to reach their learning goals (Lee et al., 2020; Pajares, 2008; Panadero & Romero, 2014). So, those students are more aware of their strengths and weaknesses, and often seek out and apply more effective learning strategies to improve their weaknesses, because they believe that their progress depends on their efforts (Lee et al., 2014). In other words, students can pin their success or failure on their efforts rather than their skills. In that case, students assume that success is in their control, to progress towards desirable learning goals (Brannick, Miles & Kisamore, 2005; Putwain et al., 2013). Thus, they believe that as long as they make an effort in learning, they can attain a deep understanding of a subject matter (Bandura, 1997; Roick & Ringeisen, 2018; Tseng et al., 2015). This belief is an indication of students' having high self-efficacy (Bandura, 1997; Chen et al., 2019; Kim et al., 2015).

Mahlberg (2015) argues that students possessing high self-efficacy are hard-working, more persistent in learning, prefer to do more challenging tasks, and are more prepared to deal with their anxiety. Furthermore, Nbina and Viko (2010) put forward that such students are more likely to get involved in goal setting, monitoring and self-assessment processes since they are able to deal with cognitive demands and difficulties. In other words, students who believe that their ability is sufficient to complete a task are highly likely to be adequately motivated to use cognitive and metacognitive strategies to better understand the task (Lee et al., 2020; Nota et al., 2004; Roth et al., 2016). There is ample research in higher education displaying evidence regarding a strong relationship between the use of cognitive-metacognitive strategies (e.g., reasoning, analysing, synthesising) and self-efficacy.

For example, Seker (2015) investigated the influence of motivational orientations and the use of cognitive, metacognitive and resource management strategies on student language learning performance at a state university in Turkey. According to the research result, students having higher self-efficacy used cognitive and metacognitive strategies more often to accomplish the goals they set. While those who had higher self-efficacy were able to make an effort to overcome challenging situations, students who had lower self-efficacy did not strive so much to improve their weaknesses. The results also showed that students with higher self-efficacy got better grades and set more challenging goals than students with lower self-efficacy. From the research, it can therefore be concluded that students who have higher self-efficacy are more

likely to achieve academic success since they have the ability to monitor their progress and persist even when they face difficulties. Moreover, this research also indicated that students who use cognitive and metacognitive strategies are academically more successful than those who do not often use these learning strategies.

In another study, Teng and Zhang (2018) investigated the effect of cognitive and metacognitive strategies on English students' learning performance in four universities in China. He measured students' use of effective learning strategies by using self-regulated learning questionnaires, and then he implemented an English test for them. According to the research result, students who reported using cognitive and metacognitive strategies more often indicated a deeper understanding of the subject matter than those who rarely used learning strategies. In addition, students using cognitive and metacognitive strategies received better scores on the English test the researcher implemented than those who did not use it. Furthermore, those who often used more effective learning strategies showed higher self-efficacy.

Students' monitoring of their academic progress is a fundamental component of self-regulated learning. For example, Birjandi and Rahimi (2012) tested the effectiveness of the use of metacognitive strategy and the importance of self-monitoring on student learning in their study. They conducted their research with students studying English translation and literature in Iran. The students were provided listening strategies during instruction and the opportunity to monitor their own performance to reach their goals. The researchers used the listening section of TOEFL and a range of verbal texts on different topics to measure students’ academic progress at the end of the study. According to the research results, students in the experimental group received better scores than students in the control group. Students in the experimental group exhibited more self-efficacy and more willingness to use metacognitive strategies for the next learning tasks than those in the control group.

More recently, Roick and Ringeisen (2018) investigated the effect of cognitive and metacognitive learning strategies on student learning in a Maths course in a German university with two hundred and six students. In addition, they researched the relation between students' self-efficacy and their use of effective learning strategies. According to their research result, students with higher self-efficacy used cognitive and metacognitive strategies more than those who had lower self-efficacy. Moreover, students who used effective learning strategies more showed better learning progress and higher exam scores than those who did not use these

strategies. Therefore, it was concluded that students who had higher self-efficacy indicated better academic performance than students with lower self-efficacy.

As indicated, students' motivation is important for them to take responsibility for their own learning (Alotaibi et al., 2017; Pintrich, 2004; Ryan & Deci, 2017; Wolters, 2003). If students have high motivation, they are willing to set their own goals and use cognitive and metacognitive learning strategies to reach them (Kahrizi et al., 2014; Veenman, 2017). Students' motivation comes from their intrinsic interest and self-efficacy (Schunk, 2003). Students' having an intrinsic interest is more likely to lead them to make an effort to improve their learning (Fong et al., 2019; Pintrich, 2002; Teng & Zhang, 2018). Students improving their learning may lead to, or even stem from, higher self-efficacy (Ryan & Deci, 2017). Consequently, they can regulate their own learning to engage with the subject matter in-depth. Research has shown that if students possess intrinsic interest and self-efficacy, they tend to use effective learning strategies more often to improve their learning (Honicke & Broadbent, 2016; Leenknecht et al., 2021; Trevino & DeFreitas, 2014; Zimmerman, 2000). Researchers have generally used exams or tests to monitor students' learning progress. According to their results, students who have higher self-efficacy produce better exam performance in exams than students having lower self-efficacy because students having higher self-efficacy can set more explicit learning goals and develop learning strategies to achieve the goals they set (Birjandi & Rahimi, 2012; Roick & Ringeisen, 2018). Students' achieving their own goals may strengthen their self-efficacy to set more challenging goals to engage in a deep understanding of the subject matter they study (Chen et al., 2019; Geitz et al., 2016; Pajares, 1996). Therefore, it can be said that there is a reciprocal relation between students' self-efficacy beliefs and setting their goals to develop their learning.

2.3.3 The reciprocal relationship between student self-efficacy and goal setting process

Setting learning goals is a foremost and very important step for students to develop self-regulation skills because it may stimulate them to reach the goal (Andrade, 2010; Brown, 2011; Kitsantas et al., 2004; Schunk, 2003). Students who want to set their own goals feel that they have ability to improve their learning (Scager et al., 2014). Students setting their own goals use

cognitive or metacognitive strategies and monitor their own progress to confirm that they are on the right track (Butler & Lee, 2010; Honicke & Broadbent, 2016; Winne, 1995). If they think that the strategies they selected do not work, they are able to change their strategies to try new ways to achieve their goals. When students feel that their goals are too difficult for their own abilities, they can return to the beginning to set an easier goal for the next step. When students evaluate their own performance, whether they achieved the goals they set and if they achieve the goal at the end of the learning process, they will have higher self-efficacy (Heikkila & Lonka, 2006; Jungert & Rosander, 2010; Roick & Ringeisen, 2018). In that case, they will be more likely to set more challenging goals for the next time. In this way, students can gradually increase their goals' difficulty levels (Brown, 2011; Van Dinther et al., 2011; Wang & Wu, 2008). As a direct result, students' self-efficacy is likely to be getting stronger step by step, too.

In the literature, many studies have investigated the relationship between self-efficacy and the goal-setting process. For example, Morisano, Hirsh, Peterson, Pihl and Shore (2010) carried out their research with university students and created two groups with them. They helped students from one of the two groups to set their own goals, and they did not guide another group for it. At the end of the study, students from the goal-setting group received a higher GPA (Grade Point Average) than students from the control group. Moreover, students' course attendance rate from the goal-setting group was higher compared to the control group. More importantly, this research indicated that students from the goal-setting group had higher self-efficacy to set a more difficult goal for the next time. Recently, Lee et al. (2020) also conducted similar research with university students. They applied questionaries to evaluate students' use of self-regulated learning strategies. The research result indicated that students who received assistance from their tutors to set goals were more willing to focus on their courses to accomplish their own goals. Moreover, students who were willing to set their own goals showed higher self-efficacy than those who were unwilling to set their own goals. In accordance with those two studies, once students saw that they managed to achieve their goals, their self-efficacy increased.

Handoko et al. (2019) conducted research to investigate the relationship between self-efficacy and the goal-setting process with a relatively high number of students from different institutions. They surveyed six hundred and forty-three MOOC (Massive Open Online Courses) students from various universities through Online Self-Regulated Learning Questionnaire (OSLQ) to understand the differences between students who completed their course and those

who did not. They found that most of the students who used the goal-setting process managed to complete their course. They also found that students who used the goal-setting process had higher self-efficacy. Researchers added an open-ended question at the end of the questionnaire to better understand students' explanations. According to the analysis of students' open-ended responses, it was found that students who had higher self-efficacy seemed more willing to set advanced goals and to reach them. Therefore, students with higher self-efficacy were likely to improve their learning more than students who had lower self-efficacy.

Since most studies about the use of self-regulated learning strategies have been conducted in Western world, Alotaibi et al. (2017) carried out their study in Saudi Arabia to investigate relations between self-regulated learning and academic achievement of higher education students. They collected their data from three hundred and fifty-six students who attended a preparatory year programme. Researchers focused on the effect of goal setting process on students' academic achievement of English and Mathematics courses. The research results indicated that students who frequently set their own goals received higher scores in English and Mathematics courses than those who did not. It was also found that students who frequently set their own goals showed higher self-efficacy than those who did not.

In another study, Muwonge et al. (2017) conducted their study in Uganda to investigate the effect of self-efficacy on the use of metacognitive learning strategies among teacher-education students. They collected the data from six hundred and forty-nine students from seven universities through a modified Motivated Strategies for Learning Questionnaire. According to the research results, students who had higher self-efficacy tended to set their own goals to increase their learning. Indeed, students who set their own goals are more willing to use metacognitive learning strategies to achieve their goals. Therefore, these students are academically more successful than those who have lower self-efficacy. We can argue that there is a strong relationship between student self-efficacy and the goal-setting process.

According to the research results explained above, students having sufficient self-efficacy use self-regulated learning strategies more effectively. Therefore, students are more likely to accomplish the goals they set. Handoko et al. (2019) argue that when achieving their goals, students believe themselves more capable of success at every turn. This situation is likely to strengthen their self-efficacy even more. Students possessing high self-efficacy might persevere in the face of difficulties, finding suitable ways to overcome obstacles (Chen et al., 2019; Kim

et al., 2015; Levesque, Zuehlke, Stanek & Ryan, 2004). For students to overcome obstacles, they need to identify their weaknesses first. In other words, they need to be able to evaluate their own learning progress. If students are not on the right track to overcome their own difficulties, they can see it- and adapt their learning strategies until they achieve the goals they set. Therefore, it may be argued that self-assessment is an important skill for students to improve their learning.

2.3.4 The importance of students' having self-assessment abilities to be able to use self-regulated learning strategies effectively

Students who have advanced self-assessment skills are able to monitor their own learning progress. This is likely to help students identify their own limitations (Andrade, 2010; Panadero et al., 2017). Students who know these limitations may make more effort to overcome them to achieve the goals they set. So, they might develop their learning processes. If they are not able to overcome their limitations by themselves, they may need to seek out help from their tutors or more skilled peers. Self-regulated learners do this because they are intrinsically motivated to develop their own learning (Long & Aleven, 2017; Mahlberg, 2015; Nbina & Viko, 2010). Students receiving support from others are more likely to overcome their own weaknesses (Andrade, 2010; Orsmond & Merry, 2013; Roth et al., 2016). Therefore, students' motivation might increase if they manage to overcome their weaknesses. Students who have higher motivation are likely to be willing to take more responsibility for their own learning. They can set more difficult goals and select an appropriate learning strategy to reach them. Butler and Lee (2010) argue that students who are able to evaluate their own performance can use their learning strategies efficiently and effectively because they are able to identify what they need to do to improve their learning. Therefore, students are more likely to improve their learning as a result of the self-assessment process. Research also indicated that students who have self-assessment skills are likely to increase their use of self-regulated learning strategies (Boud, 1995; Butler & Lee, 2010; Kahrizi et al., 2014; Panadero & Alonso-Tapia, 2014). For example,

Teng and Zhang (2020) conducted a study with eighty undergraduate students in a Chinese university to investigate the effect of self-assessment on students' learning progress in an

academic writing course. While students in the intervention group learned how to assess their own performance for five months, students in the control group did not. The results of the study found that students in the intervention group outperformed students in the control group in the exam. As one would expect, students in the intervention group more often used self-regulated learning strategies than students in the control group. The results also indicated that students in the intervention group had higher self-efficacy than those in the control group. Consequently, it can be said that students' self-assessment skills are likely to be crucial for students to regulate their own learning to make progress.

In another study, Panadero et al. (2017) conducted a meta-analytic review to investigate the effect of self-assessment on students' use of self-regulated learning strategies. The study included four separate meta-analyses, with a total of nineteen studies and two thousand three hundred and five students. The research results showed that there is a positive effect of self-assessment on students' use of self-regulated learning strategies. So, it may be argued that students who can assess their own performance use self-regulated learning strategies effectively, and it indicated that these students could develop their weaknesses as well. Students with advanced self-assessment skills showed higher self-efficacy because students who use self-regulated learning strategies more often achieved their goals. Chen et al. (2019) conducted a study with two hundred and sixteen nursing students. They collected their data through a questionnaire to investigate the relationship between self-assessment and the use of self-regulated learning strategies. According to their result, students who had self-assessment skills tended to use self-regulated learning strategies to improve their learning. Students who used self-regulated learning strategies indicated a deeper understanding of the subject matter as well.

We can see that students who are able to evaluate their own academic performance are more likely to achieve the goals they set because they can use learning strategies frequently and effectively. Assessment may become enormously valuable to help students see their own limitations. For example, Panadero and Romero (2014) argue that tutors use formative assessment and written feedback to enable students to evaluate their own learning progress because it gives information to them about their strengths and limitations. Students may understand how they overcome their limitations to do better work after receiving feedback from their tutors. Therefore, students can develop the ability to evaluate their own learning progress with time. From that perspective, formative assessment is more likely to help students develop their self-assessment skills, and in turn their self-regulated learning skills. Thus, it might be

argued that formative assessment and written feedback play a vital role in the development of students' self-regulated learning skills (Nicol & McFarlane-Dick, 2006).

Fook and Sidhu (2013) conducted a study to examine whether formative assessment had an effect on student self-assessment and self-regulated learning skills. They completed their study at a public university in Malaysia. A total of forty-two undergraduates, twenty-seven postgraduates and thirty tutors from the Faculty of Education participated in the study. The researchers used both qualitative and quantitative methods to conduct their research. With regards to the results, formative assessment clearly offered excellent opportunities to students to develop their self-regulated learning skills, as the study showed that students learned what their limitations are. They were more likely to take responsibility to overcome or push those limitations. Furthermore, the study result indicated that formative assessment helped students learn how to evaluate their own academic performance. It is clear that assessment is an important factor for students to help develop and improve self-regulated learning skills.

2.4 Summary

There are broadly two learning approaches: surface and deep learning approaches (Alt, 2017; Geitz et al., 2016; Kallay, 2012). If students aim to meet external expectations to pass their exams or get a degree, they are likely to superficially learn the subject matter they study (Keyser & Viljoen, 2015; Liu et al., 2012). If students want to learn the subject matter, it means that they might have enough motivation to improve their learning (Putwain et al., 2013; Sebesta & Bray Speth, 2017). So, they are likely to make an effort to deeply engage with the subject matter. For students to deeply engage with the subject matter, they need to take more responsibility for their own learning because students do not only receive knowledge from their tutors, but they also improve their learning by using different resources in this situation (Pai & Mallya, 2016; Tseng et al., 2015; Weinstein et al., 2011). Czajka and McConnell (2019) argue that students' taking responsibility for their own learning indicates that they are at the centre of learning. Students who are at the centre of learning organise their learning environment to improve their learning (Handoko et al., 2019; Yan, 2020; Zhao et al., 2014). These students are described as self-regulated learners in the literature (Panadero, 2017; Pintrich, 2004; Teng &

Zhang, 2018). Some researchers (e.g., Heikkila & Lonka, 2006; Keyser & Viljoen, 2015; Lee et al., 2020) assert that self-regulated learners are very effective learners at the same time so that they are seen as academically successful students. There is also a rich body of research from various global higher education settings that indicate the importance of developing student self-regulated learning as well as the importance of student motivation and self-assessment abilities. According to research results given in this chapter, students who have advanced self-regulated learning skills can use their resources more effectively and efficiently to receive higher grades, produce better assignments, and show deeper engagement with the subject matter they study. We can, therefore, say that students' having self-regulated learning skills is crucial in higher education. Academics' teaching practices and activities are important for students to improve their learning as they can help their students develop their self-regulated learning skills. We, thus, need to know how academics describe self-regulated learning because understanding their perceptions might help us understand the ways that this concept derived from many studies is understood by academics and how this then influences their practice. For this reason, I aim to explore how academics conceptualise self-regulated learners. The first research question is:

R.Q. 1: How do academics conceptualise self-regulated learners?

Tutors may help students develop their learning processes through assessment and feedback because they can inform their students what their weaknesses and strengths are and give some suggestions on how they can overcome their weaknesses (Broadbent & Poon, 2015; Carless & Boud, 2018; Fong et al., 2019). This is likely to help develop students' motivation because if students know what they need to do for progress, they will be willing to make an effort to improve their learning (Muwonge et al., 2017; Pai & Mallya, 2016). That is, students are likely to take more responsibility for their own learning. Students who take responsibility for learning might regulate their own effort and environment to improve their learning so that they are likely to develop their self-regulated learning skills (Roth et al., 2016; Seker, 2015; Teng & Zhang, 2018). It might be argued that assessment and feedback have an impact on the development of students' self-regulated learning skills. Thus, I will argue the impact of assessment and feedback on the development of students' learning processes and self-regulated learning skills in detail in the next chapter.

Chapter 3: Literature Review II

3.1 Introduction

Baird et al. (2017) argue that assessment is very important to improve students' learning processes because it gives information to students about their level of understanding of the course content. Information about students' learning progress is given to them through feedback (Boud & Molloy, 2013; Craig & Burke da Silva, 2014; Henderson et al., 2019). Feedback is broadly categorised as summative and formative (Li & De Luca, 2014). Whilst the purpose of summative feedback is to judge students' learning outcomes according to the predetermined criteria, formative feedback aims to monitor students' learning progress to help develop their learning processes (Mulliner & Tucker, 2015; Price et al., 2010). Although both types of feedback may help develop students' learning processes, it seems that formative feedback is more compatible with the development of students' learning processes because some researchers (e.g., Hattie & Timperley, 2007; Hawe & Dixon, 2017; Small & Attree, 2016) put forward that the purpose of formative feedback is to contribute to students' learning processes and self-regulation by monitoring students' learning progress. I will therefore discuss the effect of formative and summative feedback on student academic performance in detail in this chapter and explain why I focused more on formative feedback in this study.

Academics can give formative feedback to their students as verbal and written (Weaver, 2006). Some researchers (e.g., Beaumont, O'Doherty & Shannon, 2011; Carless & Boud, 2018; Dann, 2014; Dawson et al., 2019; Wylie & Lyon, 2015) assert that although verbal feedback may have a positive effect on students' academic performance, written feedback is more likely to positively impact on students' learning processes because academics can give detailed and helpful information in written feedback. Moreover, academics can give advice in written feedback to their students about what they need to do to overcome their weaknesses (Dowden, Pittaway, Yost & McCarthy, 2013). Evans (2013) adds that when students need to remember their tutors' advice, they can read their written feedback. Glover and Brown (2006) argue that academics give advice to their students to show them what their mistakes are and how they can overcome them. This is likely to lead students to take more responsibility for their own learning to correct their mistakes because students who know their mistakes and how they can overcome

them are more likely to make an effort to improve their learning (Hanh & Ramnath, 2016). Leenknecht et al. (2021) put forward that written feedback can be used to help develop students' motivation. If students have higher motivation, they will likely take responsibility for learning so that they might monitor and evaluate their own academic performance (Hughes & Hargreaves, 2015; Kippers et al., 2018). Mahlberg (2015) argues that students who are able to evaluate their own performance can regulate their own learning environment and effort to improve their learning. In other words, students are likely to become self-regulated learners. I will thus discuss the effect of written feedback on students' motivation, self-assessment, and self-regulated learning skills in the last section of this chapter. Finally, I will explain why I asked the second research question of this study.

3.2 Educational assessment

There are two types of assessment broadly described in the literature: 'summative' and 'formative' assessments (Guskey, 2005; Li & De Luca, 2014). Summative assessment is defined as judging students' work against stated goals and criteria and giving information to students about what they have learned and what they have not learned (Black, 2013; Taras, 2005). Formative assessment is described as checking whether teaching instructions worked or not and tracking students' academic progress to help them reduce the gap between what they have done and what they should have done (Andrade, 2010; Babo et al., 2017; Fook & Sidhu, 2013; Sadler, 2010). Therefore, it can be said that while summative assessment is more concerned about the result of learning, formative assessment seems to be more concerned about the process of learning (Black, 2013; Kingston & Nash, 2011). From that perspective, it appears that formative assessment may support student learning processes more than summative assessment (Black & Wiliam, 1998; Kippers et al., 2018; Pla-Campas et al., 2016). There is also extensive research in higher education that shows formative assessment has a positive effect on student learning processes (e.g., Beaumont et al., 2011; Brookhart, 2001; Clark, 2012; Dann, 2014; Hawe & Dixon, 2017; Kingston & Nash, 2011; Mahlberg, 2015). For this reason, some researchers state that formative assessment should be used more than summative assessment to help develop students' learning skills (Hattie & Timperley, 2007; Mulliner & Tucker, 2015).

However, several other researchers argue that if the summative assessment is well-designed, it may contribute to student learning processes as well (Dawson et al., 2019; Winstone et al., 2016). For instance, Liu et al. (2012) assert that questions in summative assessment can be designed to support students' higher-order thinking skills. Therefore, for students to receive a high grade from summative assessment, they should make more of an effort to engage in the subject matter in-depth (Boud & Molloy, 2013; Sadler, 2010). When students make an effort to receive a high grade, they are likely to develop their learning processes if the summative assessment is designed to encourage to use higher order thinking skills (Brookhart, 2001). In other words, students need to take responsibility for their learning by organising their learning environment to improve their learning (Carless, Salter, Yang & Lam, 2011; Price et al., 2010). Students' taking responsibility for learning is more likely to develop their learning processes because it indicates that students set their own goals (Roth et al., 2016). Then, students can adjust their learning strategies to achieve the goals they set (Clark, 2012; Orsmond & Merry, 2013). Students' improving their own learning processes might help them engage with the content knowledge of the subject matter in-depth (Carless et al., 2011; Dann, 2014; Mahlberg, 2015). Thus, summative assessment may have a positive effect on student learning processes if it is designed carefully (Shute, 2008; Taras, 2005).

Black and Wiliam (1998) emphasise the advantages of the use of formative assessment on student learning processes in their study, and they tend to ignore the positive effect of summative assessment. Yet, Biggs (1998) have a different idea from them because he defended the idea that using both formative and summative assessment together may have a considerable effect on student learning processes. Although it is often seen that summative assessment is more likely to encourage surface learning for students, Biggs (1998) argues that summative assessment could also be vital for students' academic progress as students need to strive to learn better to receive higher grades. Students can also use information derived from formative assessment to increase their understandings to get a higher grade from their next summative assessment (Brown, 2011; Evans, 2013; Lee et al., 2014). In this way, summative assessment can be turned into positive effect on student learning processes (Biggs, 1998). Therefore, it might be argued that formative and summative assessments may support each other to create a powerful impact on student learning processes, rather than excluding one of them from education.

Although summative assessment can be well designed to help students engage in deep learning, tutors may predominantly focus on students' test scores. This is likely to lead tutors to practice similar questions in lectures to enable their students to get higher marks and grades (Guskey, 2005; Ratnam-Lim & Tan, 2015). In other words, students can increase their test scores over time because questions may become familiar to students as a consequence of excellent practice (or repetition), but it does not mean students engage in deep learning (Biggs, 1998; Black, 2013; Lau, 2016). Therefore, most probably, tutors are not able to use assessment to effectively contribute to student learning processes because most summative assessments may cause students to follow tight parameters to learn knowledge introduced in lectures. In this case, students are likely to engage in surface learning (Andrade, 2010; Barber, 2007; Grosas et al., 2016; Kallay, 2012). So, emphasising the possible negative effect of summative assessment in terms of student learning led to the creation of several alternative models and paradigms to move away from summative assessment. Gipps (1994) describes this situation as a 'paradigm shift' and for him, while summative assessment is an 'old' model of assessment, formative assessment is the new one. He also argues that the 'old' model of assessment should be used as little as possible. Therefore, it can be said that Gipps (1994) and other researchers created a dichotomy in the assessment literature. This in turn led to the formation of tension between summative and formative assessment (Lau, 2016).

Some recent research supports a holistic approach to summative and formative assessments. For instance, Mahshanian, Shoghi and Bahrami (2019) conducted their research at a university in Iran. They chose three classes to apply formative assessments, summative assessments, and formative-summative assessments combined, respectively, in each class. The researchers implemented two pre and post-tests in an English as a foreign language course within four months for these three classes. According to the research results, students in the class in which formative and summative assessments were applied together received a better score than the other two classes in the achievement tests. Additionally, the difference in scores between the pre and post-tests in the group in which summative-formative assessment was applied together was higher than the other two groups. Thus, it showed that students use formative assessment as a practice to obtain a higher grade in their summative tests. Interestingly, students also indicated that summative tests enabled them to keep their motivation high to improve their learning. It was also reported that formative assessment helped students be aware of their strengths and weaknesses. Therefore, students strived to overcome their weaknesses to increase their understandings.

Similarly, in another study, Grosas et al. also (2016) investigated the effect of the use of formative and summative assessment together on student learning in an Australian university. The results of their study indicated that although formative assessment is more effective than summative assessment on student academic performance, the use of formative and summative assessment together has the most positive effect on student learning because students place a high level of importance on their formative feedback to identify any weak areas, but they also do so to earn a higher score in the summative assessment. The researchers found that, if students used their formative feedback, they would improve their learning processes. However, it appeared that some students did not benefit from their formative feedback to improve their learning processes. The results of the study showed that summative assessment helped students use their formative feedback to develop their weaknesses to increase their grades for their next exams. Therefore, according to the research result, the use of formative and summative assessment together also improved the effect of feedback. In effect, the whole was greater than the sum of the parts. It may be argued that the use of both assessments together helped students take more responsibility to develop their understandings of the subject matter they study.

According to Biggs (1998), giving more responsibility for learning to students helps them improve their learning processes, because students can improve their understandings by being actively involved in learning activities. In other words, giving more opportunities to students to develop their learning may lead them to make more of an effort to reduce the gap between their current understanding and the desired goals by seeking help and developing their learning strategies (Biggs & Tang, 2007; Li & DeLuca, 2014). Hattie and Timperley (2007) suggest that assessment should be used to encourage students to take responsibility for improving their own learning processes, thereby creating a positive effect of assessment on students learning skills. Taras (2005) argues that applying formative and summative assessment together in a balance is the way to do that. Therefore, Biggs (1998) asserts that instead of seeing two different assessments like Black and Wiliam (1998), summative and formative assessments should be defined as two parts that reinforce each other to contribute to learning processes. Taras (2007, pp. 64) describes this very well in her article that “each limb must work with the other in order for the whole to work; the animal is stronger as it is better balanced and without one back leg the elephant would fall over”.

She also argues that in order to give feedback, assessment needs to be used to address weaknesses and strengths of students' work or performance (Taras, 2005). In other words, teachers need to judge students' performance to be able to determine what students have learned and what they have not learned so that teachers can give feedback that tells students what they need to do to improve their weaknesses (Li & De Luca, 2014; Ratnam-Lim & Tan, 2015; Sebesta & Bray Speth, 2017). I also agree that if formative and summative assessments are used together, their effect is highly likely to maximise student academic progress. These assessments should not be used in contradiction to each other; educators can use them in harmony (Grosas et al., 2016). Since we can also use formative assessment to increase students' summative assessment scores, it seems that we may use both assessment models to help develop students' learning processes. So, if assessment contributes to student learning processes, we can say that there is a positive effect of the assessment. Since I approach summative assessment in relation to formative assessment, I decided to focus on formative assessment to explore the effect of assessment on student learning processes in this project as perceived by academics in higher education.

3.2.1 Formative assessment and feedback

Students improving their own understandings by being actively involved in learning activities rather than passively receiving knowledge from their lecturers are more likely to develop their own learning skills (Brown, Bull & Pendelbury, 1997). Students need to take more responsibility for their own learning to do that (Butler & Winne, 1995; Price et al., 2011; Winstone et al., 2016). Moreover, they need to interact with the content knowledge and discuss their ideas with their peers by connecting their previous knowledge (Panadero et al., 2017). This is more likely to lead students to engage with the subject matter in-depth. This approach to knowledge development is compatible with 'student-centered learning' because the main assumptions of it are students' active engagement in learning and students' taking responsibility for their own learning (Carless & Boud, 2018; Cassidy, 2012).

Formative assessment is crucial for student-centered pedagogy because it enables students to receive feedback about their progress during the learning processes when they try to improve their own learning (Black & Wiliam, 2003; Hattie & Timperley, 2007). Students receiving

feedback from their lecturers are supposed to act on the feedback to develop their understandings (Askew & Lodge, 2000; Nicol, 2010). Therefore, lecturers provide feedback that includes information about students' weaknesses and strengths and what they need to do to consider reducing the gap between what they have done and what they should have done (Shute, 2008). This situation is more likely to lead students to improve their learning because if students are aware of their own weaknesses, they will likely make more of an effort to overcome them (Boud & Molloy, 2013; Sadler, 2010). Accordingly, students might engage with the subject matter better. As a result, students may develop their learning and thinking skills because they will be trying to overcome their own weaknesses by acting on the feedback independently (Price et al., 2010; Wylie & Lyon, 2015). This indicates that the purpose of formative assessment is to help students develop their learning processes rather than improving only their content knowledge (Craig & Burke da Silva, 2014; Dawson et al., 2019; Winstone et al., 2016). Therefore, we can say that formative assessment is not only concerned about what students learn, but it is also concerned with how they learn a topic (Nicol, 2010; Shute, 2008).

Pla-Campas et al. (2016) conducted a study to investigate the effect of formative assessment on students' learning progress. They collected data from a hundred and eighteen students from the School of Education at the University of Vic- Central University of Catalonia. Formative assessment activities were applied in the class, and students' final grades were measured to check whether there is an effect or not. According to the research results, students who were involved in formative assessment activities received a much higher grade in the final exam than those who did not participate in formative assessment activities. Therefore, it was concluded that formative assessment makes a positive contribution to student learning processes. It was also indicated that students who were involved in formative assessment activities were glad to be active in the class. So, they were willing to take more responsibility for their own learning.

With respect to some researchers, formative assessment is likely to help develop students' learning skills in higher education so that students can become life-long learners (Li & De Luca, 2014; Orsmond & Merry, 2013). They can decide how to organise their learning environment to construct their own knowledge within the context. If students do not improve their learning skills, they are more likely to simply reproduce the content knowledge introduced in lectures (Fong et al., 2019). Yet, this may not lead students to become good learners, because a good learner is described as somebody who has improved their learning skills to critically engage with the discipline (Price et al., 2011). Some researchers argue that despite this, students are

not supposed to do everything alone (Boud & Molloy, 2013; Carless et al., 2011; Dawson et al., 2019; Sadler, 2010). If they encounter difficulty when they learn a topic, they need to take responsibility to seek out help from a more skilled and knowledgeable person (Boud & Molloy, 2013). In other words, students may need somebody to help overcome their difficulties (Carless et al., 2011). In higher education, this person might be their tutors or peers. Students can generally get help from their tutors by having discussions with them or receiving written feedback (Sadler, 2010). Students need to have enough motivation to be able to use their feedback more effectively to improve their weaknesses (Sadler, 2013).

Winstone et al. (2016) argue that formative assessment should aim to support students' motivation to help develop their autonomy because students who have sufficient motivation are much more willing to take responsibility for their own learning. However, some research indicates that formative assessment might not contribute to students' motivation due to lecturers' lack of knowledge about the proper and effective use of formative assessment (Henderson et al., 2019; Small & Attree, 2016). For instance, they might use negative language in their written feedback (Small & Attree, 2016). This is likely to negatively affect students' motivation (Henderson et al., 2019). Therefore, Weaver (2006) suggests that tutors need to consider their students' motivation when they structure their written feedback. Otherwise, their written feedback is less likely to have a formative effect on student learning processes.

Leenknecht et al. (2021) conducted a study to examine the effect of formative assessment on student motivation. They surveyed 194 students from a Dutch University of Applied Sciences by using the Assessment for Learning – Data-Based Decision Making (AfL-DBDM), the Basic Psychological Need Satisfaction and Frustration Scale (BPNSFS), and the task-specific Academic Self-Regulation Questionnaire (SRQ-a). The research results indicated that formative assessment has a positive impact on student motivation and learning processes. So, if tutors use formative assessment effectively, they are highly likely to help develop their students' motivation. Students who have higher motivation are likely to take more responsibility for learning to develop more sophisticated understanding of the discipline.

For students to construct their own knowledge within the curriculum, they need to set their own learning goals (Evans, 2013). Price et al. (2010) suggest that formative assessment could be used to enable students to set their own goals because it aims to give more learning responsibility to students to do so. If students set their own learning goals, they will likely take

responsibility for learning (Winstone et al., 2016). Students who set their own learning goals are more likely to make an effort to achieve them. Students may try different learning strategies to find the most effective one to reach the goals they set. To do that, students need to monitor their own learning progress to detect whether their strategies work or not. If their strategies do not work to improve their learning, they will need to change them. Nevertheless, if students see that their strategies work properly, they will likely reach their own goals. Students who achieve their own learning goals are more likely to set more challenging goals for the next time to better engage in the subject matter they study (Dawson et al., 2019).

Babo et al. (2017) examined the effect of formative assessment on students' learning in the mathematics module in Accounting and International Commerce degrees. Twenty students were involved in the study. Students took formative tests and then took a summative test. Thereafter, the researchers surveyed students to perceive their opinions about formative assessment. The research results showed that students who were involved in the study increased their summative test grades. It was observed that after formative tests, students set goals to strengthen their weaknesses because students stated that formative assessment helped them see their weaknesses. The research result indicated that formative assessment might enable students to set better-defined goals. This will allow them to study more efficiently and effectively to improve their learning.

Zimmerman and Moylan (2009) argue that if formative assessment is well designed, it is likely to contribute to students' self-efficacy. Panadero and Romero (2014) conducted a study to examine the effect of self-assessment, one of the most important formative assessment components, on student self-efficacy. They began their study with two hundred and eighteen pre-service teachers. While researchers helped students in the experimental group assess themselves, they did not help students in the control group. According to the results, students who can assess their own learning progress use effective learning strategies more often. These students showed higher self-efficacy as well because it was noted that formative assessment helped them believe in themselves and this led to an increase in learning efficacy. The purpose of formative assessment is to encourage students to take responsibility for their learning to improve their own understandings (Zimmerman & Moylan, 2009). Therefore, it helps students strengthen their weaknesses rather than only judge their work (Zimmerman & Schunk, 2011). Formative assessment may help students become willing to set their own learning goals, adjust their learning strategies, monitor their own progress to reach the goals they set (Panadero &

Romero, 2014). Students reaching their own goals are more likely to improve their self-efficacy. However, Henderson et al.'s (2019) research indicated that academics could harm students' confidence due to harsh language used in feedback. This situation would be more likely to cause a decrease in students' self-efficacy. For this reason, when they design their formative assessment, they need to consider their students' confidence as well.

The studies above indicate that formative assessment, properly designed, might positively affect students' motivation, self-efficacy, learning processes, and self-regulated learning skills. Students can receive feedback from their lecturers, peers, or other external sources to improve their own learning. Feedback is one of the most crucial educational tools to facilitate student learning processes (Glover & Brown, 2006; Wiliam, 2011). Therefore, feedback is supposed to include information that students can use to improve their learning, not simply weakness-identifying criticisms (Hughes & Hargreaves, 2015). Hattie and Timperley (2007) suggest that good feedback should answer these three questions: Where am I going?; How am I going?; and Where to next? If the feedback answers these three questions, students are more likely to set their own goals, adjust and develop their learning strategies and make an effort to develop their understandings to achieve the goals they set.

As mentioned in the previous section, two types of feedback are broadly defined, formative and summative (Wylie & Lyon, 2015; Yorke, 2003). Since in this study I aimed to explore the effect of feedback on the development of students' learning processes, I focused more on formative feedback because although summative feedback may also help develop students' learning processes, it focuses more on students' learning outcomes. Tutors can give formative feedback in two ways, written and verbal (Price et al., 2011; Wiliam, 2011). Research (e.g., Carless et al., 2011; Dawson et al., 2019; Fook & Sidhu, 2013; Guskey, 2005; Hughes & Hargreaves, 2015; Kingston & Nash, 2011) shows that students generally understand their tutors' verbal feedback because students have a chance to discuss with their tutors face to face. So, students can immediately ask questions to their tutors if they do not understand anything in the feedback (Babo et al., 2017). In addition, since verbal feedback is given instantly, it may have a positive effect in improving students' weaknesses because tutors can immediately notice their students' mistakes and help them to correct their mistakes (Brookhart, 2001; Brown, 2011). Although verbal feedback is likely to be effective in student learning development, students may forget verbal feedback after the lecture. In other words, verbal feedback may not be permanent for students. In addition, tutors may not be able to give detailed information about their students'

academic performance in verbal feedback because they give the feedback to their students immediately without thinking too much (Ferris et al., 2013; Hyland, 2013a). In written feedback, tutors may not give immediate feedback to their students, but they can give detailed feedback that can contribute to their student's learning processes because tutors might have sufficient time to structure feedback that includes suggestions for their students about how they can improve their weaknesses (Glover & Brown, 2006; Hyland, 2013b; Kumar & Stracke, 2007). Students can have a chance to read written feedback when they need to remember what their weaknesses are and how they can overcome them (Kingston & Nash, 2011). Thus, some researchers (Al-Hattami, 2019; Nicol, 2010; Sadler, 2013) argue that written feedback is likely to be effective to help develop students' learning processes.

In order for students to benefit from written feedback they receive, they need to understand it very well (Panadero et al., 2017). However, some research (e.g., Henderson et al., 2019; Leenknecht et al., 2021; Small & Attree, 2016) shows that students have difficulty in perceiving their lecturers' written feedback. If students do not understand written feedback given by tutors, they do not take action to improve their weaknesses (Boud & Molloy, 2013). It seems that it is a big issue for tutors because they spend a lot of time structuring their written feedback to contribute to their students' learning (Henderson et al., 2019). Several studies (e.g., Hanh & Ramnath, 2016; Henderson et al., 2019; Hyland, 2013a; Mulliner & Tucker, 2015; Small & Attree, 2016; Weaver, 2006) indicate that although academics think that their written feedback is very helpful for students to improve their learning, students said that they did not use their feedback very effectively when the feedback did not make sense for them. Interestingly, some students said that they did not even read the feedback since it looked very complicated to understand, so they did not understand what their weaknesses were and what they could do to overcome their own weaknesses. Therefore, unfortunately, there seems to be a very big difference between the academic's and the student's perception of written feedback. Small and Attree (2016) assert that if this gap should be closed, students would be empowered to take advantage of written feedback to improve their learning processes by taking responsibility for their own learning. Some researchers (e.g., Kahrizi et al., 2014; Orsmond & Merry, 2013; Schunk, 2003; Veenman, 2017) also argue that if students understand written feedback, they are more likely to develop their self-assessment skills so that they can regulate their own learning environment and effort to improve their learning. We can say that the message in the written feedback should be as clear and understandable as possible to contribute to students' learning processes.

3.2.2 The relation between written feedback, self-assessment, and self-regulation

As mentioned above, students having motivation lead them to take responsibility for learning (Hattie & Timperley, 2007). Winstone et al. (2016) argue that written feedback can support students' motivation if it is carefully structured. Hanh and Ramnath (2016) add that if written feedback includes clear and detailed information about how students can improve their learning, students think that their tutors value them and they are important to their tutors. Therefore, students' motivation is more likely to increase. They also discuss that students took more responsibility for their own learning if their written feedback was clear and well-structured. Similarly, Weaver (2006) asserts that if written feedback explicitly tells students what they need to do to improve their work, they are more likely to take responsibility for learning. Then, they can set their own learning goals to be achieved. In that case, they are more likely to make enough effort to do what was asked of them in the written feedback. It has also been suggested that students who managed to do what was asked of them demonstrated higher motivation and so took more initiative to improve their own learning (Kippers et al., 2018). As a result, these type of students developed their learning processes and content knowledge together. According to these researchers, lecturers should consider student motivation when they structure their written feedback (Hyland, 2013b).

Al-Hattami (2019) conducted research to examine students' and academics' perceptions of the effect of written feedback on student academic achievement in Bahrain. He collected his data by surveying two-hundred students and thirty-seven academics from English Language Education, Arabic and Islamic Studies, and Maths and Science disciplines at the University of Bahrain. A questionnaire was used to collect research data. According to the research result, written feedback has a significant effect on students' learning and their self-regulated learning skills. The researcher also found that written feedback helped students most to develop their work because it motivated them to take responsibility for their own learning. The study also indicated that students who were motivated could better assess their own academic performance to improve their learning. In other words, written feedback also directly supports students' self-assessment skills. Panadero et al. (2017) argue that students who have self-assessment skills are likely to become more effective self-regulated learners because students can identify their weaknesses by themselves and show more effort to improve their own learning.

Yan (2020) conducted his study in Hong Kong to examine the relation between self-assessment and self-regulated learning and their effects on student academic performance. He collected the research data from sixty-three master's students in a teacher-education institute in Hong Kong using a modified version of the Self-assessment Practice Scale. The study result showed that there is a strong relationship between self-assessment and self-regulated learning. If students are motivated, they will evaluate their own learning progress. Therefore, these students are highly likely to detect what their weaknesses are. Then, they can try to find ways to overcome these weaknesses. If they cannot find solutions on their own, they will likely seek help from their tutors or more skilled peers. This situation may still develop students' learning skills because students take responsibility for their learning. Schunk (2003) asserts that written feedback could be designed to enable students to develop their self-assessment skills to detect their own weaknesses. If written feedback manages to help students assess their own learning progress, they will likely set new goals and develop learning strategies to overcome them (Butler, 2010). Students who have the ability to assess their own learning progress are more likely to be able to engage in the subject matter once they develop ways to overcome shortcomings in their learning abilities (Kumar & Stracke, 2007). This may strengthen students' motivation consequently.

Andrade (2010) also asserts that written feedback is a useful tool to help students evaluate their own learning progress. Written feedback gives a chance to students to help them perceive their weaknesses (Kluger & DeNisi, 1996). Students need to use their learning skills to overcome their own weaknesses (Bartimote-Aufflick, Brew & Ainley, 2010; Kahrizi et al., 2014). As noted above, students should have sufficient motivation to take responsibility for their own learning (Liu et al., 2012). Then, they can analyse learning tasks to set their own learning goals. Students who set their own goals can assess their own learning process whether they are on the right track towards the goals. Even if students can assess their own learning with the help of their tutors' written feedback to identify their weaknesses, they may need somebody who has more expertise to improve their learning. In other words, students are expected to take responsibility for their learning, but they cannot manage their learning totally independently (Leenknecht et al., 2017). This helpful element is written feedback in this project.

Carrillo-de-la-Pena et al. (2009) conducted their study to investigate the effect of formative assessment activities and written feedback on student academic performance. A total of five-hundred and forty-eight students from three degrees- Medicine, Psychology, and Biology- from

four Spanish universities were involved in the study. While they utilized formative assessment activities in the experimental group, they did not use them in the control group. At the end of the study, a summative assessment was given to students to measure their learning level. The research result indicated that written feedback enabled students to evaluate their own performance. Moreover, students in the experimental group showed higher summative test scores than students in the control group. According to the research results, written feedback helps develop students' self-assessment skills. The research also showed that students who developed self-assessment skills improved their learning more than those who did not have sufficiently developed self-assessment skills.

These studies indicate that written feedback is the most likely approach to develop students' self-assessment and self-regulated learning skills. Written feedback aims to enable students to develop learning processes and students' content knowledge of the course (Andrade, 2010; Hyland, 1998). Students receiving written feedback need to assess their own performance and then set new goals and plans to achieve them to improve their academic performance. Students' assessment of their own learning is very important to improve their understandings because when they do so, they can see what their weaknesses are and use more effective learning strategies to develop their learning. If students produce better academic works, they will have higher motivation to set more difficult goals to improve their learning. Even if they receive written feedback from their tutors, they need to make sense of the written feedback to understand task objectives and set new goals (Dowden et al., 2013; Panadero, 2017). This is likely to lead students to be at the centre of their learning. In other words, students might become self-regulated learners. Students who can regulate their own learning are highly likely to engage fully in the subject matter they study.

3.3 Summary

From this critique of the existent research literature, we can see that assessment has a considerable effect on student learning because students are then aware of their level of knowledge and where their weaknesses lie. They also receive constructive feedback about how they improve their weaknesses at the end of assessment processes (Guskey, 2005). Summative assessment is used to judge student performance to give them feedback about their level of

progress (Black, 2013; Grosas et al., 2016; Lau, 2016; Taras, 2005). The purpose of formative assessment is to provide feedback to students about their weaknesses, strengths and how to improve their weaknesses during the learning process (Fook & Sidhu, 2013; Mahlberg, 2015; Pla-Campas et al., 2016; Shute, 2008; Wylie & Lyon, 2015). Both summative and formative assessments can be used to provide feedback to students about their level of academic progress (Dawson et al., 2019; Grosas et al., 2016; Mahshanian et al., 2019; Ratnam-Lim & Tan, 2015). For this reason, we can benefit both summative and formative assessments to help students develop their learning processes (Biggs, 1998; Lau, 2016; Mahshanian et al., 2019). Although Taras (2005) argues that summative assessment can positively affect students' learning processes, Barber (2007) asserts that formative assessment focuses more on helping develop students' learning processes because formative assessment aims to help students overcome their weaknesses with time rather than judge students' level of knowledge according to predetermined criteria. Research claims that while formative assessment aims to develop students' learning processes by monitoring their progress, it does not aim to judge students' performance according to predetermined criteria to describe whether they are successful students (Kingston & Nash, 2011; Leenknecht et al., 2021; Pla-Campas et al., 2016). Hence, we can say that formative assessment is more likely to contribute to students' self-regulated learning skills.

Formative feedback can be provided as verbal and written (Clark, 2012; Hansen, 2020). Verbal feedback could be very useful to help students improve their learning because tutors can give quick feedback to their students about their weaknesses and what they need to do to overcome them (Craig & Burke da Silva, 2014; Dowden et al., 2013; Fong et al., 2019; Hylan, 2013). Yet, Li and De Luca (2014) argue that it may be difficult to give detailed information to students through verbal feedback because tutors may have limited time and may give feedback without thinking too much. Additionally, tutors may not have opportunities to give verbal feedback to all students and students can forget their verbal feedback after lectures (Mulliner & Tucker, 2015; Price et al., 2011). Written feedback is used to give detailed information to students and tutors may have opportunities to give written feedback to all students because tutors may have sufficient time to structure written feedback to give helpful instructions to all students about how they can improve their learning (Arts, Jaspers & Joosten-ten Brinke, 2021; Mahfoodh, 2017; Voelkel, Varga-Atkins & Mello, 2020). Then, students are likely to take responsibility for their own learning as they might act on written feedback (Hanh & Ramnath, 2016; Kumar

& Stracke, 2007). So, they can develop their self-regulated learning skills (Teng & Zhang, 2020).

Consequently, we might argue that as long as students set their own goals and use more effective learning strategies to achieve the goals they set, they will be likely to better engage with the discipline they study. Thus, assessment and learning activities should be designed to enable students to take responsibility to set their own goals and develop effective learning strategies to attain them (Dann, 2014; Evans, 2013). In the literature, although there is a lot of research that supports that formative assessment has a strong effect on students to become self-regulated learners (e.g., Mahlberg, 2015; Panadero et al., 2017; Wylie & Lyon, 2015; Yorke, 2003), there are few studies that investigated the effect of written feedback on student self-regulated learning skills (e.g., Butler & Winne, 1995; Muwonge et al., 2017; Teng & Zhang, 2020). Nicol and Macfarlane-Dick (2006) discuss that written feedback is one of the most important tools of formative assessment, to give responsibility for learning to the student. Hattie and Timperley (2007) assert that written feedback can be used to help students develop their learning processes and self-regulation. Therefore, I aim to explore how academics think they use their written feedback to help students become self-regulated learners. The second research question of this study is:

R.Q. 2: What are academics' perceptions about how their written feedback enables their students to become self-regulated learners?

As presented in research question 1 and research question 2, I aim to explore variances in tutors' perceptions of self-regulated learning and variances in the use of their written feedback to help develop their students' self-regulated learning skills. I will explain how I answered the research questions in the Methodology chapter, which is the next chapter.

Chapter 4: Methodology

4.1 Introduction

Having reviewed the literature on self-regulated learning, formative assessment, and written feedback, I turn now to the design of the research study and the methods of data collection and analysis used. This chapter, therefore, aims to introduce the methodological framework for this research. First, I will discuss the ontological and epistemological standpoints of this research. Then, I will introduce two main paradigmatic approaches: positivism/objectivism and interpretivism/constructionism. I will discuss the differences between these two paradigmatic approaches, and then explain why I selected a particular paradigm for this research. Discussing why I selected a particular paradigm will lead the reader to understand the purposes of the research and why I selected a specific data collection method and a specific data analysis approach. Next, I will explain the participant selection process and ethical issues to indicate how I anonymised the participants and protected their dignity and rights during the research. Since semi-structured interviews are the data collection method, I will explain how I designed and conducted interviews to give more information about the interview questions and the interview processes. After that, I will explain which steps I followed to analyse the research data. Then, I will discuss issues of trustworthiness and credibility of the study. Finally, I will conclude the chapter with a summary.

4.2 Research paradigm

There are ontological and epistemological standpoints of every research. Ontology is briefly defined as ‘the study of being’ (Crotty, 1998, p.10). It concerns the nature of existence and structure of reality (Crotty, 1998). Snape and Spencer (2003) argue that ontology is concerned with what it is possible to know about the world. Richards (2003) adds that ontology is comprised of assumptions that deal with the nature of reality and what exists. Bryman (2008) argues that if ontology is concerned with the nature of social entities, it is labelled as ‘social

ontology'. Social entities can be either objective entities that are independent of the individual's perceptions and interpretations or can be subjective entities that are constructed by the individual's perceptions, beliefs, and interpretations (Ormston, Spencer, Barnard & Snape, 2014). Briefly, ontology is concerned with our beliefs about the kind and nature of reality and the social world.

Epistemology concerns the nature of knowledge and how it is possible to find out about the world (Snape & Spencer, 2003). Crotty (1998) defines epistemology as individuals looking at the world and develop meanings by using their senses. Cohen, Manion and Morrison (2007) define epistemology as the assumptions someone makes about 'the very bases of knowledge – its nature and form, how it can be acquired and how it is communicated to other human beings' (p.7). These authors stress that epistemological assumptions that individuals hold deeply affect how they go about uncovering knowledge. That is, if knowledge is viewed as tangible and objective, the researcher needs to use natural science methods such as testing, measuring, and doing an experiment (Cohen et al., 2007). However, if knowledge is viewed as personal and subjective, the researcher cannot use natural science methods because that knowledge depends on people's perceptions and values (Cohen et al., 2007). In other words, the researcher needs to interpret knowledge according to people's and their own perceptions and values.

There are a range of ontological and epistemological positions that researchers can adopt, and which will inform their studies. There are two main paradigmatic approaches: Positivism/Objectivism and Interpretivism/Constructionism. Positivism/Objectivism concerns the importance of objectivity and evidence in discovering truth and knowledge is not affected by the researcher. In positivism, facts and values are distinct. Therefore, this gives a chance to the researcher to conduct objective and value-free inquiry (Snape & Spencer, 2003). In other words, researchers have to stay away from the findings not to affect it with their perceptions and values. It has been said that the nature of knowledge is discovered without people's consciousness (Crotty, 1998). In this paradigm, the truth is static and objective. This objective and static truth can be discovered if researchers use appropriate research designs. These ways are described as scientific methods because knowledge is seen as objective, value-free, generalizable, and replicable (Wellington, 2000).

Interpretivism/Constructionism focuses on knowing about the world according to our perceptions, values, and interpretations (Bryman, 2008). In other words, knowledge is

constructed by our perceptions and interpretations of the world around us in addition to direct observation. In this paradigm, since knowledge is subjective and personal, it is explored rather than discovered (Crotty, 1998). Natural science methods are not suitable for this approach because there are countless perceptions and understandings of reality (Ormston et al., 2014). While researchers have to stay away from the findings in positivism, researchers should be close to the findings to construct meanings from their participants' perceptions of knowledge in interpretivism (Snape & Spencer, 2003). Facts and values are not distinct and objective. So, researchers cannot conduct value-free inquiry because findings are affected by researchers' perceptions and values (Cohen et al., 2007). Finally, while the research process is inductive in interpretivism, the research process is deductive in positivism (Bryman, 2008). That is, while in interpretivism, on the one hand, researchers need to construct a theory by using the data collected, in positivism, on the other hand, researchers need to use the data collected to test or examine a theory that has already existed. I find this juxtaposition to have great value considering the nature of my research.

In my research, I aim to explore tutors' perceptions of self-regulated learners. Then, I aim to explore how these same tutors believe they use their written feedback to support their students to become self-regulated learners. Since I aim to explore the nature of a construct and how it is understood, I take an interpretivist view which allows researchers to build a close relationship with the data collected from participants. This research paradigm is likely to give me a chance to deeply engage with tutors' perceptions, beliefs, and values about self-regulated learners and how they use written feedback to support their students' learning.

4.2.1 Interpretivism

A multitude of scholars argue that interpretivist paradigm presents researchers with the opportunity to see the world from participants' experiences and perspectives (Grix, 2004; Guba & Lincoln, 1994; Klen & Meyers, 1999; Morehouse, 2011; Thanh & Thanh, 2015; Tuli, 2010). A researcher working within the interpretivist paradigm is able to construct their understanding by listening to and understanding individuals' experiences (Mallon, 2007). Interpretivism helps scholars explore the participants' world (Brand, 2009). Willis (2007) indicates that

interpretivism seeks to get insight into specific context and allows researchers to view the issue from different angles. He also states that knowledge is socially constructed in interpretivism (Willis, 2007). For this reason, this paradigm might be compatible with those who aim to explore a phenomenon in a group of people. While positivism seeks rigid realities and rules regarding a particular topic, interpretivism accepts various perspectives, supports researchers to be open-minded to all possible views, and helps promote participatory and holistic research (Willis, 2007).

Thanh and Thanh (2015) assert that interpretivist research is more subjective than objective. Willis (2007) argues that interpretivists acknowledge that objective research on individuals' experiences and thoughts is not possible. Therefore, researchers using interpretivism do not seek reality in rigid ways, they seek reality by interpreting the experiences, understandings, and perceptions of individuals (Irshaidat, 2019). Participants having a wide range of experience may give rich data to the researcher. So, it might help the researcher gain deep insight into the issue (Schwandt, 1998). Goldkuhl (2012) argues that reality can be surprisingly diverse, yet valid, as it depends on the multiple perspectives of individuals. Researchers' interpreting multiple perspectives of individuals is likely to present more comprehensive descriptions of the phenomenon (Kelliher, 2005).

Scholars report that interpretivists generally use qualitative research methods in data collection since these research methods can present rich data that helps researchers to comprehensively understand the context (Nind & Todd, 2011; Silverman, 2000; Thomas, 2003). Thomas (2003) adds that researchers who decided to use interpretivism need to use qualitative research methods because it allows researchers to "portray a world in which reality is socially constructed, complex, and ever changing…" (p.6). Creswell (2009) argues that qualitative research methods enable scholars to explore the meaning related to social problems. Therefore, qualitative methods are appropriate for those who seek to understand the perceptions and experiences of individuals (Cova & Elliott, 2008). The purpose of interpretivism is to deeply understand the issue identified by researchers (Punch, 2009). In this research approach, the researcher is more likely to take an interactive role to get to know the participants and this may help researchers make better sense of what participants say (Brand, 2009). For these reasons, I decided to use interviews, one of the qualitative methods of data collection, because it might allow me to interpret the participants' experiences and perceptions about self-regulated learning, and written feedback.

Interpretivism claims that there are various realities that describe a phenomenon (Guba & Lincoln, 1994). With regard to this view, the reality is dependent upon individuals' construction of reality for themselves, so realities are changeable in respect to place, context, and time (Benton & Craib, 2010). Therefore, individuals' opinions regarding a notion are very important (Rowlands, 2005). As an epistemological term, interpretivism "eschews the notion that knowledge exists independently in the external world, embracing rather the view that knowledge is holistic, and the relationship between the knower and the known is interactive and inseparable" (Lincoln & Guba, 1985, p. 37). Therefore, a study following the interpretivist approach seeks meanings, perceptions, similarities, and differences from individuals' expressions about a notion that is under investigation (Williams & May, 1996).

If a realist/positivist perspective was implemented in this study, self-regulated learning would be a concept independent of people's perspectives and experiences (Ron, 2004). Therefore, it might be something that can be measured, if self-regulated learning is treated as tangible and as a single notion. Although there are a number of questionnaires to gauge people's self-regulated learning skills, it is too difficult to say those psychometric tests measure people's skills 100% correctly (Gaus, 2017; Mallon, 2007). Hence, researchers not only use quantitative methods, but they also apply qualitative methods to investigate a phenomenon (Hogg & Maclaran, 2008). Interpretivism is a good way to clarify the relation between the external world and the individuals who experience it (Malhorta & Birks, 2003). It enables the researcher to explore knowledge (Schwandt, 1998). While interpretivism claims that reality is constructed as a consequence of interaction between subject and object, it acknowledges the existence of an external world at the same time (Grix, 2004; Scotland, 2012). In interpretivist view, knowledge is constructed between the knower with their experiences and the known (Tuli, 2010). Therefore, there may be various subjective 'definitions' of a particular phenomenon. To address and resolve this, I aim to explore variances in academics' perceptions and understandings about self-regulated learners. I thought that phenomenography would be appropriate for my research purpose, as it focuses on and aims to explain such variances. All these reasons led me to apply phenomenography as a research approach. My research questions are:

1. How do academics conceptualise self-regulated learners?
2. What are academics' perceptions about how their written feedback enables their students to become self-regulated learners?

4.3 Phenomenography

Phenomenography was primarily developed as a new research approach by Swedish educational researchers during the 1970s (Marton et al., 1977; Marton & Svensson, 1979; Säljö, 1979). Ference Marton first used phenomenography to explore differences in student learning approaches. The purpose of his research approach was to explore answers to questions related to how people learn and understand knowledge in a specific context (Marton & Booth, 1997; Svensson, 1997). Using phenomenographic research in different contexts to explore experience of learning leads it to include the most typical experiences (Edwards, 2007). Moreover, the development of phenomenography has continued in the discipline of education (Yates, Partridge, & Bruce, 2012). Phenomenography is most frequently defined as "a research method for mapping the qualitatively different ways in which people experience, conceptualise, perceive, and understand various aspects of, and various phenomena in, the world around them" (Marton, 1986, p. 31). Phenomenography helps us describe subjective experiences because people collectively experience and understand phenomena in qualitatively different ways, though they are often interrelated (Harris, 2008). In the phenomenography, the object and the research subjects are viewed together, so it can be said that phenomenography is a relational approach, exploring relations between the object and the research subjects (Limberg, 2000). Thus, when phenomenography creates inseparable relations between subject and object, the phenomenon as a whole is well-represented.

4.3.1 Assumptions of phenomenography

Researchers have developed phenomenography as "a reaction against, and an alternative to, the then-dominant tradition of positivistic, behaviouristic and quantitative research" (Svensson, 1997, p. 171). There are ontological and epistemological assumptions within the phenomenographic approach (Cope, 2004). According to these epistemological assumptions, experience is interpreted in terms of the principle of intentionality (Marton & Pang, 2008). This principle is based on a non-dualist view of human consciousness (Pang, 2003). Therefore, experience is formed through interactional relations between people and the world that is described as a human-world relationship (Bowden & Marton, 1998). Marton and Pang (2008, p. 535) described the intentional nature of human experience by indicating that a person "cannot experience without something being experienced". So, a variety of meanings related to the

phenomena of interest, and the differences and similarities in these meanings constitute knowledge in phenomenography (Svensson, 1997). Those various meanings and experiences describe ‘collective consciousness’ about a phenomenon (Marton & Booth, 1997).

According to ontological assumption, phenomenography is associated with the interiority of human beings and the reality of the world (Denzin & Lincoln, 2003). While research approaches are generally underpinned by a dualist ontology, in which the individual and the world are analysed as two distinct views, phenomenography is based upon a non-dualist ontology, in which the individual and the world are analysed as inseparable views that are related to each other (Svensson, 1997). Marton expresses his ideas about phenomenography’s non-dualistic ontology as follows:

> There are not two worlds: a real, objective world, on the one hand, and a subjective world of mental representations, on the other. There is only one world, a really existing world, which is experienced and understood in different ways by human beings. It is simultaneously objective and subjective (2000, p. 105).

According to this idea, the main purpose of phenomenographic research is to explore the inseparable relationship between individuals and their perspectives of the world (Pang & Marton, 2003). Svennson (1997) explains further: those ontological assumptions of phenomenography become epistemological in a broad sense because research objects in this approach can be interpreted by the subject. Explanations indicate that in addition to the existence of an external world, individuals’ experiences are important for phenomenographic research as well (Bowden, 2000). This association between independent object and subject’s experience is defined as second-order perspective in this research approach (Marton & Pang, 2008).

4.3.2 A second-order perspective

Marton (1981) defines perspectives as ‘first-order’ and ‘second-order’ perspective. The former aims to portray various aspects of the world and the latter aims to portray individuals’ experiences of various aspects of the world (Marton, 1981). Marton defines the first-order perspective as being “from the outside” and the second-order perspective as being “from the

inside" (1981, p. 171). Marton (1981) explains further about these terms: while first-order perspective looks for real meaning of something, second-order perspective is concerned with how a phenomenon is perceived. As a result, the second-order perspective affects the construction of research questions (Marton & Booth, 1997). Questions are asked in the form of 'how' and 'what' rather than the form of 'why' (Marton & Booth, 1997). For example, I asked one of my research questions as 'How do academics conceptualise self-regulated learners?' (second-order perspective) instead of 'Why do academics want to make their students as self-regulated learners?' (first-order perspective).

Phenomenography is concerned with examining the main features of variation in how individuals experience a specific phenomenon rather than creating these features as cognitive processes (Barnard, McCosker & Gerber, 1999). Marton (1986, p. 32) clarifies this situation as an interest in "content of thinking rather than the process of thought or perception". 'Content of thinking' is another explanation of the knowledge object of phenomenography, which is the inner relation between individuals and their worlds (Cousin, 2008b). The focal point of a 'knowledge object' is that phenomenographic research accepts that all individuals' experiences of the phenomenon are logical and valid (Harris, 2008). Therefore, the second-order perspective helps researchers interpret participants' perceptions of a specific phenomenon to explore human's consciousness as an object of research (Bowden, 2000). This may lead to the emergence of various definitions about the phenomenon, which are described as 'knowledge interests' in phenomenographic research (Marton, 2000).

4.3.3 Knowledge interests of phenomenography

The knowledge interests of phenomenography aim to uncover variations in people's experiences to constitute experiential definitions of this variation (Marton & Booth, 1997). Marton and Pang state that the purpose of the knowledge interests of phenomenography is to analyse "the anatomy of the experience itself, rather than on the anatomy of the mind underlying the experience" (2008, p. 543). The term 'ways of experiencing' is used to describe the knowledge interest of phenomenography (Marton & Booth, 1997). This term is defined as an "internal relation between the experiencer and the experienced" (Marton & Booth, 1997, p.

113). Marton (1996) also explains a way of experiencing as something that depends on an individual's consciousness or awareness. He argues that awareness is an individual's total experience of the world, but individuals are aware of everything simultaneously in different ways.

Marton and Booth (1997) argue that 'experience' consists of two main parts. These are referential and structural aspects (Yates et al., 2012). While the referential aspect describes the particular meaning of an experience, the structural aspect represents the structure of an experience (Yates et al., 2012). These two parts occur simultaneously to present an experience (Marton, 2000). The structural aspect of an experience is described as all features that the subject notices and sees in the object (Marton & Pang, 2005). It includes two elements which are 'external horizon' and 'internal horizon' (Marton & Pang, 2005). While the external horizon refers to what is in the background of the experience, the internal horizon refers to the whole phenomenon and the relationship between its parts themselves (Marton & Booth, 1997). Marton and Booth (1997) define it as 'the anatomy of experience' and use a diagrammatical way to represent it as indicated in Figure 4.1.

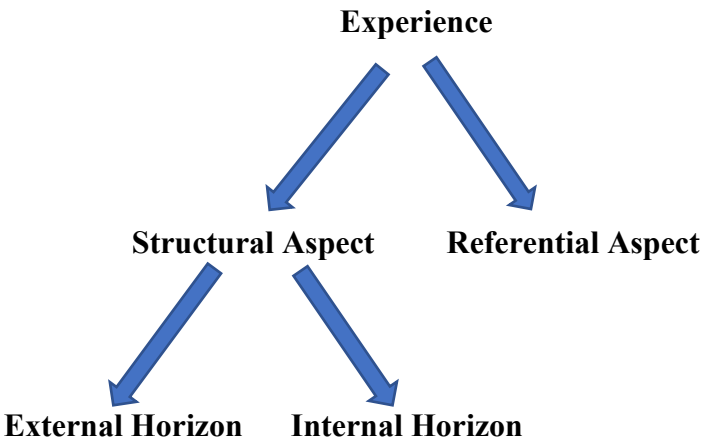

Figure 4.1: The anatomy of experience (Marton & Booth, 1997, pp.88)

Marton and Booth (1997, pp.87) give an example to make the definitions of the elements in the diagram above more explicit. Imagine a deer (the phenomenon) that appeared in the forest. There is a background in the environment where the deer is located. For example, there is the forest where the deer is located, the grass is there, and the trees around the deer. These parts

form the external horizon of the experience. Then the entire deer and the parts of its body is discerned. For example, the deer's antler, legs, and even its stance can be important details to be discerned. These parts form the internal horizon of the experience. So, the external horizon and the internal horizon together create the structural aspect of the experience (Marton, 2000). If an individual sees this deer, they will interpret its appearance with their previous experiences. In other words, an individual describes this deer from his or her own perspective. Individuals' descriptions of the deer (the phenomenon) may become different from each other due to having different prior experiences. This is the referential aspect of the experience (Marton, 2000). Finally, the combination of the structural and referential aspects forms the experience itself (Marton & Pang, 2008). Consequently, data has been collected based on these philosophical views and descriptions explained above.

4.3.4 Data collection in phenomenography

The main method for data collection in phenomenography is the face-to-face interview (Ashworth & Lucas, 2000). There are also some other data collection methods such as written surveys, focus groups and drawings (Edwards, 2007). I used the interview method to collect my data, because it was more suitable than others for my research. Bruce (1994, p. 44) explains that the features of phenomenographic interviews are:

- they are centered on the interviewee's life-world;
- they seek to understand the meaning of phenomenon in the interviewee's life-world;
- they are qualitative, descriptive, and specific;
- they are focused on certain themes;
- they are open to ambiguities and change;
- they take place in an interpersonal interaction;
- they may be a positive experience.

In addition to this information, phenomenography is concerned with capturing participants' awareness and experiences in how a phenomenon is perceived even if the data is collected at an individual level (Harris, 2011). In other words, collecting data at an individual level enables

researchers to structure collective awareness of how a specific phenomenon is experienced (Svensson, 1997).

I used the semi-structured interview for my research since it seemed to help me gain insight into academics' views of self-regulated learning. Trigwell (2000, p. 68) describes the semi-structured interview as researchers "exploring thinking at greater and greater depths without leading". In addition to this idea, this type of interview is supposed to create a conversational environment giving participants the freedom to help them express their opinions (Ashworth & Lucas, 2000). Open-ended questions are a natural way of gathering participants' experiences about a particular phenomenon, because those questions give opportunities to participants to choose which aspect of the question they want to answer (Marton, 1994). Therefore, open-ended questions allow researchers to follow unpredictable ways of reasoning which might result in new reflections (Booth, 1997). The semi-structured interview method serves to make phenomenographic interviews happen, because it is required that the interviewer does not introduce any thoughts that the participant has not mentioned (Åkerlind, Bowden & Green, 2005). Bowden (2005) argues that the researcher is expected to avoid making positive or negative comments about the participant's ideas in the interview process.

The purpose of semi-structured interviews in phenomenographic research is to uncover variation between participants' experiences about the phenomenon that is being explored (Åkerlind, 2005a). This interview model focuses on the relationship between the participant and the phenomenon rather than only the phenomenon itself (Bowden, 2005). Semi-structured interviews in phenomenographic research aim to elicit participants' various perspectives in terms of how they define the phenomenon (Svensson, 1997). For this reason, the interviewer should create a conversational environment to help interviewees feel comfortable in expressing their honest opinions (Ashworth & Lucas, 2000). To do this, the interviewer should not explain their own understanding of the topic, so as not to affect interviewees' thoughts (Bowden, 2005). The interviewer should ask non-directive questions to interviewees to learn their ideas from different angles (Bowden, 2005).

Cope (2004) advises that interview questions should be designed to explore participants' opinions from different perspectives. Facilitating participants' giving concrete examples of current experiences is more likely to lead researchers to be able to explore underlying meanings in participants' explanations (Åkerlind, 2005a). Each question in the interview should be asked

to illuminate angles of the structure of awareness which form the phenomenon (Cope, 2004). This situation enables the researcher to understand the internal and external horizons of the phenomenon (Cope, 2004).

4.3.5 Interview design

I designed the interview schedule according to a model structured by Åkerlind (2005b). For him, interview questions are supposed to increasingly focus on the phenomenon. Therefore, I designed the interview questions to move from the general to the specific. I aimed to understand academics' general ideas about the phenomenon by asking a general question and helped them talk about it in detail with several specific follow-up questions. In this case, a researcher is more likely to enable participants to engage with the interview because for Bruce (1994), participants may become unfamiliar with the research and therefore may not be too close to interview questions as well. Researchers' beginning the interview by asking a general question might give an idea about the researcher's purpose or scope. My interview questions are gathered under three main headings:

1. Formative Assessment
2. Written Feedback
3. Self-regulated Learning

Concerning the first interview questions, I intended to learn academics' opinions about formative assessment because in the literature, formative assessment is crucial to help students develop self-regulated learning skills. The first heading is very important to help academics express their opinions about how they use formative assessment to help develop their students' learning. The second heading is about written feedback since written feedback is a vital tool of formative assessment to contribute to students' learning too (Black & Wiliam, 1998). I asked questions about self-regulated learning at the end because I thought that academics were not likely to express their ideas about self-regulated learning in a relevant, coherent manner if I asked it in the first group of questions. I thought that if I asked formative assessment and written feedback at the beginning, they would have had a chance to think more about self-regulated learning because I assumed that self-regulated learning was less likely to sound familiar to most

of the participants. I then asked questions about the effect of formative assessment and written feedback on students' self-regulated learning skills. As mentioned before, there is a strong relation between formative assessment and self-regulated learning (Black & Wiliam, 2009; Panadero et al., 2017). Therefore, I intended to understand the participants' views about formative assessment and then their views about self-regulated learning. I also tried to understand the relation between their views on written feedback and self-regulated learning. For these reasons, the interview questions were formed as they were around the three main headings.

The interview included eleven questions, but I asked more questions to several interviewees because their explanations directed me to explore further, to understand their responses better. In this way, I felt that I was able to deeply engage with my participants' understandings of the phenomenon. Probing questions are important in phenomenographic interviews to help participants express their views in detail (Ashworth & Lucas, 2000). In addition to the interview questions, I also used probing questions to encourage them to give fuller explanations of their views. Some of the prompts I used are 'tell me more about that…', 'what do you mean by that, because I did not understand well…', 'can you please tell me more of how you felt about that…'. These expressions helped me better understand the main thrust of their explanations because I encouraged them to talk more and to give their views from different perspectives. A copy of the interview questions is presented in appendix A.

4.3.6 Participant selection and sample size

Purposive sampling strategy, which is compatible with phenomenography, was used when participants were selected for the research (Yates et al., 2012). Participant selection was done to capture a range of perspectives to reveal variation in experience of the phenomenon (Green, 2005). I recruited the participants from the Faculty of Science, the Faculty of Arts and Humanities, and the Faculty of Social Sciences and Health to cover all faculties at Durham University. Researchers should select appropriate participants for their study, and they should also consider whether these participants have experience of the phenomenon which is being explored (Marton, 2000). Reflecting upon this, I aimed to make my sample purposive. Ashworth and Lucas (2000, p. 300) state that 'selection of participants should avoid

presupposition about the nature of the phenomenon, or the nature of the conceptions held by particular "types" of individuals while observing common-sense precautions about maintaining "variety" of experience'. Therefore, it can be said that participants in phenomenographic studies are deliberately selected by the researchers according to the phenomenon being explored (Cope & Prosser, 2005). The participants were selected according to the criteria below:

1. Academics are from Faculty of Arts and Humanities, Faculty of Social Sciences and Health, Faculty of Science
2. Interviewees include Assistant Professors, Associate Professors and Full Professors
3. They currently work in the university
4. There are both male and female participants

I endeavoured to interview the same number of academics from each faculty, but I was not able to do that because some academics invited to participate in the study chose not to, due to busy schedules or other work commitments. I interviewed nine academics from the Faculty of Arts and Humanities, twenty academics from the Faculty of Social Sciences and Health, and eleven academics from the Faculty of Science. As a researcher, I felt that I received sufficiently rich data from each faculty when I checked the transcripts. I also tried to interview the same number of Assistant, Associate and Full Professors, but again I struggled to meet this target. Therefore, I decided to interview available academics who agreed to participate in my research. I interviewed twenty-two Professors, five Associate and thirteen Assistant Professors from a wide range of disciplines. As a result, forty academics participated in my research. Although my original approach to sampling was purposeful, it ended up becoming an opportunity sample. I did my pilot study with three academics to test the interview questions. While two of the three academics participating in the pilot study are from the Faculty of Arts and Humanities, one is from the Faculty of Social Sciences and Health. All three academics in the pilot study were Assistant Professors. However, I did not use the data collected from my pilot study in the main study. I used these interviews to improve my interview questions and gain experience before I did my main interviews. So, I have three participants for my pilot study and thirty-seven participants for the main research, reflected in the table below:

Table 4.1 The number of the participants

	Faculty of Arts and Humanities	**Faculty of Social Sciences and Health**	**Faculty of Science**
Assistant Professor	1	7	2
Associate Professor	1	3	1
Full Professor	5	9	8

In terms of sample size, Bruce (1997) suggests that the data should include sufficient and suitably rich information regarding the phenomenon of interest. Bowden (2005) points out that there are two factors that affect the sample size in phenomenographic studies. The first factor is that sample size is concerned with giving opportunity to the researcher to find variation in reflections. The second is that the number of interviews needs to include a manageable amount of data for the researcher. In this regard, I think that my sample size has suited both factors.

4.4 Ethical considerations

Social researchers must consider the effects of research on participants and protect their dignity as human beings no matter what their work is about (Brand, 2009; Cova & Elliott, 2008; Ellis, 2016; Forster, 2013; Gaus, 2017; Irshaidat, 2019). Therefore, I considered the ethical issues at every stage to preserve my participants' dignity and rights during the data collection. The research was carried out according to the code of conduct prescribed by Durham University, School of Education, and the British Educational Research Association's Ethical Guidelines for

Educational Research (2011). The School of Education ethics committee approved the ethical form of the study in 2018. A copy of the ethics approval email is presented in Appendix C.

Participants were informed about the research study through email with a participant information sheet. A participant information sheet includes the research aim, research questions and explanation of the methodology. A copy of the participant information sheet is presented in Appendix D. Participants were informed that the interviews would be recorded by mobile phone and voice recorder. After the thesis was completed and submitted, they were reassured that the interviews and recordings would be destroyed. Some researchers (e.g., Cohen et al., 2007; Kim, 2010; Kvale & Brinkmann, 2009; Morehouse, 2011; Nind & Todd, 2011; Ormston et al., 2014; Thanh & Thanh, 2015) assert that informing people that their identity will be anonymised, and dignity will be preserved is a very important way to convince them for interviews. Thus, participants were also informed that the interviews would be anonymised and coded to protect their confidentiality. Participants' identities were protected by coding only their academic titles with letters and numbers and not using their names for coding. Participants were told that only the researcher and the supervisors of the research could get access to the recordings and transcripts. Participants were told that they could leave the interview whenever they wanted, and it was also their choice whether to answer the questions or not. After participants were informed about the research, they were asked if they have any questions about the research. Finally, they were given the consent form to sign if they agree to participate in the interview. A copy of the blank consent form is presented in appendix E. As a result, forty academics agreed to participate in the interview.

4.5 Conducting interviews and pilot interviews

To test and refine questions, the first three interviews were carried out as pilot study. The purpose of a pilot study is to help researchers make their interviews more relevant to the methodology and remove any barriers to the study (Forster, 2013; Kim, 2010). It gives a chance to the researcher to check suitability of interview questions and enables researchers to develop their interviewing skills (Bowden, 2005). Pilot studies may lead researchers to prepare for unexpected difficulties too (Cope, 2004). It is very important to have good conversational skills in interview because researchers are supposed to ask questions related to the topic even if the

interviewee mentions irrelevant things (Green, 2005). When I started the first pilot interview, I finished it earlier than expected because I asked direct questions from the first participant without building a good relationship with her. Therefore, I was not able to ask some questions relevant to main interview headings mentioned above. After the first interview, I reflected on it to identify my weaknesses. I realised that I should have opened up the conversation to obtain more information from the first participant. The second interview took much longer than the first interview, but this time, I noticed that I talked much more than I was supposed to. Moreover, I explained several terms to make my questions more explicit for my second interviewee. It was a mistake, because though I was eliciting answers of my participants without directing them, I directed the second participant by giving my own thoughts about the questions and some terms. The third pilot interview turned out much better than the others because I managed to open up the conversation, helping the participant give more information to me. I was able to ask further questions on the topic based on the participant's responses. More importantly, I did not dominate or slow down the conversation in explaining terms for the participant. However, I noticed that I should have listened to the participant more carefully because if I had, I would be able to ask better questions to acquire more beneficial information from the interviewee. At the end of the third pilot interview, I felt more confident, more able to conduct the remaining interviews according to the purposes of my research.

I interviewed forty academics from three faculties at Durham University over six months. While three of them were pilot interviews, thirty-seven academics were interviewed for the main data collection. I was invited to conduct my interview at academics' offices at a particular time and the day. At the beginning of the interview, I gave brief information about the research again to all participants to eliminate any potential ambiguity in the interviewees' understandings. After that I gave them an information sheet and consent form to inform them about their rights and ensure them that their personal information was secured. I also told them that they can withdraw the interview at any time. I said to them that they can answer any questions they like, and they do not have to answer any questions that they cannot or do not want to answer. After that I began to interview the participants if they agreed to the process. All participants openly and willingly responded to all interview questions and said that they were glad to participate in the research because the questions were about learning, teaching, and assessment in higher education. Although some participants were not familiar with the term self-regulated learning, they endeavoured to talk about it, which was helpful conversation for me, too. All interviewees did their best to contribute to the data collection. Most interviews lasted between forty and sixty

minutes. All interviews were recorded by both mobile phone and voice recorder to ensure information from the participants was not lost. Finally, I transcribed all interviews verbatim myself.

4.6 Data analysis in phenomenography

The purpose of phenomenography is to describe conceptions related to one specific phenomenon of interest that is being examined (Svensson, 1997). Therefore, the data analysis in phenomenographic research is concerned with revealing variation in conceptions of the specific phenomenon that is investigated by the researcher (Bruce, 2000; Limberg, 2005).
There is no particular technique to analyse phenomenographic data in the literature. While some authors criticize this lack of a septic data analysis technique or process (Francis, 1996; Richardson, 1999; Säljö, 1997), others argue that a particular process is not necessary or desirable because of the nature of this research approach (Bruce, 1997; Prosser, 2000).
Åkerlind (2002) argues that although phenomenography lacks a specific process of analysis, there are several common helpful practical principles to enable researchers to analyse the data. The researcher can ignore or narrow down predetermined thoughts about the topic chosen; the researcher needs to gather experience and create categories of description by using individual interviews; and the researcher needs to construct relationships between variation in conceptions of interview transcripts (Åkerlind, 2005c).

Bruce (1997, p.104) states that the process of analysis is “an interplay between the researcher’s understanding, the nature of the phenomenon being studied and the style of the available data”. Hence it can be said that the outcomes of the analysis process are between the researcher and the data (Prosser, 2000). The researcher needs to think deeply and engage with how participants describe the phenomenon and what they said rather than simply recording their words (Walsh, 2000). Furthermore, the researcher is required to view all data together rather than concentrating on what participants say separately to designate the main ideas and the relationship between them (Marton & Booth, 1997).

Marton, Carlsson and Halasz’s (1992) early work proposes that data analysis in phenomenography follows a four-step approach. The first step is designating similar data as

‘pools of meaning’; the second step is classifying similar data from ‘pools of meaning’; the third step is comparing groups of similar data and creating a category of description for each; and the fourth step is to form reliability of the research, by engaging with an independent judge.

Säljö (1997) adds two more steps to the approach explained above. The first one is that the researcher is required to perceive the data very well to identify patterns in it. Second, conceptions are needed to be understood by the researcher in questioning how the phenomenon was perceived. Furthermore, Sandbergh (1994, p. 86) suggests a five-stage approach for data analysis in phenomenographic research. These stages include “becoming familiar with the transcripts; the referential aspect of the analysis; the structural aspect of the analysis; the intentional constitution of the conception and establishing the outcome space of the conceptions”.

Some researchers use more stages to analyse their data (Dahlgren & Fallsberg, 1991; McCosker, Barnard & Gerber, 2004). These additional stages include “familiarisation, condensation, comparison, grouping, articulating, labelling and contrasting”. Although there are several data analysis paths as mentioned, I preferred to benefit from all of them rather than to follow only one because the aim of using data analysis processes or techniques is to identify categories which express the phenomenon under investigation in a variety of ways (Edwards, 2007). The purpose of categories is to describe the phenomenon in a collectivist way rather than an individualistic way, even as they they are concerned with experiences of the phenomenon, not people in the research (Åkerlind, 2005c). All in all, the consequence of the phenomenographic research is to illustrate categories of description and an outcome space (Marton & Booth, 1997).

In this study, I benefitted from the literature associated with self-regulated learning such as self-efficacy, motivation, goal-setting process, learning strategy usage, and self-assessment for data analysis because I thought that it would be better for me to use the data more efficiently. In other words, using the literature from a broad perspective allowed me to evaluate my data in more detail. For example, when I structured the categories, I tried to evaluate the data in terms of self-efficacy, motivation, goal-setting process, learning strategy usage, and self-assessment. Therefore, in all categories, I tried to describe self-regulated learners by using these terms. I read the transcripts to identify keywords associated with motivation, self-efficacy, goal-setting process, and self-assessment. Then, I tried to connect

these terms with each other to make more sense to help me structure the categories. Finally, I critically evaluated the data in the four different categories that emerged.

4.6.1 Familiarisation and condensation

Before reading the transcripts, I listened to the recorded interviews several times to better engage with the data (Åkerlind, 2005a; Svensson, 1997; Trigwell, 2000). This helped me to feel a closeness to the participants, too. Then I began to read the transcripts when I felt ready. In the first reading I focused on the group as a whole. In the second reading, I focused on individual transcripts. After the second reading, again I focused on the transcripts as a whole. I did this process two times to better familiarise myself with the transcripts. I made summaries of the transcripts and wrote down key words related to the term self-regulated learning in my notebook to remind myself later. When reading the transcripts, I tried to connect all key descriptions to create a big picture to follow. I read the transcripts many times because I realised that when I read a particular transcript more than once, I created a different, and deeper, meaning every time. This situation enabled me to see the transcripts from various angles. Since English is my second language, reading transcripts took a long time for me. Moreover, repeated reading of the transcripts helped me to understand the participants' different perspectives. I tried to be as open-minded as I could to consider all participants' words and views. Finally, I endeavoured to identify similarities and variations in the transcripts.

4.6.2 Identification and selection of data

I grouped the data according to the faculties. Then, I selected key sections of the transcript reflecting what participants thought about self-regulated learning and the effect of written feedback on it. Afterwards, I compared these sections to identify similarities and differences to categorise them. I separated these themes to write similar sentences under their respective themes because it was easy to compare participants' thoughts and definitions about the issue this way (Kettunen & Tynjälä, 2018; Prosser, 2000; Trigwell, 2000). I read the transcripts many times to identify more meanings about the topic. I always went back and forth through

transcripts, reviewing to ensure that I detected the right meaning. This situation helped me to remove irrelevant data from the transcripts. Therefore, I was able to refine the transcripts in terms of self-regulated learning and written feedback. Then I selected data which related to self-regulated learning such as 'intrinsic motivation', 'self-assessment', 'self-efficacy'. This enabled me to better identify category of descriptions in the next steps. At the end of this stage, I managed to reduce the data which is very beneficial to interpretation. As a result, the refined data was manageable while still allowing me to deeply engage with the topic I researched. I was able to focus on the group as a whole while checking the individual transcripts to consider similarities for the themes.

4.6.3 Sorting data

In this phase, I grouped the themes together by considering similarities and differences within individual and at a collective level to create 'pools of meaning' (Marton & Booth, 1997). Individuals may have distinct understandings of the same phenomenon (Åkerlind, 2005c). So, I read the participants' explanations of self-regulated learners again to identify similarities and differences. After that I formed several sub-themes in terms of similarities or differences in definitions. This situation led the data to be more manageable. As a second step, I sorted the data according to the participants' thoughts about how they use their written feedback to improve their students' self-regulated learning skills. There were also clearly divergent thoughts about this issue. So, I outlined several themes to explain and discuss various ideas and understandings. Finally, I compiled the themes based on the participants' similarity of ideas.

4.6.4 Describing categories and creating the outcome space

This is the final stage of data analysis. When I sorted the data, I had many themes. I needed to reduce those themes to create more rigid data to make my research result more explicit. I used Marton and Booth's (1997) three criteria to identify categories of description. These three criteria are: each category should be distinct to define the phenomenon experienced; a logical

relationship should exist between categories; and each category should be able to indicate critical variation in the transcripts. I described four categories to indicate differences of the academics' perceptions about the phenomenon. At the same time, I considered the logical relationship between categories when I constituted them. Moreover, there is a hierarchy between the categories. The complexity increases from the first category to the last category and each progressive category includes the categories before it. So, the first category is 'self-regulated learner is a student who tries to understand the concepts introduced in the degree programme'. The second category is 'self-regulated learner is a student who connects concepts with each other to develop their own meanings'. The third category is 'self-regulated learner is a student who develops their content knowledge to be able to critically evaluate the evidence to develop their own perspective'. The fourth category is 'self-regulated learner is a student who develops learning skills to change as a person to become life-long learners'. Finally, I represented graphically how the relationships between the categories can be logically constructed in a table. This demonstrates the outcome space of the phenomenon in the study. I did not create an outcome space for the effect of written feedback on student self-regulated learning skills because I explained it within each category. The findings indicate that academics use their written feedback to develop their students' learning skills according to their perceptions of self-regulated learning. Therefore, discussing its effect on student self-regulated learning skills under each category appears to present more refined categories for the reader.

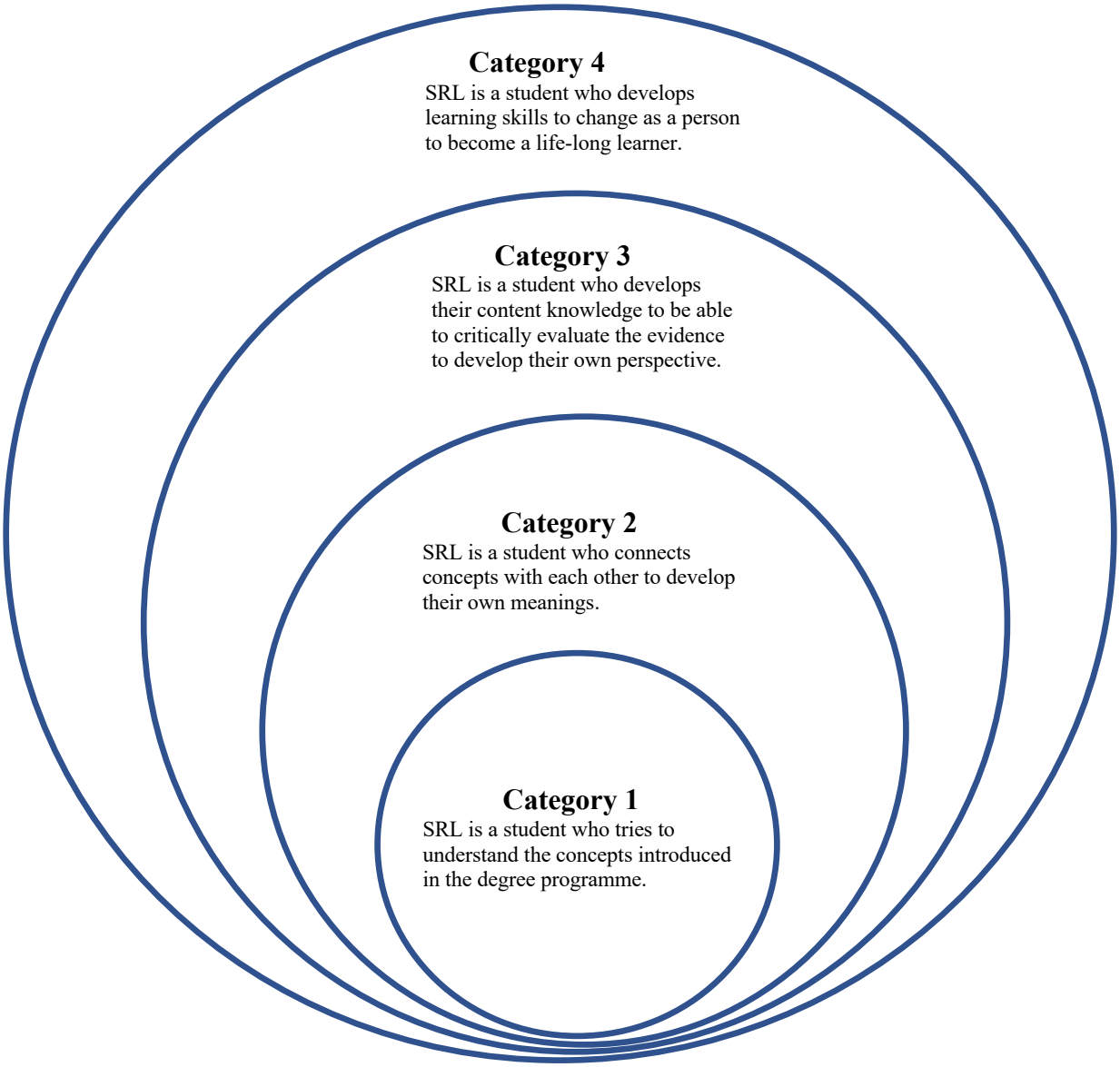

Figure 4.2 The outcome space

4.7 Trustworthiness and credibility of the research

There is still debate about the evaluation of the trustworthiness and credibility of qualitative designed research. While some researchers assert that there can be a set of criteria to judge trustworthiness and credibility of studies, others argue that concepts of trustworthiness and credibility are not suitable for qualitatively designed research because of the relationship with

interpretivist stance (Savin- Baden & Howell Major, 2013). Cope (2002) argues that evaluation of trustworthiness and credibility of phenomenographic research is considered as problematic and many studies did not clearly explain these problems within their reports.

Trustworthiness is defined as consistency of an instrument to measure what it wants to measure (Kvale & Brinkman, 2009). In qualitative studies, it can be said that instrument is researchers themselves because they collect and interpret the data and their background is highly likely to affect their interpretations (Cope, 2002). Researchers are expected to reach the same results in the same research to ensure trustworthiness. In phenomenographic research, it is an important issue, because this study depends on researchers' interpretations so that they may reach different conclusions. Marton (1986) argues that phenomenography is a process in which the researcher interprets the data with open-mindedness to explore information. Since individuals experience the world differently, there is a unique relationship between the researcher and the data. This may lead researchers to reach different results even if they use the same data. Therefore, it can be said that outcome space will be unique for each researcher (Cope, 2002). Sandbergh (1997) argues that in phenomenographic studies, since the outcome space is unique to each researcher, the categories in the outcome space should be interrelated to provide consistency to the reader.

Credibility indicates to what extent the research has achieved its purpose (Åkerlind, 2002). Credibility in phenomenography is related to how individuals interpret the phenomenon, rather than seeking one independent reality of it (Åkerlind, 2002). Booth (1997) argues that credibility is related to the trustworthiness of the findings, demonstration of the outcome space, and defense of the assertions in phenomenographic studies. While credibility refers to being able to convince the reader that findings taken from participants reflect truth, trustworthiness refers to presentation of the process being done meticulously (Ellis, 2016). The reader then can judge the credibility and trustworthiness of the research. Cope (2002) proposes eight criteria to evaluate the credibility of the research. These are:

1. The researcher's background should be acknowledged.
2. The participants' characteristics should be explicitly stated.
3. The design of interview questions should be defended.
4. The steps taken to collect unbiased data should be clearly explained.
5. The researcher should approach the data analysis with an open mind.

6. The data analysis should be explained.
7. The researcher should describe the processes used to check interpretations in data analysis.
8. The results should be demonstrated in a way that allows inspecting.

Cope (2002) argues that it is not possible for the researcher to interpret the data independently of their own background. In other words, the researcher's background affects data analysis.

Participants' characteristics of the research gives information to other researchers whether the study is applicable to other contexts (Cope, 2002). Åkerlind, (2002) suggests that the results of phenomenographic research should be generalisable to other people with similar characteristics. Although generalisation is not expected in qualitative research, the variation of experience in one group is expected to be common to other similar groups (Marton, 1986). While the results of quantitative research may be generalisable to a bigger population, the term transferability is more often used and more suitable for qualitative studies (Cova & Elliott, 2008). The information in the research is more likely to allow the reader to make decisions about whether the findings are transferable to other similar groups of people (Walsh, 2000). Based on the information provided in this chapter, it is possible for the reader to judge the credibility and trustworthiness of my study and the subsequent data analysis.

Data analysis has been conducted according to Åkerlind's (2002) framework and I added several items to it to make the process more explicit. This allowed me to describe the findings in an organised way. I analysed the data alone to create the findings of the research. Then I received feedback from my supervisors to re-organise to make it better and clearer for the reader. During the data analysis process, researchers may need help to better structure their findings (Walsh, 2000). Researchers' being able to make the analysis process more explicit is more likely to lead to decrease in potential research bias (Kvale & Brinkmann, 2009). At the end of data analysis, categories of descriptions are explained clearly, and the outcome space is depicted to present the connection of categories. I coded the academic titles as indicated below. Then I used quotes under categories and added my interpretation to analyse the participants' thoughts. According to Marton and Booth (1997), categories of description should be justified, explicit and understandable for the reader to help them judge the research.

Faculty of Social Sciences and Health → SocSci
Faculty of Arts and Humanities → A Hum
Faculty of Science → Sci

Assistant Professor → AsstP
(This is the entry level permanent academic position after a few years of fixed term research or teaching positions. They are responsible both for teaching undergraduates and conducting research.)
Associate Professor → AsciP
(An associate professorship is the first promotion obtained after gaining a faculty position. It is a position between assistant professor and a full professorship. UK universities started using the title associate professor in place of senior lecturer or reader.)
Full Professor → P
(This is the most senior academic position in the UK. In addition to research and teaching, professors are expected to take on an academic leadership role in the department or faculty.)

According to the results of the data analysis, it appears that there were no noticeable differences in academics' definitions of self-regulated learners between the faculties. Likewise, there were no important differences between definitions of self-regulated learners of Assistant Professors, Associate Professors, and Full Professors. Also, I did not find any apparent differences between male and female academics' definitions of self-regulated learners. Collectively, it seems that in terms of academics' definitions of self-regulated learners, there are no noticeable differences between faculties, academic status, and gender in the categories. Although there are no differences between faculties, it appears that there are more quotations from the Faculty of Social Sciences and Health and the Faculty of Arts and Humanities in the third and fourth categories. This may be due to the lack of the same number of participants from different faculties. This also applies to Assistant Professors, Associate Professors, and Full Professors. Likewise, I did not specify the gender of the participants in the quotations since there were no noticeable differences between male and female academics' definitions of self-regulated learners. Some participants' mother tongue is not English. Therefore, some sentences in quotations may contain expressions that do not conform to English grammar. I did not correct

any of them so that the originality in the meaning would not change. In some long excerpts, I removed irrelevant phrases and added "..." instead. But I paid attention to the semantic integrity in the quotations at the same time.

4.8 Summary

I was informed by the interpretivist research paradigm because I aimed to explore academics' perceptions, beliefs, and understandings about a notion. Since individuals have unique perceptions, and beliefs about a notion, there might be noticeable differences between their perceptions and beliefs. I aimed to identify differences in individuals' perceptions and beliefs to draw a schema about the notion in my research. Willis (2007) argues that the researcher's background and values also affect the research results in interpretivism. So, we can say that my background and values affected the research results because I interpreted the data by myself. Since phenomenography allows the researcher to interpret the data collected to identify variances of individuals' perceptions and to draw a schema from these variances, I selected phenomenography as a research approach. I used semi-structured interviews to collect the data because it was suitable for the research purpose. I interviewed thirty-seven academics from the Faculty of Science, the Faculty of Social Sciences and Health, and the Faculty of Arts and Humanities at Durham University. I used phenomenographic data analysis to identify variances of academics' perceptions about self-regulated learners and variances of their beliefs about how they use their written feedback to help their students develop their self-regulated learning skills. As a result of data analysis, I identified four categories. Category 1: Self-regulated learner is a student who tries to understand concepts introduced in the degree program. Category 2: Self-regulated learner is a student who connects concepts with each other to develop their own meanings. Category 3: Self-regulated learner is a student who develops their content knowledge to be able to critically evaluate the evidence to develop their own views. Category 4: Self-regulated learner is a student who develops learning skills to change as a person to become life-long learners. Therefore, I will introduce and discuss these four categories in the next chapter.

Chapter 5: Findings and Discussion

5.1 Introduction

After analysing the data, four themes, or categories, emerged in describing a self-regulated learner. While the definitions of self-regulated learning include some elements that are in line with published theories such as, motivation and setting goals, they also include elements that have not traditionally been included in the published theory but nonetheless reflect how current academics conceptualise self-regulated learning. Although some academics' descriptions share components of self-regulated learning, their use of these components differs from each other, so I have distributed them into different categories. For instance, the focus of Category 1 is students' understanding of concepts introduced in lectures and seminars. The focus of Category 2 is students' connecting concepts with each other to develop their own meanings. While Category 3 focuses on student critical thinking to describe a self-regulated learner, Category 4 focuses on students' development of learning skills to become lifelong learners. Each category builds on the one before, and as we move from the first to the final category, the categories are hierarchical so that each category subsumes the one before. We might argue that by the time we get to Category 4, the explanation of self-regulated learning is more sophisticated, more extensively developed. For example, Category 2 includes Category 1; Category 3 includes Category 2 and Category 1, but Category 1 does not include Category 2. We can think of it as nested sets. The categories are as follows:

Category 1: Self-regulated learner is a student who tries to understand the concepts introduced in the degree program.

Category 2: Self-regulated learner is a student who connects concepts with each other to develop their own meanings.

Category 3: Self-regulated learner is a student who develops their content knowledge to be able to critically evaluate the evidence to develop their own views.

Category 4: Self-regulated learner is a student who develops learning skills to change as a person to become life-long learners.

I will analyse academics' descriptions under the four categories indicated above. Then, I will analyse how academics believe they use their written feedback to help their students develop their self-regulated learning skills. Finally, I will talk about the implications of each category and discuss them. For instance, for the first category, I will describe how academics define a self-regulated learner and then how they believe they use their written feedback to enable their students to become more effective self-regulated learners. After that, I will discuss the implications that I have inferred from the academics' interviews. I will follow the same structure for each category to make categories more explicit and understandable for the reader. After following this structure, finally, I will analyse the categories in terms of their referential and structural aspects to explicitly show variances between the categories.

5.2 Category 1: Self-regulated learner is a student who tries to understand the concepts introduced in the degree program.

Six academics out of thirty-seven described a self-regulated learner as a student who makes an effort to engage with the content knowledge of the structured programme. Since the academics focused on students' learning of content knowledge, it seems that the development of the students' learning process was not their priority in this category. Although academics' explanations may refer to learning processes, it appears that their main expectation is for students to improve their content knowledge. Students are expected to do the readings the structured programme offered, listen to their lecturers, and understand the concepts introduced in lectures and seminars. This shows that in this category, self-regulated learners were supposed to learn what their degree programme offered them. In other words, it seems that students were given tight parameters to be followed to improve their learning. Students were not expected to go beyond the course content or lecture materials to extend their learning. For example:

So, I guess a student who follows the reading list by reading every week and comes and talks to me about the material and who makes an effort to learn concepts is a self-regulated learner. (AsstP2, Sci)

I think a self-regulated learner is a learner who makes an effort to understand content knowledge, you know, because we spend lots of time structuring the content of the module. So, it is really important to learn the material given in lectures, you know. (P3, SocSci)

Here, the first interviewee described a self-regulated learner as 'a student who follows the reading list' and 'who makes an effort to learn concepts' (AsstP2, Sci). This indicates that students need to do what the programme tells them to do. The second interviewee said that 'it is really important to learn the material given in lectures' (P3, SocSci). Therefore, it can be said that students are expected to do readings the programme offered to engage with content knowledge. In that case, it seems that students do not have much autonomy to choose their own readings to construct their own knowledge to go beyond the course content. It appears that the academic's approach is more content-oriented. According to their interviews, it appears that content knowledge is the primary focus rather than learning processes for them. Two more academics echoed that:

So, I think a self-regulated learner is a kind of student doing all those reading around the subject, reading their lecture notes, and reading the experimental works and then following the instructions to produce a good lab report. (AsstP1, Sci)

These kinds of students [self-regulated learners] do the readings we give and study hard to complete reading them, you know. I think they are good students, you know. (P3, SocSci)

In these quotes, the academics said that a self-regulated learner is doing the readings given in the lectures to improve their content knowledge. While academics might have provided more flexibility to their students to help them engage with content knowledge, they expected their students to follow the reading lists structured by the programme. So, students may not feel the flexibility to set their own goals to construct their own knowledge within the module context (Broadbent & Poon, 2015; Hawe &Dixon, 2017). This situation is less likely to lead students to improve their learning skills (Biggs & Tang, 2007; Geitz et al., 2016). The first interviewee thinks that students can produce good lab reports if they follow the instructions given. This indicates that they are committed to the structured programme. Their practices seem to be more compatible with teacher-centered learning. The second interviewee also described a self-regulated learner who does what the structured programme offered. It seems that their thoughts were more about the content rather than the learning process. Moreover, we can say that they likely do not give enough, if any, autonomy to their students because they expect their students to do the readings provided by the programme. Interestingly, they described this type of student as a good student. It may be argued that they equated a self-regulated learner with a good student. The two academics appear to give more learning responsibility to their students because they expect their students to study outside of the class. Then, if they do not understand anything in the content, they are supposed to ask for help from their lecturers. Although it seems that students can develop their learning processes and content knowledge together, the purpose of academics appears to prioritise their students' content knowledge development rather than their learning processes:

I think of a self-regulated learner who well, first of all, shows up for the lectures and seminars and practical but has also prepared for those so that they can ask questions about the readings provided and make use of the sessions to clarify anything about theoretical concepts they do not understand. […] Following the readings we provided in the module handbook is really important for our students to improve their learning. (AsstP6, SocSci)

Students should talk and discuss with their tutors in order to engage with the material and the content of the articles introduced by tutors because they can understand what they did not understand in this way. […] …students should learn very well what their tutors introduced in lectures… (P2, A Hum)

Here, for the interviewees, students need to ask their lecturers questions to better understand the concepts introduced in lectures. In this case, it appears that students must take more responsibility for learning. They must make an effort to understand the concepts and materials after the lectures. Students can set their own learning goals and then select strategies to reach their goals. If they monitor their learning progresses, they can find their own weaknesses. They may need to get help from their tutors to overcome them. Although it seems that students can develop their learning processes, the interviewees appear to predominantly focus on the development of their students' content knowledge offered by the structured programme, because while the first interviewee said that 'following the readings we provided in the module handbook is really important' (AsstP6, SocSci), the second interviewee said that 'students should learn very well what their tutors introduced in lectures' (P2, A Hum). Moreover, the second interviewee said that students need to 'engage with the material and the content of the articles introduced by tutors' (P2, A Hum). This indicates that although students are supposed to be active in their learning by discussing with their tutors, they are given mostly rigid parameters to be followed. Furthermore, some academics talked about student motivation and time-management abilities to explain how a student regulates themselves to improve their content knowledge by following the instruction given:

I guess successful self-regulated learning is when a student is engaging with their own accord with the material. […] They [students] should plan and manage their time to develop their understanding of the material, formulas and concepts provided by following their tutors' instructions. (P5, Sci)

I expect a self-regulated learner to manage their time to learn content knowledge. […] I think the student who is able to manage his time to follow instructions to learn the content and material given by the lecturer every week is a self-regulated learner. (P2, A Hum)

According to these academics, although the academics said that students need to have the motivation and manage their time to be able to regulate their own learning, they again expected their students to rigidly follow their tutors' instructions to understand the concepts and materials given in the lectures. In other words, it appears that content knowledge is the primary focus for these academics rather than developing their students' learning processes. While in the previous

quotes, it is emphasised that students should rigidly follow the programme rules and attend sessions, in the quotes here, it seems that students were given more autonomy because they were expected to make an effort outside of the class to better engage with the concepts by following the structured programme. Therefore, we can say that even though students are supposed to depend on the structured programme, they were encouraged to develop their learning processes at the same time. Despite this, the academics mainly focused on students' content knowledge development in their interviews. For instance, although time management has an important place in self-regulated learning (Honicke & Broadbent, 2016; Kim et al., 2015; Teng & Zhang, 2020), it is interesting that academics use this term to explain how students need to rigidly follow the instructions their tutors provided to improve their content knowledge. Since academics in this category mainly focus on students' content knowledge development, it seems that they also use their written feedback for this purpose.

5.2.1 Use of written feedback to support self-regulated learning

The interviewees in the first category predominantly focused on content knowledge development to describe self-regulated learners. Therefore, these academics appear to use written feedback to help their students develop their content knowledge. However, according to the data, there seem to be differences in the way academics give written feedback. There are three different uses of written feedback. First, some academics aim to correct their students' mistakes through written feedback. Students can easily understand what their mistakes are and what true answers are as well. Second, other academics aim to point out their students' mistakes through written feedback but do not give true answers or solution steps because they expect their students to identify their own ways to correct their mistakes. Students understand what their mistakes are, but they need to make an effort to correct them by themselves. Third, several academics use written feedback to help their students identify their own mistakes and their own ways to correct them. The difference between the second and third practices is that while students are given what their wrong answers are in the second practice, they are expected to explore their wrong answers or mistakes by themselves in the third practice. So, students need to understand what their mistakes are by themselves, and then they need to make an effort to correct them. The academics try to make their students identify their own mistakes to give them more responsibility for their own learning. We can say that students are given the most

responsibility for learning in the third practice of written feedback. Although these three different uses of written feedback may affect students' self-regulated learning skills differently, the purpose of all academics here seems to help their students improve their understanding of the content knowledge. Although students may develop their learning processes when they act on their written feedback, academics in this category have predominantly focused on their students' content knowledge development in their interviews. Although the academics talked about 'taking responsibility for learning', 'motivation', 'mastering knowledge', 'setting goals', they used these terms to explain how they help their students improve their understanding of the content knowledge, not to improve their learning processes. For example, two academics talked about how they use their written feedback to contribute to their student's learning:

> And so, the written feedback would be mostly correcting their understanding or correcting their use of things like literature or correcting the actual factual basis of what they've written and explaining to them where they've gone right, where they've gone wrong and making them fully understand the concepts. I help them [students] to develop their self-regulation in this way. (P5, Sci)

> The same goes for correcting answers to tutorial questions. That is also written feedback, and I use it to teach them correct answers […] I think that's kind of a useful way of getting them to engage with the material and the content I have given. (P2, A Hum)

According to these quotes, the academics try to correct their students' errors and misunderstandings and then teach them the concepts through their written feedback. It seems that they transfer the knowledge to their students directly. Therefore, it could be argued that they do not prefer to give much autonomy to their students to identify their own mistakes and ways to correct them. It appears that they primarily expect their students to follow the instructions offered. The interviewees seem to assume that students would become good learners if they rigidly follow the instructions given. So, we might argue that teaching content knowledge in a rigid way to students is very important to these two interviewees. It appears that they give very little autonomy to their students to set their own goals to engage with the subject matter. Allowing students to follow their interests is essential to help them become self-regulated learners because students can then take responsibility for their own learning and set their own goals to learn the content knowledge in-depth (Alotaibi et al., 2017; Roick & Ringeisen, 2018). Zhao et al. (2014) argue that the students who are supposed to follow rigid methods of learning may not strengthen their motivation because they may not have enough chances to take responsibility to set their own goals to construct their own knowledge within a

particular context. If academics expect their students to follow the instructions rigidly, students are less likely to develop their learning skills (Birjandi & Rahimi, 2012; Brannick et al., 2005; Putwain et al., 2013). Some academics use written feedback to inform their students about their mistakes, but they do not correct them because they expect their students to take responsibility to do that. For instance:

> You teach then you ask students what they understood, and then the opportunity to like written feedback is critical because when you go back, you can make it a perfect circle. You can fill in what has been misunderstood, what is a misconception, you know, but I think students should take responsibility to correct their mistakes. So, I don't help them with it, you know. (AsstP6, SocSci)

> So, for instance, for lab reports, and we have sessions where we have the opportunity to give written feedback. I show them their reports, show them where they did well, and show them where they made mistakes, so I expect them to fill those gaps. I think it helps develop their self-regulation abilities to improve their understandings of the concepts. (AsstP1, Sci)

These two academics said that they point out their students' wrong answers and mistakes in their work, but they do not directly give true answers because they expect their students to find a way to correct their own mistakes. According to the academics' explanations, they give chances to their students to correct their own mistakes. It appears that students are more independent here because they need to identify a suitable way to correct their own mistakes rather than receive correct answers directly from their tutors. We might argue that the possibility of students' developing self-regulated learning skills is higher than the first practice of written feedback because students are supposed to take more responsibility to improve their understanding of the content knowledge of the programme (Andrade, 2010; Askew & Lodge, 2000). In other words, it seems that students are more at the centre of their own learning. Therefore, students can get some autonomy to set their own goals (Pai & Mallya, 2016). Another academic's approach appears to enable her students to identify their mistakes by themselves and then encourages them to find their own ways to improve their work:

> I think written feedback is precious. […] I give them model solutions, which are very important, and I think the model solutions can also be regarded as a form of written feedback. […] It's their ability to get specific criticism of the places where they make mistakes. So, students can use different strategies to correct their mistakes, you know. So, they develop their understandings of content knowledge given in lectures, you know. (P5, Sci)

The interviewee said that they give their students a model solution to help them point out where they are wrong and then identify ways to correct their own mistakes. Therefore, they appear to expect their students to take responsibility for learning. Students are supposed to make an effort to understand why they are wrong, and then they can choose their own strategies to overcome their difficulties to improve their understanding of the concepts. According to the interviewee's explanation, although they seem to help develop their students' self-regulated learning skills, their main intention appears to help them better engage with content knowledge because they said that 'they develop their understandings of content knowledge given in lectures' (P5, Sci). Based on this quote, students have more autonomy, but they are still expected to rigidly depend on some parameters given by their tutors. Two more academics' use of written feedback seems to give their students even more responsibility because they expect their students to detect their own mistakes and identify ways to correct them without a model solution. Because students are expected to take more responsibility for learning, they are more at the centre of their learning (Leenknecht et al., 2017; Nota et al., 2004). Although students are supposed to identify their own ways to produce better work, it still seems that the interviewees' primary focus is to help develop their students' content knowledge rather than their learning processes:

I never show my students their mistakes because I expect them to find them out, you know. But in my written feedback, I provide explanations that help them identify their own misunderstandings. It is in their hands whether to improve their work or not. So, I think I help them engage with content knowledge provided by the programme in this way. (P3, SocSci)

I try to give clues to my students in written feedback, you know so that they can find misunderstandings in their work, you know. I think they will be able to focus more on the lecture notes and readings for that. (AsstP2, Sci)

The first interviewee said that 'I never show my students their mistakes' (P3, SocSci). This indicates that the interviewee gives responsibility to their students for learning because students are supposed to point out their own mistakes (Geitz et al., 2016; Nett et al., 2012). It appears that they intentionally do not transfer knowledge to their students to allow them to improve their own learning. Moreover, they said that 'I provide explanations that help them identify their own misunderstandings' (P3, SocSci). It appears that students are supposed to make inferences from their written feedback. In this case, students need to try different learning strategies to correct their own misunderstandings. This situation is more likely to lead students

to produce better academic work (Henderson et al., 2019; Keyser & Viljoen, 2015; Weinstein et al., 2011). However, although the academics' explanations seem to help develop their students' learning processes, they predominantly emphasized the importance of students' content knowledge development. For example, although the second interviewee seems to give responsibility to their students to develop their learning processes, they said that 'I think they will be able to focus more on the lecture notes and readings' (AsstP2, Sci). In other words, their priority, like the others, is to help their students learn content knowledge through written feedback.

All in all, in the first category, there were three ways that academics claimed that they used their written feedback to help develop their students' self-regulated learning skills. First, academics gave correct answers to their students in their written feedback, or they corrected their students' mistakes. Their students were given little flexibility to reach correct answers because they received them directly from their tutors. Second, academics told their students what their mistakes are but do not give correct answers to them because they expect their students to take responsibility to overcome their difficulties. The difference between the first and second practice is that while students are not given so much flexibility to correct their mistakes in the first practice, students are given the flexibility to correct their mistakes and misunderstandings by themselves in the second practice. Third, academics try to help their students point out their own mistakes and then identify ways to improve their work. While students are not expected to identify their own mistakes in the second practice, students are expected to take responsibility to identify their own mistakes in the third practice. From that perspective, it seems clear that students are given the most responsibility for their learning in the third practice of written feedback. Despite this, according to the interviews, it seems that the overarching priority of the academics in this category is to help their students to engage with content knowledge rather than help them develop their learning processes.

5.2.2 Implications for self-regulated learning

In this category, students were supposed to learn the content knowledge by rigidly following the programme instructions. Students needed to read articles and lecture notes offered by their tutors. This may indicate that students are not so independent as to be able to set their own

goals, since they are given such tight parameters to be followed rigidly (Dinsmore et al., 2008; Grosas et al., 2016). Students who depend on and follow the programme instructions in such a rigid manner are less likely to improve their learning processes because, in order for students to improve their self-regulated learning skills, they need to identify their learning goals and select an appropriate strategy to reach them (Broadbent & Poon, 2015; Panadero, 2017; Teng & Zhang, 2018). It seems that although students are supposed to deeply engage with the discipline, the academics predominantly focus on content knowledge development rather than emphasise the importance of the development of learning processes. This situation may also cause lecturers to consider their students' learning outcomes rather than their learning processes (Chen et al., 2019). For this reason, the academics may not help students develop their learning processes as desired. If students do not improve their learning processes, the possibility of deeply engaging with the discipline for them will likely decrease (Handoko et al., 2019; Honicke & Broadbent, 2016; Pintrich, 2004; Zimmerman, 2000). The data shows that the academics gave priority to strictly following the programme instructions in learning the concepts, formulas, and materials. This may limit students in taking responsibility for their learning because it in this situation they are not given much autonomy to set their own learning goals (Birjandi & Rahimi, 2012; Hughes & Hargreaves, 2015; Roick & Ringeisen, 2018). Therefore, we can say that students are more likely to develop their content knowledge rather than their learning processes. Consequently, since students all are expected to follow similar ways to improve their learning, they predictably produce similar outcomes.

In the literature, the definition of self-regulated learning is different from the definition held by the interviewees in this category because, in terms of the literature, students need to develop their learning processes in addition to acquiring content knowledge (Brown, 2011; Cassidy, 2012). Students should have the autonomy to be able to identify their own learning goals (Andrade, 2010; Chen et al., 2016; Dowden et al., 2013). Then, they need to select a suitable learning strategy to be able to achieve the goals they set. Yet, in this category, the academics seem not to focus on improving students' learning processes, they expect their students to follow the programme instructions rigidly to improve their content knowledge. From that perspective, their description is different from the definition offered in the literature.

An academic (AsstP6, SocSci) said that students need to ask questions in the lecture to understand the concepts and materials better. From that perspective, the academic seems to expect his students to develop their learning processes because students need to take

responsibility to improve their understanding of the content knowledge. But the same academic added that students need to follow the readings provided with the module handbook. It seems that students are supposed to rigidly follow the programme instructions simultaneously. In other words, students have tight parameters to improve their learning. Several academics mentioned the importance of time management for students to be able to improve their learning. Although solid time management is an indicator that students are able to regulate their own learning to engage with content knowledge (Bartimote-Aufflick et al., 2010; Evans, 2013; Panadero et al., 2017; Teng & Zhang, 2020), academics used this term to expect their students to follow the structured programme rigidly, as one of the academics said that students need to manage their time to understand the readings given by the lecturers. Therefore, identifying learning goals for students might be problematic for them here because they are less likely to take responsibility to set their own goals when given specific tasks. Handoko et al. (2019) argue that for students to become a self-regulated learner, they should be allowed the autonomy to take responsibility in structuring their own learning within the context. Students need the flexibility to go beyond the course content to extend their learning.

Furthermore, another academic (AsstP2, Sci) said that students need to motivate themselves to improve their understanding of the content knowledge. Again, the academic used 'motivation' to explain the engagement with the structured programme rather than expecting their students to develop their learning processes, which would develop their capacity and naturally increase motivation. Instead, students simply need to have enough motivation to make the effort to learn the information introduced in lectures and seminars. We can expect that students will organise their learning environment to rigidly follow the readings given by the structured programme. This situation is less likely to allow or encourage flexibility in students to identify their own learning goals (Ashwin, 2006; Trevino & DeFreitas, 2014). Indeed, according to Teng and Zhang (2018), students should be given flexibility in researching their readings related to the programme and go beyond the course content to extend their learning. Students having more flexibility might follow their intrinsic interests (Tseng et al., 2015; Veenman, 2017; Wolters, 2003). This is more likely to lead students to take more responsibility for learning and extending their own learning will come naturally because they will want to set their own goals to satisfy their interests (Sebesta & Bray Speth, 2017; Seker, 2015; Van Dinther et al., 2011). Thus, they might be more effective self-regulated learners.

According to the data, academics use their written feedback to facilitate content learning for students. Their use of written feedback varies slightly from one another. Although their purposes are similar, it seems that their use of written feedback may affect students' self-regulated learning skills differently. For example, while in the first practice of written feedback, tutors directly give correct answers to their students, in the second practice of written feedback, tutors tell their students what their mistakes are, but they do not tell them what they need to do to correct their mistakes. They want to give more responsibility to their students. In the third practice of written feedback, tutors prefer to help their students to identify their own mistakes and ways to correct them. Therefore, it seems that students are given the most learning responsibility in this practice of written feedback. Although it appears that students can develop their learning processes in the second and third practice of written feedback, the academics in those categories still mainly focus on content knowledge development rather than learning processes. Additionally, academics mentioned the importance of following the readings the programme offered and learning the concepts introduced in lectures. It may be argued that here we see teacher- and student-centered learning simultaneously. It seems that they both want their students to take responsibility and to follow the way presented to them. This situation may develop students' self-regulated learning skills to some extent because students cannot utilize flexibility enough to manage their learning environment on their own, to go beyond the course content to extend their learning. We can see that although academics use some elements of self-regulated learning, they predominantly focused on students' content knowledge development rather than their learning processes development. This indicates that students' engagement with content knowledge of the programme is more important for the academics here.

5.3 Category 2: Self-regulated learner is a student who connects concepts with each other to develop their own meanings.

Eleven academics from all three faculties defined a self-regulated learner as someone who connects concepts from various topics with each other to create their own meanings. This type of student not only studies to understand the concepts very well, but they also try to develop their own meanings by linking them. Some academics stated that students need to use their thinking skills to be able to link concepts. Those who link concepts with each other have begun developing their learning processes (Schunk, 2003; Zimmerman, 2009). In this category, it seems that academics do not only transfer knowledge to their students, but they also enable students to take some responsibility for their learning. The academics talked about 'thinking skills' and 'intrinsic motivation' to explain how students develop meanings using the concepts. Therefore, students are supposed to develop their learning processes to be able to engage with the subject matter. There are overlaps between quotations in this category because most tutors' explanations were related to 'motivation' and 'thinking skills'. The description of self-regulated learning in this category seems more developed than the description in Category 1 because while students in Category 1 are expected to improve their understanding of concepts, formulas and principles, students in Category 2 are expected to use their thinking skills and develop their learning processes to connect concepts with each other to develop their own meanings. In other words, while the academics in Category 1 emphasise students' learning content knowledge of the subject matter, the academics in Category 2 focus on students' developing their learning processes to better engage with content knowledge. Therefore, it is clear that the conception of self-regulated learning in Category 2 includes and extends the conception of self-regulated learning in Category 1. For instance, one of the interviewees said that a self-regulated learner is someone who tries to learn the subject matter in-depth by connecting concepts with each other, not just to get a passing grade from the exams:

> So, a self-regulated learner for me, someone who does not only learn specific concepts and principles to try to pass exams, but they also connect concepts with each other to make their own sense. So, I do not think a self-regulated learner comes and says to the teacher; tell me how to pass the exam, which is what I think British education has become many ways. But I think a self-regulated learner puts effort to learn to go beyond the exams. (AssciP1, A Hum)

Here, the interviewee described a self-regulated learner as someone who learns concepts well and connects them to show engagement with the subject matter. For this interviewee, passing

exams is not an indicator that a student deeply engaged with the subject matter. Students should study not only to pass exams or to receive a particular mark, but they should also want to learn more about the discipline. Indeed, this interviewee appears to be saying that students should not only make an effort to follow the programme instructions rigidly, but they should also set their own goals to achieve them. If students want to set their own goals, they will likely go beyond the course content to extend their learning because they are more responsible for their own learning (Baird et al., 2017; Carless & Boud, 2018; Lee et al., 2014; Scager et al., 2014). In this case, academics may not aim to transfer too much information to their students since they expect their students to develop their own meanings, connecting concepts with each other. At the same time, students must learn concepts specific to the content to develop their own meanings. In other words, students are supposed to take more responsibility for learning to better understand the concepts to make more sense by connecting them. As a result, we can say that students are able to improve their learning processes. Similarly, two academics defined a self-regulated learner as a student who takes the module content and then develops meanings from it by using their thinking skills:

We would hope a self-regulated learner tries to use thinking skills to engage with the discipline content. So, you know, students who can use their thinking skills can create their meanings with concepts. (P7, Sci)

In my opinion, you know, a good self-regulated learner is a student who can create their own comments from the information they learned in the lectures and seminars. In this way, they will need to use their thinking skills more. (AsstP1, SocSci)

According to these two academics, if students use their thinking skills, they are more likely to create their own meanings. It seems that their students are expected to start constructing their own knowledge. Clark (2012) argues that in order for students to create their own meanings, they need to set their own goals. The second interviewee said that ‘students create their own comments from the information they learned in the lectures and seminars’ (AsstP1, SocSci). The interviewee may have meant that students need to follow the structured programme because they are expected to use the information they learned in the lectures and seminars. If that was their intention, the contribution to the student's learning process would be limited because then the student is expected to follow specific instructions rigidly, and students may not have enough flexibility to set their own goals. Alternatively, the interviewee may have meant that students are expected to be independent, but they need to be committed to the module content simultaneously. If the academic meant this instead, they were referring to improving the

student's learning process, and they expect that the student can set their own goals. The first interviewee referred to content knowledge, but they seem to emphasise the module content rather than tight parameters to be followed rigidly by the student. We can infer that some academics expect their students to take the module content and then develop their own meanings from it using their thinking skills. From that perspective, students may improve their learning processes because they are expected to develop their own meanings (Ferris et al., 2013; Fook & Sidhu, 2013). Another interviewee put thinking skills at the centre of their explanation to describe how students are able to deepen learning:

> Students should develop their thinking skills, you know. Then they can play around with concepts given in lectures, you know. They can analyse them and then create new syntheses with their components. I think the person who can play with concepts is a self-regulated learner, you know. They have to practise a lot to do this, you know. (AsstP3, SocSci)

In this quote, the interviewee said that students need to use their thinking skills to analyse concepts to use them to develop their meanings. According to this interviewee, for students to do that, practice is essential because that is how they improve their thinking skills. The interviewee emphasized using the concepts given in lectures. It appears that students might be expected to follow some specific parameters to improve their learning, but to the interviewee, students are also supposed to use their thinking skills to structure new syntheses with the concepts as components. This indicates that students need to set their own learning goals. In other words, it seems that they are more at the centre of their own learning. Trevino and DeFreitas (2014) argue that intrinsic motivation is fundamental for students to take responsibility for their own learning, and in their efforts to learn the discipline in-depth, because students were more able to think by themselves in that case. Zimmerman and Schunk (2011) add that if students have intrinsic motivation, they are more likely to improve their learning processes to construct their own knowledge within the context. Although the academic talked about students' thinking skills, they did not talk about the importance of motivation. However, another academic said that a student needs to have the motivation to develop their own meanings:

> So, they [students] will understand the content knowledge in-depth in the Bioscience, you know because they are motivated for it, you know. So, they will want to form their own comments about the topic, you know, not just because they get a degree or get a grade, you know. (P8, Sci)

It appears that this academic thinks that a self-regulated learner is a learner who tries to learn the subject matter in-depth rather than only receiving a grade or a degree because they aim to satisfy intrinsic interests, not meet extrinsic expectations. The academic emphasized the importance of students' having intrinsic motivation to become a self-regulated learner. Students who have intrinsic motivation are more likely to develop meanings from the content knowledge. Expecting students to use concepts to develop their own meanings indicates that they are supposed to use their thinking skills (Geitz et al., 2016; Wolters, 2003; Yan, 2020). Weinstein et al. (2011) add that students who develop their own meanings improve their learning processes as well. Since students are expected to develop their own meanings by connecting the concepts with each other, they also improve their learning processes in this category. Another interviewee also talked about student motivation to describe a self-regulated learner:

I think that a self-regulated learner is self-motivated so, they know why they want to do what they are doing, they have some goals that drive them. And then they take responsibility for learning concepts and materials given in lectures, you know, and then use them to make their own interpretations, you know. (AsstP4, SocSci)

This academic stated the requirement of motivation to improve student learning processes because they used 'self-motivation' in describing a self-regulated learner. It seems that they used the term self-motivation in the same manner as intrinsic motivation because they said that students' being self-motivated will help them take responsibility to construct their learning. Students are more likely to use their thinking skills to use concepts that they learned in lectures. The academic appears to talk about students' setting goals because they said that they have goals that include independent learning so that they understand why they do what they are doing. They clearly expect their students to have sufficient motivation to set their own learning goals to develop their own meanings using the content knowledge. Roth et al. (2016) claim that this type of student is a self-regulated learner because they think that students have a better chance to develop their learning processes. However, although students can develop their learning processes in this case, the academic still seems to expect their students to follow some specific parameters rigidly. Another interviewee clearly said that students should have intrinsic motivation to take responsibility for their own learning. Similarly, they appear to emphasize the importance of students' developing their own meanings:

I think internal motivation drives students to take responsibility for their learning. So, they [students] can use thinking skills, you know. So, they beat their brains out to improve their understanding of content knowledge. So, I guess, you know, they can think more about the readings provided. So, they can use them to be able to comment on topics. I think a self-regulated learner is the one who can do this, you know. (AsstP1, A Hum)

Concerning this quote, the academic talked about intrinsic motivation, taking responsibility for learning, and using thinking skills to describe a self-regulated learner. However, it seems that the academic also expects their students to follow the structured programme because they expect their students to think more about the readings given. These students are expected to take responsibility for learning to follow the structured programme. Interestingly, they expect their students to 'beat their brains out to improve their understanding of content knowledge' (AsstP1, A Hum). It appears that the academic thinks that students need to improve their learning processes as well. The academic also appears to transfer some learning responsibility to their students because they expect them to use their thinking skills to develop their own meanings. From that perspective, students are at the centre of their learning to some extent (Panadero et al., 2016; Roick & Ringeisen, 2018; Veenman, 2017). This is a clear example that in this category, students not only have the goal of engaging with the readings provided, but they are also given some responsibility to develop their learning processes to connect the concepts with each other to develop their own meanings within the discipline they study.

As a result, in this category, students need to connect concepts with each other to develop their own meanings to engage with the discipline. To do that, students are supposed to understand the content knowledge very well, and then need to use their thinking skills to develop their own meanings (Nbina & Viko, 2010; Ratnam-Lim & Tan, 2015). While doing this, students should take more responsibility for learning (Nett et al., 2012; Wiliam, 2011; Zimmerman, 2008). At the same time, students can develop their learning processes. This is more likely to lead them to engage with content knowledge simultaneously (Birjandi & Rahimi, 2012; Morisano et al., 2010; Muwonge et al., 2017). It seems that the academics also try to develop their students' learning processes through their written feedback to help them develop their own meanings using the content knowledge. They structure their written feedback to serve this purpose.

5.3.1 Use of written feedback to support self-regulated learning

While some academics said that they use their written feedback to improve their students' content knowledge in the previous category, academics' interviews which fell into this category indicated that they use their written feedback to contribute to their student's learning processes as well. As in the previous category, according to the data, there are three different ways to help students improve their work in this category too. First, the academics tell their students what their weaknesses are and how they can overcome them. Second, the academics tell their students what their weaknesses are but expect their students to identify their own ways to overcome their weaknesses. Third, the academics do not tell their students their weaknesses directly and how they can overcome them, but help their students identify their own weaknesses and solution steps to overcome them. In this respect, although it is similar to the previous category's use of feedback, there are some differences between these two categories, indicated in Table 5.1 below. These three different paths can affect students' self-regulated learning skills in numerous ways. First, academics do not expect their students to identify their own weaknesses and ways to overcome them. The academics give them all the information they need. It seems that there is an information transfer from academics to students. From that perspective, we can say that students are dependent upon academics to improve their work because students are expected to rigidly follow the instructions academics offered. Second, some academics tell their students what their weaknesses are through written feedback, but they do not tell them what they need to do to develop their weaknesses because they expect their students to identify their own ways to make progress. From that perspective, these academics transfer less information to their students than the previous practice of written feedback. So, we can say that it seems students are more at the centre of their learning as they need to take more responsibility to identify their own ways to improve their learning. In the third practice, the academics provide written feedback to help their students identify their own weaknesses and then ways to overcome them. We can say that it seems students are much more at the centre of their learning because academics transfer much less information to them (Matsuyama et al., 2019; Mulliner & Tucker, 2015; Yan, 2020). Lesser knowledge dependency may lead students to take much more responsibility for learning, and this is likely to help students develop their learning processes (Panadero et al., 2017; Wang &Wu, 2008; Zhao et al., 2014). It appears that there is an effect of written feedback on student learning processes in this category. For example:

Written feedback is really helpful because I tell them what they're doing wrong, what their strengths are and how they can overcome weaknesses. The important thing about written feedback is to teach them how they can improve their learning. So, you know, students may use and connect concepts they learned in lectures. I am giving those things in my written feedback to my students. So, I help them more engage with the discipline content, you know. (AsstP3, SocSci)

Written feedback is useful for pointing out the shortcomings in my students' work, you know. I also tell them how they can make their work better, you know. For example, I point out problems in their work and help them improve these points. You know, I also offer some suggestions about how they develop their weak points. (AsstP1, A Hum)

According to the quotes, these academics use their written feedback to inform their students about their weaknesses and give them advice about how to overcome them. Here, we can see that these academics try to develop their students' learning processes to enable them to produce better academic work. Students are supposed to do as their tutors advise, to improve their learning by using the written feedback. From that perspective, it appears that this is a teacher-centered practice because academics provide the information to their students (Prosser & Trigwell, 1998; Randi & Corno, 2000; Veenman et al., 2006). Since students need to use different strategies to improve their own learning processes, improvements in academic work may depend on students' efforts (Zimmerman, 2002). The academics give them some advice but improving upon weaknesses is up to students (Orsmond & Merry, 2013; Price et al., 2011). In this respect, we can also say that this is a student-centered practice, as development depends on the student (Long & Aleven, 2017; Mok et al., 2006). It may be argued that teacher-centered and student-cenetred practices are used together because both the student and the academic have taken responsibility for the successful learning experience. In the second case of written feedback, some academics told their students what their weaknesses are, but chose not to tell them what they needed to do to overcome these flaws because they expect their students to deduce their own ways to improve. According to their explanations, students are expected to use their thinking skills more to improve their academic work. For example:

It [written feedback] gives the opportunity for students to make progress. You can say that you need to use more literature, you need to extend your discussion, you need to show more engagement of content knowledge, you know. So, then this is their responsibility to improve their work. I think I help my students see their problems in their work in this way. So, I want them to use their thinking skills to make better comments. (P3, A Hum)

I tell my students weaknesses in their studies, but I expect them to discover how to overcome them. So, they are able to use the concepts better. I think this situation enables them to produce better work. (P1, Sci)

I write comments to my students to say, you know, your bibliography was excellent, it was very comprehensive, but your introduction is too short, this kind of thing you would say to them. In my opinion, it may lead students to study by themselves to improve the weak points of their work. (AssciP1, SocSci)

These academics state that they give more responsibility to their students. Therefore, we can assume that students are more at the centre of their learning. One of the interviewees said that 'you need to use more literature, extend your discussion, and show more engagement of content knowledge' (P3, A Hum). Students are supposed to use the information given to improve their work, but the interviewee does not suggest how to improve those weak points. The interviewee seems to transfer less information to their students because they expect their students to develop their content knowledge as well as weak points, selecting suitable learning strategies. Although the academics give information about their students' weaknesses, this information appears to be general thoughts about the work because 'you need to use more literature' does not tell students how they can use more literature. Yet, students are supposed to take more responsibility to engage with the literature (Kallay, 2012; Lee et al., 2020). Students appear to be more independent in their learning because using how to use more literature or how to expand their discussion is up to them. Moreover, the interviewee said, 'I want them to use their thinking skills to make better academic comments' (P3, A Hum). Again, it shows that the interviewee aims to place more responsibility for learning on their students to help develop their learning processes. One academic said that 'it may lead students to study by themselves to improve the weak points of their work' (AssciP1, SocSci). According to the academic's quote, their students are responsible for improving their own weaknesses. It seems that the academic is in the background, directing students' learning to help them take more responsibility for their learning. Although they did this, they directly told their students what their weaknesses were in their work. So, it appears that students here are less likely to take entire responsibility for learning because the academic has still authority to give some information to their students.

In the third practice of written feedback, several academics said that they use their written feedback to help their students identify their weaknesses and then their own ways to overcome them. According to their explanations, students are expected to take more responsibility to set their own learning goals because they have more flexibility in deciding how to address their

weaknesses. The academics only try to guide their students to help improve their learning rather than directly transferring information to them because the academics think that students' taking responsibility for learning is more likely to develop their learning processes. Heikkila and Lonka (2006) claim that students who develop their learning processes are more likely to deeply learn the subject matter they study. For instance:

Oh, I think it is very important. […] I say, look, did you think about this, does this seem reasonable to you. I try to get them to think about their own work through written feedback. […] You have to try and get them to ask themselves always, does what I have written make sense, you know. If it doesn't, then they need to go back and try and work out what the problem is. So, they make better comments linking concepts with each other. (P1, SocSci)

I think written feedback helps them find out where their strengths and weaknesses are. […] So, giving them feedback on the tasks explains how well they explain things whether they've done that, and they've done their analysis correctly, which is very important for us. They can then choose their ways to follow. So, when they're doing increasingly more complicated laboratory work, they can say that this is how I should consider my uncertainties, this is how I should study to learn the concepts to be able to use them and so on, you know. (P7, Sci)

According to these quotes, academics use written feedback to help their students identify their own weaknesses and then overcome them to improve their academic work. An academic said that 'you have to try and get them to ask themselves always, does what I have written make sense' (P1, SocSci). It seems that written feedback from the academic enables students to self-identify the logic problems in their work. Students who can see their own logic problems in their work are more likely to use better-targeted strategies to develop them (Barber, 2007; Butler & Winne, 1995; Zimmerman, 2002). Therefore, students are expected to review whether their writing makes sense or not. From that perspective, the academic's role is to give students written feedback that will enable them to identify their weaknesses, rather than point out their weaknesses. The student who tries to identify their own weaknesses will have to take more responsibility for learning because the academic transfers less knowledge to their students (Butler & Lee, 2010; Case & Gunstone, 2002). This will place the student more at the centre of learning (Dann, 2014; Hancock et al., 2002). Another academic said that students could 'do increasingly more complicated laboratory work' (P7, Sci). We can say that this academic expects the student to develop their learning processes and set more challenging goals to be achieved. Therefore, the academic aims to give the student more responsibility through written

feedback to enable them to do better laboratory work. According to the academic's interview, students who receive this written feedback will likely make an effort to identify their own weaknesses. They are then more likely to try to produce better results by applying more suitable learning strategies (Zimmerman & Moylan, 2009). And eventually, students will likely gain more depth in this field because they are highly likely to develop their self-regulated learning skills (Jungert & Rosander, 2010). Another academic uses written feedback similarly:

> So, I think the written feedback is very good because students can see their deficiencies and weaknesses in their work. Then they [students] can spend quite a lot of time working out why they got what they got wrong. So, I think this also helps them find out their own ways to better learn content knowledge introduced in lectures to level up their work, you know. (AsstP4, SocSci)

It appears that this academic aims to encourage their students to think more because they want them to identify their own deficiencies. They claimed that students who identified why they did something wrong would likely improve their academic work. It seems that students are flexible in this learning environment because they are supposed to take responsibility to set their own learning goals and choose a strategy to achieve them (Kahrizi et al., 2014; Kitsantas et al., 2004). The academic expects their students to ‘spend quite a lot of time working out why they got what they got wrong’ (AsstP4, SocSci). It indicates that they transfer more responsibility to their students to contribute to their process of learning. Kumar and Stracke (2007) argue that the less academics are involved in the student's learning process, the more they can help develop their students’ learning processes. Therefore, the academic expects their students to ‘level up their work’ (AsstP4, SocSci) because they think that students who took more responsibility for learning are more likely to improve their learning processes as well. The fact that the academic does not only emphasise the content knowledge shows that they place importance on both students’ learning processes as well as content knowledge development. Thus, we can say that the academic indirectly encourages their students to develop their self-regulated learning skills.

Table 5.1 The table of the use of written feedback

	First Practice of Written Feedback	**Second Practice of Written Feedback**	**Third Practice of Written Feedback**	
The Written Feedback of Category 1	Directly correct students' mistakes.	Show students' mistakes and then allow them to correct them.	Help students identify their own mistakes and ways to correct them.	→ Content Focused
The Written Feedback of Category 2	Improve students' weak points in their works.	Show students their strong and weak points in their works and then allow them to improve their weaknesses by themselves.	Help students identify their own weaknesses and ways to improve them.	→ Process Focused

5.3.2 Implications for self-regulated learning

The academics in this category defined a self-regulated learner as a student who connects the concepts with each other to develop their own meanings of the subject matter. This indicates that academics do not place importance only on students' learning content knowledge, but they also on their students' learning processes. Students are not only expected to learn the concepts and materials introduced in lectures, but they are also expected to be able to use them to develop their own meanings. In this case, students are supposed to develop their learning processes because it seems that they need to set their own goals to develop their own meanings. Indeed, learning is not only a product or an outcome, but also a process in this category.

The academics expected their students to develop their own meanings by using the concepts and principles given in lectures. This indicates that students are expected to improve their learning processes to be able to use content knowledge. For students to do it, they need to use their thinking skills as they try to create their own meanings related to content knowledge (Teng & Zhang, 2020). It means that students are supposed to take more responsibility for learning.

Therefore, students need to organise their learning environment to improve their own learning. In the literature, self-regulated learners can be expected to develop their learning skills to be a life-long learner (Baird et al., 2017). Although academics mentioned learning processes, they did not clearly identify students' learning skill processes, or a desire to help them become life-long learners. The focus of their interviews was students' connecting the concepts with each other to develop their own meanings. Some academics talked about motivation to explain students' self-regulated learning. For example, one academic said that students need to be self-motivated to develop their own meanings (AsstP4, SocSci). Yet, he did not describe or identify where students' motivation may come from or how they motivate themselves. In literature, self-motivation derives from self-efficacy or intrinsic interest (Chen et al., 2019; Lee et al., 2020; Nbina & Viko, 2010; Pajares, 2008). Students who have self-motivation set their own learning goals, select strong strategies, and monitor their own progress to achieve the goals they set (Keyser & Viljoen, 2018; Roick & Ringeisen, 2018). In other words, students are more likely to develop their self-regulated learning skills to be life-long learners. However, in this category, the academics did not talk about these processes to explain self-regulated learners.

It appears that the academics aim to transfer learning responsibility to their students as well because students are supposed to connect the concepts with each other to develop their own meanings. Panadero and Alonso-Tapia (2014) argue that for students to develop their self-regulated learning skills, they need to be more flexible (as opposed to rigidly following processes from academic instruction) because, in that case, they can take responsibility for their own learning. For example, students can choose to explore readings related to, but not part of, module content. Students choosing their own readings often construct their own knowledge because they can set their own learning goals (Heikkila & Lonka, 2006; Pintrich, 2004; Winne, 1995). This is likely to lead students to deeply engage with the subject matter (Brown, 2011; Pintrich, 2000). Several academics talked about intrinsic motivation because they think that students who have intrinsic motivation are more likely to take responsibility for learning. Students can take the module content and then develop meaning from it. Although they referred to student motivation in learning processes, they did not talk about self-regulated learning steps and how they helped their students develop their learning skills.

The data also indicates that academics use written feedback to help their students improve their learning processes. For instance, they try to enable their students to identify their weaknesses. There are three different usages of written feedback in this category, like in Category 1. First,

the academics directly tell their students what their weaknesses and strengths are in their works and what they need to do to improve them. Students receive the information directly from their tutors through the written feedback. Students have instructions to be followed to identify weaknesses in their work and suggestions to improve. Second, weaknesses are identified, but they do not receive advice on how to improve. In this case of written feedback, students are supposed to take more responsibility for learning because they need to develop their own learning strategies to improve upon their weaknesses. In the third use of feedback, several academics said that to give more responsibility to their students, academics give guidance to help students self-identify their own weaknesses and choose more suitable learning strategies to overcome them. Here it appears that students are more at the centre of their learning than the previous two practices.

Here, the academics use written feedback to enable students to develop learning processes and content knowledge. To do that, they make comments in the feedback that the student can compare, seeing by contrast where they made mistakes or need improvement. Although students are expected to develop their learning processes, it seems that some academics give written feedback with rigid instructions to their students. We can argue that, often, students may not have enough autonomy to take responsibility for their own learning because it is reiterated in lectures or the syllabus that they need to follow specific parameters. Furthermore, Pintrich (2000) argues that students need to be allowed more flexibility in setting their learning goals to develop their self-regulated learning skills. Certainly, some academics in this category appear to give more responsibility to their students through written feedback. Although students can become self-regulated learners as a result of some academics' use of written feedback, it seems that these academics predominantly focus on helping their students to develop their own meanings by connecting the concepts rather than learning skills development. Long and Aleven (2017) argue that students' using concepts to develop their own meanings indicates that they have started to use their learning skills. However, it appears that academics' purpose of the use of written feedback is less likely to enable students to develop their learning skills to help them become life-long learners in this category.

5.4 Category 3: Self-regulated learner is a student who develops their content knowledge to be able to critically evaluate the evidence to develop their own views.

In this category, thirteen out of the thirty-seven academics across all three faculties defined a self-regulated learner as someone who is able to think critically. Although the interviewees said that students are supposed to use their thinking skills to connect concepts with each other in the previous category, they did not specifically mention critical thinking. However, in this category, the interviewees explicitly emphasised the importance of critical thinking to become a self-regulated learner. For students to become critical thinkers, they need to understand content knowledge very well first, and then they need to be able to critically evaluate the evidence to develop their own ideas (Kahrizi et al., 2014; Roth et al., 2016). Students are expected to express their own opinions and views about the topic they discuss (Scager et al., 2014). For this reason, it seems that Category 3 subsumes Category 2 in some respects because in this category, academics' definitions not only include students developing their own meanings by connecting concepts with each other but also students' critical evaluation of the evidence. For instance:

I would describe a self-regulated learner, somebody who has developed critical thinking skills. So, we help them see all sides of an argument, scientific argument, theoretical argument, and ethical argument. And somebody who has balanced their approach that looks at the evidence, that can think about it, can critically assess it and can give their view on it. So, I am looking for that ability from a self-regulated learner. (AssciP2, SocSci)

So, a self-regulated student to me demonstrates their ability to engage with critical thinking when they show me in an essay when they are able to engage with aspects of an argument or a theory that's been put forward in the literature […] And you know being able to bring other aspects of the literature or their independent thought in terms of evaluating the merits of that theory or evidence makes the student a self-regulated learner. (P4, A Hum)

These academics talked about critical thinking and what they expect a critical thinker to do. Then they described a self-regulated learner as the student who does what a critical thinker is expected to do. They said, in fact, a self-regulated learner is the same thing as a student who possesses critical thinking. Since they assumed that the critical thinker and the self-regulated learner were the same, they explained what a student needs to do to show they have critical thinking skills. Although a self-regulated learner is not described as a critical thinker in the literature, students are supposed to become a critical thinker as a result of self-regulation

processes (Lizzio et al., 2002; Pintrich, 2000; Veenman, 2017). A self-regulated learner sets their own goals and then selects a suitable learning strategy to reach them (Pintrich, 1999; Schunk, 2003). Students who achieve the goals they set are more likely to learn the subject matter they study (Dinsmore et al., 2008; Levesque et al., 2004; Zimmerman, 2002). Students who engaged with the subject matter are expected to critically evaluate the evidence they found to develop their own views (Kahrizi et al., 2014; Komarraju & Nadler, 2013; Leenknecht et al., 2017). One academic talked about the importance of motivation for students to become a self-regulated learner because these students likely have the patience to understand content knowledge and the interest to take responsibility to develop their own views of the subject matter. For this academic, for students to develop their own views, they need to try to structure arguments uniquely rather than reproduce other authors' views:

I think a self-regulated learner is someone who has you know the motivation, willingness and patience to go further than reproducing with someone else said to engage with critically thinking. So, these students can take the risk of making an unlike argument on their own. So, I guess a self-regulated learner is stepping outside, interested in developing a new idea as a learner. (P5, A Hum)

According to this quote, the academic emphasised the importance of students' having motivation, willingness, and patience to critically evaluate the evidence they found to develop their own views because they think that students should take risks to express their views of the discipline. However, here, it seems that the academic's definition is related to a critical thinker, not a self-regulated learner. Although a student is supposed to critically evaluate the evidence to develop their own views as a result of self-regulation processes in the literature (Fosnot & Perry, 2005; Kahrizi et al., 2014), the academic here did not talk about self-regulation processes to explain how their students develop their critical thinking skills. It appears that the academic mentioned how a student could be described as a critical thinker. In doing so, they put intrinsic motivation at the centre of her interview. For them, students who have enough intrinsic motivation are more likely to produce original work because they are supposed to take responsibility to construct their own knowledge within the context. This might lead students to develop their own idea. From that perspective, the academic expects their students not to use other authors' views without critically evaluating them. Another interviewee emphasised the importance of students' taking responsibility for learning to describe a self-regulated learner. For instance:

A self-regulated learner would be for me somebody who takes learning responsibility to improve their understandings to be able to think critically. Understanding the subject matter is very important to be able to critically evaluate the topics, you know. So, students can get out of the educational experience and a better personal sense of how well they are doing, whether they are achieving their objectives. In such a way that they can then generate distinctive ideas, you know. So, they do not just replicate what they have been told, so they try to be more critical and analytical. (AsstP2, SocSci)

This academic said that students should take responsibility for their own learning to develop their critical thinking skills. Students taking responsibility for learning can engage with the discipline because they make an effort to understand content knowledge (Black & Wiliam, 2009). Then, students are more likely to use content knowledge to develop their own meanings (Panadero et al., 2017). This may enable students to develop their own views because they can critically evaluate the knowledge they acquire (Nelson Laird et al., 2008; Pajares, 2008). It is interesting that even though the interviewee talked about a self-regulated learner, they did not mention the self-regulated learning processes again. Meanwhile, several academics talked about students' goal-setting processes to describe a self-regulated learner. For example, two academics said that in order for students to develop their own idea, they need to ask good questions, because this is more likely to help students use their thinking skills to engage with the discipline they study. Asking good questions with regards to the academics' explanations can be described as striving for their goals. Students who ask their own questions will likely seek answers to them (Grosas et al., 2016; Mahlberg, 2015). Then students may need to use learning strategies to improve their learning and the structure of their arguments (Ashwin, 2006). To structure a coherent and logical argument, students need to think critically (Kettunen et al., 2013; Price et al., 2011; Small & Attree, 2016). According to the data, being able to ask questions is an important step for students to become a self-regulated learner:

A self-regulated learner should ask good questions to present a beautiful argument; I guess kind of the basic thing. […] In order to contribute to arguments of the field, you have to ask great questions. It also shows that students can think critically, you know because students who are able to ask good questions also have improved their critical thinking skills. (P4, SocSci)

…the self-regulated learner is you can only see it when the person starts asking own questions. […] they are asking their own questions and then trying to answer them rather than just answer questions only they [academics] are asking. So, in that case, they [students] can critically evaluate the evidence they explored. That is what I would think it is self-regulated learning because you can make outstanding arguments by thinking critically. (P8, SocSci)

With regards to these quotes, we can say that the interviewees implicitly talked about setting mastery goals. For example, they used 'asking good questions' as 'setting mastery goals', because for them, students need to understand the subject matter very well to set well-defined questions, and then find ways to answer them. In other words, in this situation, students really want to learn the subject matter in-depth by structuring their arguments. Students understanding the subject matter very well are more likely to think critically and develop their own views (Komarraju & Nadler, 2013; Pajares, 2008). It indicates that students are responsible for constructing their discussions and critically evaluating the evidence to bring a new perspective to the subject matter (Zimmerman, 2008). Although their descriptions do not properly represent the definition of self-regulated learning as presented in the literature, we can say that there are still some components of it. Again, one more academic described a self-regulated learner as a critical thinker, but it seems that there are no terms that may refer to self-regulated learning in their explanation at this time:

> To me, students' being a self-regulated learner means students' having critical thinking ability what that says to me is that they are able to step to one side from their reading and from the issue, whatever the issue is that set in their assignment and to be able to take an outside view and look out dispassionately the pros and cons of the different theoretical approaches so that the role of students is in a kind of objective way to see the positives and negatives of different ideas that they can evaluate their sources that they can dispassionately do that to conclude. (P2, Sci)

This academic did not refer to intrinsic motivation, setting goals, or self-evaluation to describe self-regulated learner. From that perspective, it seems that they described what a student needs to do to critically analyse an issue in terms of theoretical approaches they have learned. Therefore, it appears that they explained the features of critical thinking in their statement. For instance, they said that students need to evaluate the issue objectively by emphasising the positive and negative sides of what they read to conclude. Even though they did not say anything about self-regulation processes, they claimed that students are more likely to be a self-regulated learner in that way. As already stated, after self-regulated learning processes, students can think critically because they can deeply engage with the subject matter after these processes (Roth et al., 2016; Veenman, 2017). However, we cannot say that a self-regulated learner is also a critical thinker. According to the academic here, every critical thinker is a self-regulated learner as well.

Overall, a self-regulated learner is described as a learner who develops their content knowledge to be able to critically evaluate the evidence they found to develop their own views. In other words, the interviewees assumed that a self-regulated learner is an individual who has critical thinking skills. Although the academics used self-regulated learning elements such as 'intrinsic motivation', 'setting goals' in the quotes, it seems that they used those terms to emphasise what a student needs to do to become a critical thinker rather than a self-regulated learner. Even though a student is supposed to critically evaluate the topic they discuss after self-regulation processes, it is interesting that the academics did not explicitly talk about self-regulation processes in detail in their interviews.

5.4.1 Use of written feedback to support self-regulated learning

Since the academics described a self-regulated learner as someone who has critical thinking skills, it follows that they also use their written feedback to help develop their students' critical thinking skills. As they report, it appears that this indirectly helps their students develop their self-regulated learning skills. For example, the academics think that if they empower students to improve their students' self-assessment skills, critical thinking skills will also increase. Students' being able to evaluate their own performance may lead students to improve their self-regulated learning skills as well (Andrade, 2010; Tseng et al., 2015). The academics try to give consistent written feedback to their students to help them understand what they need to do to improve their weaknesses in their work on their own. According to the academics' explanations, they expect their students to develop the quality of their work with time. Therefore, we can say that at the beginning, academics transfer knowledge to their students because they give written feedback that includes information that teaches them how to write good academic work critically. From that perspective, it seems that it is a teacher-centered activity. Then, the academics aim to place their students at the centre of their learning as they help their students develop their self-assessment skills. Therefore, they expect their students to be able to evaluate their own works to structure a critical discussion. Kahrizi et al. (2014) argue that for students to structure a critical discussion, they need to first develop their self-regulated learning skills to engage with content knowledge of the discipline, and then they can think critically. All in all, the purpose of the academics here is to improve their students' self-assessment skills with the

help of written feedback because they think that they can develop their students' critical thinking skills in this way, too. For instance:

I think the written feedback should be teaching the students how to read their own work so how to evaluate the quality of their own work. You know, so that they can write something and then go back and proofread it and say ok, you know the introduction is not clear, the transition between the section and the section does not flow, and then they can work on it themselves, so we sort of teaching them to see like us or to read like us a bit. Yeah, I guess that is ideally what we are doing, that is what we are trying to do by having consistent kind of criteria cross the different assignments. (AsstP2, SocSci)

Regarding this quote, it seems that the academic uses written feedback to help develop their students' self-assessment skills because they think that students who have these skills can identify their own weaknesses. The academic expects their students to take responsibility for their own learning. They seem to think that for this to happen, academics need to provide written feedback that includes clear information to help students see their weaknesses. In this way, students who are aware of their weaknesses will likely study to improve them (Craig & Burke da Silva, 2014; Dawson et al., 2019; Hyland, 2013a). It seems that the academic initially transfers knowledge to their students because they think they do not know how to do better academic work. This situation could teach students how to structure good academic work. Therefore, we can say that the academic simultaneously transfers responsibility to their students. Hancock et al. (2002) argue that students should be allowed as much flexibility as possible to improve their learning because this is more likely to help develop their self-regulated learning skills. Another academic assumed that students' self-assessment skills might be improved by giving consistent written feedback to them:

You know, let's say they have a structural problem in most their essays like they're not able to formulate an argument you know from beginning to end. And they keep this keeps coming up over and over again on their written feedback. Then I think the student will begin to say**,** ok maybe I need to spend more time outlining, I need to spend more time signposting my argument so I can see you know how it flows from point A to point B to point C. (AssciP2, SocSci)

This academic also stated that students do not know how to produce good academic work, so they feel compelled to address this. They think that they can improve students' learning skills with the help of written feedback. In other words, it could be argued that the academic feels a responsibility for their students' learning. At the same time, the academic aims to transfer the

responsibility of learning to the student with the written feedback they give. As an indicator of the student taking this responsibility, they point to students' ability to identify weaknesses in their own studies. In other words, the more a student can evaluate their own work, the more they are at the centre of learning (Barber, 2007; Czajka & McConnell, 2019; Orsmond & Merry, 2013). For this reason, the academic's use of written feedback is likely to improve students' self-regulated learning skills because Nicol and Macfarlane-Dick (2006) argue that a student who can evaluate their own work is also a student who has already taken responsibility for learning. Some academics claimed that students who take responsibility for learning are more likely to develop their critical thinking skills because they can overcome their weaknesses by themselves. For example:

> We teach them by example by giving them written feedback where we're being critical about their arguments and so hopefully in the process of seeing how we do it, they learn how to do it and how to assess their work themselves and at that point you know, they become more of a self-regulated learner rather than all sort of doing the work for them. So, you know, they can critically construct the knowledge by themselves. (P4, A Hum)

> Then you will do a discussion of the strengths and weaknesses of the different viewpoints, and you can come up with a conclusion of what you think is the most prevalent. And by coaching them with written feedback in that way, you are actually getting them to see how they would move a piece of inquiry along by evaluating their works by themselves. (P6, SocSci)

According to these academics, students' critical thinking skills are an indicator of whether or not they engaged in learning. Therefore, academics expect students to critically evaluate their own work. It seems that academics have created their written feedback according to this understanding. They give written feedback to their students to help them improve their self-assessment skills to be able to develop a critical argument. Here, as in the previous quotes, they initially transfer information to students to help develop their critical thinking skills. Then, they expect their students to take responsibilities for their own learning to develop critical argument. The academics can also help students develop their self-regulated learning skills because, as Boud and Molloy (2013) argue, after students develop their self-regulated learning skills, they develop their critical thinking. But what's interesting here is that academics focus on critical thinking in lieu of developing students' self-regulated learning skills. It appears that while academics provide written feedback to develop their students' critical thinking skills, they also provide it incidentally, improving their self-regulated learning as a knock-on effect. If attention

is paid to the explanations of the academics, they talk about what students with critical thinking are supposed to do. This shows that they expect their students to approach and evaluate their work in this way, too. Two more academics also talked about how they improve students' critical thinking through self-assessment:

> They can, of course, learn from your written feedback but for them to sort of be self-regulated learners where you hope that in the course of learning from your feedback, they can also learn how they can critically assess their work without your help. So, I think that is a bit of a challenge, but hopefully, you know just repeating the process, again and again, is a way to get around that challenge of making sure they do learn from the written feedback even if they do not learn the first time. Hopefully, they learn the third time or fourth time. (P3, Sci)

> We sort of demonstrating it in written feedback by saying look, I am not persuaded by your argument because there is a hole in it. You know, you started with these propositions X, Y and Z. Then you try to argue for this conclusion, but the conclusion does not follow from those propositions for these reasons, and you give them reasons, and you say look at, this is a hole in the argument which means that your argument is not going to persuade anybody. You know, what them to be able to do that themselves by the end of their course, to be able to sort of stop putting together an argument and then want them to be able to see for themselves why the argument does not work if it does not work. So, they can ultimately create arguments that do work. (P5, A Hum)

These academics said that students need to have the ability to evaluate their own work in order to have a critical discussion. Even if they did not say this very clearly, this meaning can be derived from their interviews. The academics use written feedback to help students structure good critical arguments. If students learn what it takes to structure critical arguments, they are more likely to evaluate their own work and make an effort to overcome their weaknesses (Panadero et al., 2016; Price et al., 2010; Wiliam, 2011). The academics state that this might happen over time. Here, it seems that instead of giving direct information, the academics help their students construct their own work. For example, one of the academics said that students are supposed to develop their arguments to persuade the reader because that is the only way to say that good academic work has been done. Shute (2008) asserts that students who can do this could evaluate the evidence using the information they have learned. In other words, it indicates that they have deeply engaged in learning (Sadler, 2010; Winne, 1995). If we look at the explanations of the academics here, they think that students need to develop their self-assessment skills in order to become a self-regulated learner. In other words, the academics

place the importance of having self-assessment skills at the centre of their conceptions of self-regulated learning and ideas about written feedback. Ryan and Deci (2017) argue that students who can evaluate themselves are more likely to engage with the discipline in-depth because students who identify their own weaknesses will strive to improve them. Since the academics described a self-regulated learner as a student who has critical thinking ability, they use their written feedback to develop their students' critical thinking through self-assessment. Panadero et al. (2017) add that a student who can evaluate their own learning could think critically. Students who have self-assessment skills are expected to become good self-regulated learners (Butler & Lee, 2010; Mahlberg, 2015; Putwain et al., 2013; Yan, 2020). Self-regulated learners are more likely to improve their critical thinking because they are expected to assimilate content knowledge in-depth (Matsuyama et al., 2019; Muwonge et al., 2017; Nicol & McFarlane-Dick, 2006). Here, the academics use their written feedback to enable their students to evaluate their own academic performance because they think that students can develop their critical thinking skills this way. Nevertheless, the academics did not explicitly talk about how they use their written feedback to positively affect their students' self-regulation steps, although they actually help develop their students' self-regulated learning skills in general.

5.4.2 Implications for self-regulated learning

In this category, the academics described a self-regulated learner as a student who engages with content knowledge to be able to critically evaluate it to develop their own idea. In other words, we can say that a self-regulated learner is defined as a student who has critical thinking. In the literature, students' having critical thinking is a result of their self-regulated learning processes (Fosnot & Perry, 2005; Randi & Corno, 2000). Interestingly, the academics talked about critical thinking when they express their opinions about self-regulated learning, but not as a result of self-regulation. Although in Category 2, learning processes are at the centre of the interviewees' conceptions, they did not talk about critical thinking skills. However, in this category, the academics expect their students to develop their critical thinking in addition to learning processes. Although students need to have developed some learning skills to be able to critically evaluate content knowledge, the academics predominantly focused on student critical thinking development rather than learning skills. We can argue that students need to be more at the centre

of their learning than previous categories because they are supposed to critically evaluate content knowledge to develop their own views in this category.

The academics in this category described a self-regulated learner as an academically successful student because although they needed to focus on learning processes to explain a self-regulated learner, they talked a lot about critical thinking and how they help their students improve their critical thinking skills. It is known that a result of effective self-regulation processes is that students can engage with content knowledge in-depth, and as a result of that they can think critically as well (Barber, 2007; Pajares, 2008). From that perspective, we can say that they expressed their ideas about self-regulated learning to some extent. If they talked about students' learning processes and learning skills more than critical thinking, it would be more related to current self-regulated learning literature. In this category, the academics talked about critical thinking more than learning skills development and used their written feedback to help develop their students' critical thinking.

Concerning the data, the interviewees use their written feedback to enable students to improve their self-assessment skills because they think that students improve their critical thinking skills in this way. However, the academics focused on students' critical thinking skills more than self-regulated learning processes when they use their written feedback. Students who can evaluate their own work are more likely to identify their own weaknesses and strengths (Roick & Ringeisen, 2018; Teng & Zhang, 2018). Students may make an effort to regulate their own learning to improve their own weaknesses (Alotaibi et al., 2017; Clark, 2012; Wolters, 2003). This situation is likely to lead those students to critically engage with the subject matter (Kahrizi et al., 2014). First, the academics give information to their students through written feedback to help them evaluate their own work. Then, students are supposed to take responsibility to improve their weaknesses by themselves. These students regulate their own learning and thereby engage with content knowledge in-depth. In this case, students are able to develop their critical thinking skills. The academics focused on their students' learning processes indirectly, though we can see from their interviews how they desire to positively affect their students' learning processes. They know that giving them direct guidance on what to do takes away flexibility that is crucial to both critical thinking and self-regulation. For example, expecting students to structure consistent and logical academic work and using written feedback accordingly will likely help them improve their learning processes. Therefore, students can also develop their self-regulated learning skills as a result of the academics' use of written feedback.

Students who have acquired developed learning skills are more likely to continue to learn after formal education because they have become a real learner (Kang & Keinonen, 2018; Prosser & Trigwell, 1998). In this category, although the academics mentioned students' critical thinking and how they help them improve this skill, it appears that they did not focus on improving their student' learning skills to help them learn how to learn. Despite this, it may be argued that academics use their written feedback to support their students' self-regulated learning skills because students need to regulate their own learning to improve their critical thinking skills. In the literature, although there are many studies which investigated the effect of written feedback on student self-assessment skills, here, academics mentioned that written feedback could affect student self-assessment and, in turn, critical thinking skills. They argued that written feedback could develop students' critical thinking through their self-assessment skills. The findings in this category indicates that the academics are confused about the true definition of self-regulated learning. Thus, they should be supported to understand what self-regulated learning is. If academics understand it, they are more likely to help their students become more effective self-regulated learners.

5.5 Category 4: Self-regulated learner is a student who develops learning skills to change as a person to become life-long learners.

Seven academics across three faculties defined a self-regulated learner as someone who develops learning skills to become a lifelong learner. These academics think that it is one of the most important set of skills to gain from higher education. According to these academics, in order for students to be a life-long learner, they need to develop a variety of learning skills. Students' being able to develop learning skills is more likely to change them as a learner (Kitsantas et al., 2004; Long & Aleven, 2017; Marton & Pang, 2008). As a consequence, students are more likely to learn by themselves throughout their lives (Weinstein et al., 2011). Broadbent and Poon (2015) also argue that learning skills and self-regulated learning skills are similar. It appears that there is an overlap between Category 3 and Category 4. While there is not an emphasis on life-long learning skills in Category 3, in this category, there is an apparent emphasis on it in addition to critical thinking. In this category, there is also an emphasis on how students change as a learner. In this way, Category 4 includes Category 3. It seems that the definition in this category is the truest definition of self-regulated learner among the four categories. An interviewee briefly defined self-regulated learner as a life-long learner:

> I think self-regulated learning is an important aspect of what we should be about in higher education, and that is to encourage learners to develop the kind of skills that make them into life-long learners. I think it is really teaching students to learn or to be able to learn themselves and to take on anything. It is the most important skill they can get from the university to change as a person. (P5, SocSci)

In this quotation, the interviewee thinks that a self-regulated learner is an individual who learns by themselves. It is interesting that, for them, facilitating the development of learning skills is the duty of higher education. The academic does not expect their students to have the ability to self-learn before higher education. For them, if students obtain the ability to learn from the university, they are highly likely to become life-long learners because these students have gained the ability to learn by themselves. This includes setting their own goals, selecting their own learning strategies and monitoring their own learning progresses to achieve the goals they set. In the literature, a self-regulated learner is expected to follow these steps to improve their learning (Boekaerts 1999; Panadero, 2017; Zimmerman & Schunk, 2011). Therefore, it could be argued that the academic places learning responsibility on their students to help develop their

self-regulated learning skills. Furthermore, another interviewee gave an example of how self-regulated learners should learn:

> Yesterday I gave a lecture in which I was talking about transitions of electrons, and it so happens that when you do that it is a piece of spectroscopy what you get is a very broad feature in the spectrum. And a group of students said why is it broad, it should be exact energy, it should be just a single feature because of quantum theory, and they were absolutely right. […] So, I was really impressed by that I was in the 2nd- year undergraduate lecture and based on what they knew they were absolutely right, so I think this is the self-regulated learning because they have developed skills to learn so they can learn by themselves throughout their life. (P6, Sci)

According to this academic, students need to be flexible to construct their own knowledge within the context, because in that case, they take responsibility for learning. For instance, the students objected that the information about quantum theory in the lecture was incorrect. The academic's attitude is critical here because they have argued with students and decided they were right. The attitude of the academic here shows that students are expected to develop their learning skills to contribute to the discipline. The example given here fits self-regulated learning. Students' constructing their own knowledge only happens once they identify that they need to use their thinking skills (Babo et al., 2017; Carless & Boud, 2018). From that perspective, we can argue that the academic not only places importance on learning content knowledge, but also on improving their students' learning processes and learning skills. Another interviewee shares a different perspective: that to help develop students' learning skills, academics should not intervene in their students' learning processes:

> They [the students] should feel they are independent so they can structure their knowledge. If students do not feel interfered with, they are more likely to evaluate an issue from a different perspective because they are not presented with a framework to comply with. […] This autonomy can eventually change them because they become capable of learning by themselves. (P7, SocSci)

This academic thinks that students should be given autonomy when they learn a subject matter because they can develop their ideas in this case. For them, while academics need to remain in the background, students need to be in the foreground in the learning environment. This situation is more likely to lead students to take more responsibility for learning because academics do not aim to transfer knowledge to their students (Wiliam, 2011). Therefore, students are not supposed to learn only the content knowledge, but they are also supposed to

contribute to the discipline by bringing a different perspective (Nicol, 2010; Teng & Zhang, 2018). Students' taking responsibility may improve their learning skills as they set their own goals and make an effort to achieve them (Birjandi & Rahimi, 2012; Boud & Molloy, 2013; Hanh & Ramnath, 2016). For Handoko et al. (2019), most probably this situation can lead students to become life-long learners. According to the interviewee here, students are more likely to change as a learner as a result of their learning processes. The academic's quote focuses on supporting students' autonomy because in this case, the responsibility for learning passes to students. Another academic emphasised that for this to happen, students need to have intrinsic motivation as well:

> Students' role in learning is not to memorise things, but to understand things in-depth in the light of the information they have learned. […] But I expect my students to understand things in-depth and have the ability to analyse well. To do this, they should have enough motivation, you know, because they need to be persistent to correct their misunderstandings. You know, I think they should take responsibility for learning. This kind of students will continue to learn even after higher education because they have now acquired new skills. For me, this is a self-regulated student, you know. (AssciP3, SocSci)

In this quote, students are not only supposed to master their content knowledge, but they are also supposed to be able to develop their own meanings by using content knowledge. This academic believes that, for students to understand the discipline in-depth, they need to have sufficient motivation. It seems that the academic wanted to emphasise 'intrinsic motivation' when they mentioned 'motivation' because they expect their students to become persistent in correcting their misunderstandings. Furthermore, they expect their students to take more responsibility for learning. Therefore, these expectations from students also refer to intrinsic motivation since Leenknecht et al. (2021) argue that students having intrinsic motivation are more likely to take responsibility to set their own goals, choose strategies, evaluate their own performance to be able to reach the goals they set. For Bandura (2006), most probably, these students will learn how to manage their learning environment to achieve the goals they set. They are highly likely to become a lifelong learner because if they achieve it in the university, they will see that they can learn by themselves (Panadero et al., 2016). In other words, this situation may help strengthen student self-efficacy (Chen et al., 2019; Geitz et al., 2016; Nbina & Viko, 2010; Pajares, 2008). After formal education, students will likely believe in themselves and that they can achieve their learning goals (Panadero et al., 2016). This situation may give the opportunity for students to learn a subject matter in-depth (Honicke & Broadbent, 2016; Lee et al., 2020). According to the interviewee's explanation, students are supposed to be at the

centre of their learning, and they need intrinsic motivation for it. Meanwhile, an academic talked about how they try to strengthen their students' motivation:

> But I think more profoundly it someone who takes on the responsibility for their learning rather than sees lectures as lectures and the lecturers as the ones responsible for their learning. So, I do not mind if a student says I would much rather do some reading this morning and come to the lecture. I do not mind if a student says can I do an essay which does not quite fit with the course, but it is something I am really interested in. I would much prefer students like that because what they are doing is following their passion. So, if they get a passion for the subject, then they regulate their learning very well. (P1, A Hum)

Concerning this quote, the academic appears to give some degree of autonomy to their students because they allow them to choose their topics to complete their assignments. It seems that the academic's purpose is to give responsibility to their students to help them develop their content knowledge. They think that students' following their passion is more likely to help them regulate their own learning because they will do what they really want to do. Although the academic did not specifically use the term 'intrinsic motivation', we can say that they used 'following their passion', and 'doing something they are really interested in' as intrinsic motivation, because it may stimulate students to make an effort to complete their learning tasks. Therefore, to this academic, it seems that the learning process is more important than learning content knowledge. In other words, they predominantly focus on improving students' learning skills rather than their content knowledge when they described self-regulated learners. Another interviewee explicitly places intrinsic motivation at the centre of their conception of self-regulated learner. We might argue that some academics appear to be more knowledgeable about intrinsic motivation to help their students become more effective self-regulated learners:

> I guess there is a kind of effective emotional element to help students learn by themselves. Then there is a cognitive element to being a self-regulated learner. The first I think is the most important, which is what I am talking about, which has to be that deep internal motivation that drives them to take responsibility for their learning. And the second is that they have the skills to know how to do that so they have the desire to do it and the skills to do and the result will be that they become a self-regulated learner. (AsstP7, SocSci)

According to this academic, a self-regulated learner is someone who can learn by themselves. They said that in order for students to become a self-regulated learner, they need two elements. The first of these is intrinsic motivation, which they see as an emotional element to stimulate student learning. The second element is the student's cognitive skills. The student who has

intrinsic motivation is more likely to be willing to take responsibility to improve their own learning using their cognitive skills. In other words, intrinsic motivation activates the student to use their cognitive skills so that they are able to construct their own knowledge within the context. The student here is defined as a self-regulated learner because in this way, the student will take responsibility for engaging with the subject matter. The interviewee emphasised that the most crucial element to help the student become a self-regulated learner is intrinsic motivation. They think that it will provide the desire to learn for the student. It seems that the academic tries to transfer learning responsibility to the student instead of directly transferring the structured knowledge to them. Although it appears that the academic did not explain all the elements of self-regulated learning in detail, we can say that they described a self-regulated learner as presented in the self-regulated learning literature. Therefore, we might assume that they may create a flexible learning environment for their students to lead them to become self-regulated learners. Another academic said that self-regulated learners are expected to identify their own weaknesses to strengthen them (P2, SocSci). In other words, they are supposed to have the ability to be able to assess their learning performance. Although self-assessment is mentioned in Category 3 to help develop students' critical thinking skills, in this category, the academic thinks that students need to have self-assessment skills to improve their own learning skills to become life-long learners. For Yan (2020), students' having self-assessment skill is essential for students to become self-regulated learners because they can identify and work on their weaknesses by themselves. Students' evaluating their academic performance to minimize their weaknesses is more likely to lead them to engage with the subject matter they study (Andrade, 2010; Mahlberg, 2015):

> I define a self-regulated learner as someone who is able to just regulate his own learning and so is able to probably guess his level of understanding and then know what to do for the next step. So, a student or a learner knows what their weaknesses are. They have a sense of their weaknesses and strengths but are willing to kind of deal with their weaknesses. Only in this way can a student develop their learning skills to be a life-long learner. (P2, SocSci)

In this quote, the student who takes responsibility for learning is expected to improve their own learning. The academic said that in order for the student to do this, they need to be able to evaluate their own learning because in this way they can identify their weaknesses so that they strive to improve them. The academic claimed that the student who overcomes their weaknesses is able and motivated to learn the discipline in-depth. The student who does this can improve their self-efficacy and take responsibility to set more challenging goals for themselves (Baird

et al., 2017; Wiliam, 2011). Consequently, students may think that they can achieve more challenging goals since they already achieved the goals they set before (Kallay, 2012; Long & Aleven, 2017). Naturally, these students will take more responsibility for learning (Carless & Boud, 2018; Kang & Keinonen, 2018). A student who can overcome their own weaknesses will be a lifelong learner because they improve their learning skills (Panadero et al., 2017). From this point of view, it seems that the academic here places self-assessment skill at the centre of their conception of self-regulated learning. Another academic expressed that a self-regulated learner is supposed to seek help from others when they cannot overcome their own weaknesses:

So, they know what they want to do; they can choose a topic area. They can kind of make decisions about how they want to do it, and they have a sense of when they need guidance because they only get a certain amount of supervision from us. So, it is up to them to decide when the best time is to come see me as their supervisor. And that they can map out then what their learning needs are with me. And we can then have that discussion one to one, you know. So, in my opinion, students can learn how to learn as a result. (P1, A Hum)

In this quote, since students can choose their topics of study, we can say that they are given autonomy. This shows that the academic expects their students to take responsibility for learning. It seems that since the student is supposed to take responsibility, seeking help or guidance to improve their own learning is their responsibility as well. Then the process becomes about students' monitoring ability. If students are able to monitor their learning progress, they will likely understand when they need help (Orsmond & Merry, 2013; Panadero & Romero, 2014). Students who seek help might achieve the goals they set because they can improve their weaknesses (Butler & Lee, 2010; Yan, 2020). The steps explained by the academic are compatible with those in the self-regulated learning literature. It appears that the academic provides a learning environment for their students to foster their self-regulated learning skills because they give an appropriate level of autonomy to their students. Here, although the academic defines self-regulated learners with an emphasis on seeking help, they basically try to describe a self-regulated learner as someone who improved their learning skills to become a life-long learner. Finally, another academic said that for a student to become a self-regulated learner, they need to have enough autonomy to construct their own knowledge within the context. To this academic, a self-regulated learner is expected to be completely at the centre of their learning to develop their own knowledge:

I think a self-regulated learner is a student who constructs his own learning. I can also say that he is the person who gathers the information scattered around according to his own goals and makes sense of them. […] So, I do not feed them [students] with a spoon. Although it may be difficult for them to get used to it at first, they eventually learn to take responsibilities for their learning. […] So, they find the information that glows through the fog and clouds by following their passions. (P5, SocSci)

This academic expects a self-regulated learner to construct their own knowledge because students are supposed to follow their passion. They said they do 'not feed [their students] with a spoon'. This is a good explanation to emphasise they do not aim to transfer knowledge to their students directly. The academic also made an analogy to explain how students need to construct their own knowledge. Students are supposed to seek their knowledge through clouds and fog, exploring to find and build their learning. In regard to their quote, students are expected to set their own goals according to their passion and put in enough effort to achieve them. Although their description does not include all components of self-regulation presented in the current literature, they appear to know what a student needs to do to become a self-regulated learner, because they give autonomy to their students- which is very much related to self-regulated learning.

5.5.1 Use of written feedback to support self-regulated learning

In the first category, academics predominantly focus on their students' content knowledge development, while in the second and third category, academics aim to enable their students to improve their learning processes and their critical thinking, respectively. In this category, although there are overlaps with other categories, they place motivation at the centre of their conceptions to explain self-regulated learners. For them, motivation is vital for students to develop their learning skills and make them life-long learners. Thus, the academics use their written feedback to contribute to their students' motivation and delegate more responsibility for learning. According to the data, academics think that the language of written feedback is one of the most important features to strengthen their students' motivation. So, they consider the language when they structure their written feedback. One academic (P1, A Hum) said that he tries not to use imperative language in written feedback, not to direct his students' learning,

because he thinks that giving autonomy to students can improve their motivation. To positively affect students' motivation, the academics seem to gently point out their students' weaknesses in their work rather than criticising their skills in their written feedback. In this way, students can attribute the problem to their lack of effort, not to their lack of skills (Carless et al., 2011; Dawson et al., 2019). Several academics talked about the importance of students' self-confidence to develop their students' motivation. Therefore, it seems that academics try not to harm students' self-confidence while creating their written feedback. For example, an academic (P7, SocSci) said that he pays more attention to the language of written feedback, to not say harsh things and harm their students' confidence. Thus, we can say that all academics' interviews in this category deal with student's motivation because they expect their students to take responsibility for learning. For example, an interviewee said that academics need to spend enough time to use balanced language in written feedback:

I think the language in the phrasing is very important. And that takes time as someone giving the written feedback you know if you rush it, you can end up being quite harsh. I think you need to write and then think hang on a minute, is that a bit harsh. I need to make sure that I'm not harming this person's self-confidence. So, that means the feedback takes time. (P7, SocSci)

This interviewee thinks that the language in the written feedback should not be harsh, to avoid damaging the student's self-confidence. Students' having enough confidence may improve their self-efficacy because they can believe themselves capable of learning in those cases (Geitz et al., 2016; Hsieh & Schallert, 2008; Jungert & Rosander, 2010). Winne (1995) argues that self-efficacy is one of the most important motivation resources for students. If they think that they can achieve their own learning goals, they will likely be willing to continue to set more challenging goals and better engage in learning (Khiat, 2019; Kippers et al., 2018). It seems that the academic believes that they can improve their students' self-efficacy through their written feedback because they aim to develop their confidence for learning. Students who have sufficient confidence are more likely to set their own goals (Lee et al., 2014; Putwain et al., 2013; Roick & Ringeisen, 2018). This may lead students to engage with the discipline in-depth (Sadler, 2013). Students need to be given the flexibility and the support to set their own goals rather than expect them to rigidly follow instructions that academics offer (Zimmerman, 2008). To do that, an interviewee said that they avoid telling their students what they need to do to improve their learning in their written feedback to give autonomy to them:

I think it can negatively affect where you are simply saying to the student do this, do this and do this in the written feedback. I think that's a way that does not help because the language of written feedback is essential, you know. I think in the written feedback, we should present flexibility to them to strengthen their motivation. I also give them some advice to broaden their horizons. That gives the students confidence, or the key things about becoming a self-regulated learner I think is having confidence in your own ability. […] So, if written feedback undermines confidence, then it does not help. If written feedback encourages confidence, it helps. (P1, A Hum)

According to this quote, the interviewee thinks that if academics use imperative language in their written feedback, it may negatively affect students' motivation, because it does not present any flexibility to them. Academics transfer information to their students in this case, so students are discouraged from taking responsibility for learning (Panadero et al., 2016; Veenman, 2017). Pintrich (2004) argues that it is vital for students to take responsibility to set their own goals. Therefore, the interviewee emphasised that they try to give them the flexibility to develop their confidence to take more responsibility for their learning to engage with the discipline. They also said that 'I give them some advice to broaden their horizons' (P1, A Hum). It seems that they do not tell the students what they need to do but still give instructions that they can follow. Although they give some advice to the students, it appears that they do not expect their students to follow them, they only want to help them see that there may be various ways to improve the argument. We might argue that the interviewee seems to give the autonomy to their students to help them set their own learning goals. For this reason, this situation is likely to lead students to develop their self-regulated learning skills (Dinsmore et al., 2008; Handoko et al., 2019). Czajka and McConnell (2019) argue that students setting their own goals are at the centre of their own learning. Then students are more likely to make an effort to achieve their goals to deeply engage with content knowledge (Keyser & Viljoen, 2015). Students who achieved their learning goals are more likely to believe in themselves and set more challenging goals (Weinstein et al., 2011). In other words, their self-efficacy will likely improve as a result of this process (Honicke & Broadbent, 2016; Schunk, 2003). Another academic said that to positively affect student confidence and motivation, they try not to judge their students' skills because in this case, students may associate their weaknesses with their skills rather than a lack of effort or misunderstanding. Therefore, the academic here tries to make comments about students' work. For example:

I always try to point out weaknesses in my students' work in written feedback, but it can be difficult sometimes because my students think I am criticising their skills. So, there is a bit of a tension there because I can undermine their confidence, so I do not want to say, your writing is not clear, or your writing is worse, or you are not a clear writer. I do not want to pass judgment on them as a person. (AsstP7, SocSci)

The interviewee tries to help students develop their learning by highlighting what their weaknesses are. While doing this, the interviewee said that they do not aim to criticise their students' skills. For example, they do not say to their students 'you are not a clear writer' (AsstP7, SocSci). If they criticised their students' skills, the student's motivation would be more likely to be harmed because they would attribute their weaknesses to lack of ability (Liu et al., 2012; Muwonge et al., 2017). Therefore, students may not make enough effort to produce better work (Pai & Mallya, 2016; Pintrich, 2004). According to this interviewee, it seems that they want to avoid too-brief written feedback as well, because they said that they do not want to say 'your writing is worse' or 'your writing is not clear' (AsstP7, SocSci). In this case, they want to give detailed feedback to help them understand where their weaknesses lie. For them, this type of language is more likely to improve students' confidence. Another academic said that giving information about structuring good academic work to students with written feedback can develop students' motivation:

And it can be both ways like written feedback can encourage people a lot, but it can also discourage them. So, I think trying to construct the feedback in a way that gives them some objective facts or more objective information about how they're performing relative to the learning criteria. I think it helps develop their [students'] motivation because they can set their own goals, you know. (P2, SocSci)

This academic said that they structure their written feedback to encourage their students to improve their learning and it seems that they aim to improve their students' motivation. To do that, they give information in written feedback to their students to help them produce better academic work, not to judge their skills. If students' motivation improves, they are likely to take responsibility for their own learning. Then students will set their own learning goals to produce good academic work, completing the circle. We can say that the academic here appears to offer flexibility to their students to encourage them to take responsibility for learning. In the literature, students are expected to be flexible to be able to set their own goals to become self-regulated learners because they can construct their own knowledge within a context in this way (Teng & Zhang, 2018; Zimmerman, 2008; Zusho et al., 2003). Therefore, this situation can develop the student's self-regulated learning skills. Another participant said that they pay

attention to the language of written feedback to be able to give more responsibility to their students. They present many options to their students to help them choose a suitable learning strategy to reach their own goals. For them, students' having flexibility can enable them to construct their own knowledge within the context:

I use written feedback to give more responsibility to my students, you know. For this, the language of written feedback is critical. So, I prefer to give them ways to choose rather than tell them what to do. That way, they can structure their own learning so that they learn how to learn. (P6, Sci)

The academic seems to place their students at the centre of their learning because they want to give more responsibility for learning to them. When they talk about the language of written feedback, they talk about how the content of written feedback should be. For instance, they do not tell their students what they need to do to improve their learning. Instead, they propose different ways to give them the flexibility of choosing one to help construct their own knowledge within the context. However, it can be said that although they want to give flexibility to their students, they may still expect them to follow instructions they gave, since they expect their students to choose one of the ways they have given in written feedback. Despite this, we can argue that students may develop their self-regulated learning skills because they expect their students to learn how to learn. Finally, an academic mentioned the importance of the language of written feedback to strengthen their students' intrinsic motivation. They said that students need to have intrinsic motivation to develop their learning skills to be lifelong learners. Therefore, it appears that the interviewee here structures their written feedback to positively contribute to student intrinsic motivation:

To make students life-long learners, it is necessary to improve their learning skills. For this, it is necessary to strengthen their motivation, you know. While creating my written feedback, I make sure that its language does not harm my students' motivation. So, I make sure that the language of my written feedback is not harsh and does not direct my students. I try to make them find out their weaknesses rather than directly tell them what their weaknesses are, you know. (AssciP3, SocSci)

This academic said that motivation is crucial for students to develop their learning skills. Fong et al. (2019) emphasise that the student should have intrinsic motivation to be able to set their own learning goals to construct their own knowledge. Therefore, the academic uses their language in a way that does not harm the intrinsic motivation of the student while creating written feedback. Here, it seems that there is an important relationship between language of

written feedback and student motivation. While ‘the language of my written feedback is not harsh’ (AssciP3, SocSci) may refer to the effect on the student’s motivation (as they do not want to demotivate their students), ‘the language of my written feedback does not direct my students’ (AssciP3, SocSci) may refer to the student’s autonomy because it seems that the academic tries to transfer responsibility for learning to their students. The fact that the academic helps their students to identify their own weaknesses can be explained by their willingness to give them more responsibility for learning. Therefore, it appears that the academic tries to improve their students' learning skills to enable them to become life-long learners.

5.5.2 Implications for self-regulated learning

In this category, the academics described a self-regulated learner as a student who develops their learning skills to become life-long learners. These students can continue to learn after formal education. In Category 2, although students are supposed to develop their learning processes, the academics did not talk about students’ having developed learning skills to become life-long learners. In this category, it seems that students are given more responsibility to set their own learning goals to go beyond the course content to extend their learning. Students who take responsibility for their learning may develop their learning skills as they use various learning strategies to achieve the goals they set (Czajka & McConnell, 2019; Handoko et al., 2019; Hawe & Dixon, 2017). The academics also talked about the importance of having critical thinking skills because they also expect their students to critically evaluate the content knowledge of the subject matter to develop their own view. In Category 3, although the academics emphasized the importance of having critical thinking skills to become self-regulated learners, it seems that they did not emphasize the importance of acquiring developed learning skills to enable their students to become life-long learners. The academics in Category 4 focused on helping develop their students’ learning skills to enable them to become life-long learners in addition to students’ having or acquiring critical thinking skills. Zimmerman and Schunk (2011) argue that if a student is willing to take responsibility to set their own goals, select powerful learning strategies, and monitor their own progress to achieve the goals, we can say that this student is a self-regulated learner because they can construct their own learning

methods towards objectives. So, it seems that the definition of a self-regulated learner in this category is the closest to the definition presented in the current literature.

Academics described a self-regulated learner as a one who develops their learning skills to become life-long learners. So, they try to help their students improve their learning skills. They think that academics' staying in the background of the learning environment may enable students to take more responsibility for their own learning. In this case, tutors do not intervene in their students' learning unless absolutely necessary. It indicates that academics aim to give more responsibility for learning to their students because if students are more responsible, they will likely develop their learning skills. According to the data, tutors need to encourage and guide students in setting their own learning goals, selecting learning strategies, and monitoring their own progress rather than directly transfer structured knowledge to their students or give tight parameter to them to be followed rigidly. In other words, tutors need to give autonomy to their students. Then, even if students have sufficient autonomy, they need to learn knowledge within the context at the same time. Motivation is very important for students because motivation may help students make more effort to learn the subject matter. For this reason, academics should support their students' motivation, and enable them to take as much responsibility as they can to construct their own learning within the context. Students' taking responsibility to construct their learning is more likely to lead them to develop their learning skills too.

Tutors consider the language of their written feedback to help develop their students' motivation. They do not use harsh or imperative language in their written feedback, in order to avoid harming their students' motivation. In the literature, it is agreed that language of written feedback should not be harsh because students may think that they are not capable enough to develop their own learning. In other words, students may think that their failure is due to their own lack of talent. This situation is more likely to cause student motivation to decrease. Therefore, students are less likely to strive to overcome difficulties to improve their learning. For instance, students do not seek help when they are not able to solve a problem. Tutors' consideration of this issue when they create their written feedback is likely to support students' motivation. Zimmerman and Schunk (2011) assert that the increase in students' motivation leads them to improve their learning by taking more responsibility. In that case, written feedback may have positive effect on student learning because students are more likely to be

willing to construct their own knowledge within the context. This may help develop students' learning skills as well. So, students can become more effective learners in this case.

In the literature, it is argued that written feedback should be detailed and should inform students on what they need to do to improve their learning because if students know what they need to do, they will make an effort to improve their own learning. However, some academics in this category said that written feedback should not offer rigid instructions to students, in order to allow them some flexibility. The tutors feel that their purpose should be to help students identify weaknesses in their work and find ways to improve them. Tutors think that they can transfer responsibility for learning to their students in this way. Roth et al. (2016) argue that the more students take responsibility for learning, the more they can develop their learning skills. Therefore, it may be argued that written feedback can contribute to students' learning skills development if the language and content are structured carefully. According to the data, tutors' staying in the background of the learning environment and using written feedback to help students identify and improve their own weaknesses is more likely to lead students to become more active in their learning. This learning environment can also enable students to develop their learning skills. Students' might fundamentally change as learners as they develop learning skills that will stay with them throughout their lives. For tutors in this category, these students most probably will continue to learn after formal education. In other words, they will become life-long learners.

5.6 Relations between the categories

As discussed, there are four categories in my study that emerged from the phenomenographic data analysis. According to Marton and Booth's (1997) anatomy of experience schema, I have examined them in terms of structural and referential aspects to see the differences between the categories better. In this research, the phenomenon is 'a self-regulated learner' because I aim to explore academics' perceptions, understandings, and experiences about how they describe self-regulated learners. For example, in the first category, a self-regulated learner is described by tutors as 'a student who tries to understand the concepts introduced in the degree program'. In terms of the structural aspect of the self-regulated learner in the first category, it seems that tutors predominantly expect their students to do the readings the structured programme offered, listen to their lectures, and understand the concepts introduced in lectures and seminars. In other words, students are expected to meet external demands. Therefore, we can say that this is the external horizon of the structural aspect. However, if students take more responsibility for their own learning to get a deep insight into the concepts introduced in lectures and seminars, we can say that this is the internal horizon of the structural aspect because students will likely try to satisfy their internal demands. In this research, academics' perceptions of the self-regulated learner develop from the first to the fourth category. So, as we move from the first to the fourth category, while the desire of students to meet their internal demands will likely increase, their desire to meet external demands will likely decrease.

According to the categories, it is clear that these categories are logically related to each other in terms of their structural and referential aspects. This has produced four titles under both aspects shown in Table 5.2 below. While the referential aspects are discussed within 'reproducing', 'developing meanings', 'critically evaluating evidence' and 'becoming lifelong learners', the structural aspects are grouped under 'learning concepts', 'connecting concepts', 'using thinking skills' and 'developing learning skills'. There is a top-down hierarchy between categories, as mentioned before. For example, Category 2 includes Category1; Category 3 includes Category 2 and Category 1, but Category 2 does not include Category 3, and so on. In other words, from the first to the last, the categories develop progressively, adding substantially in meaning to the previous one. Therefore, it can be said that while conception in the first category is the simplest definition, conception in the fourth category is the most complex and developed category, which is the closest to the definition in the literature.

Table 5.2 The referential and structural aspects of the categories

Structural Aspects	**Referential Aspects**			
	Reproducing	**Developing Meanings**	**Critically Evaluating Evidence**	**Becoming Life-Long Learners**
Learning Concepts	Category 1			
Connecting Concepts		Category 2		
Using Thinking Skills			Category 3	
Developing Learning Skills				Category 4

In the first category, academics defined a self-regulated learner as individuals trying to understand the concepts and formulas introduced in lectures. Therefore, students' understanding of the concepts is the crucial element in this category. Since the emphasis is on understanding the concepts, we can say that knowledge is transferred to the student. In other words, students are expected to rigidly follow programme instructions. From that perspective, we can say that students try to reach goals set by others. Since students are expected to rigidly follow instructions to understand the concepts and materials, they may not go beyond the course content to extend their learning. For this reason, students' learning products may become similar to each other. To become self-regulated learners, students should be able to set their own goals and choose learning strategies to achieve them (Keyser & Viljoen, 2015; Lee et al., 2020; Sebesta & Bray Speth, 2017). Instead, here it seems that students are given some strict parameters to be followed to learn the concepts introduced in lectures and seminars. For instance, students are expected to read articles provided in the reading list. Thus, we can say

that while the referential aspect of Category 1 conception is ‘reproducing’, the structural aspect of it is ‘learning concepts’.

In Category 2, a self-regulated learner is described as a student who connects concepts with each other to develop their own meanings. In this category, students are supposed to develop personal meanings to show engagement with the discipline. Since students are expected to develop their own meanings using concepts, they are also expected to use their thinking skills. However, the thinking skills described here seem a bit superficial because academics did not mention critical thinking. Students need to understand the concepts well and then develop their own meanings using those concepts. Since the focus of academics’ explanations is on students’ connecting concepts with each other, the referential aspect is 'developing new meanings' and the structural aspect is ‘connecting concepts’. While in the first category, students are expected to understand the concepts by following the structured programme rigidly, in the second category students are expected to develop their own meanings by establishing relationships between concepts. Therefore, we can say that conception in Category 2 is more sophisticated than conception in Category 1.

In the third category, a self-regulated learner is expected to critically evaluate the evidence they found to develop their own views. Students are supposed to assess issues from different angles and support their evaluation with particular theories. In other words, students are supposed to use their thinking skills to develop their own opinions. While in the second category, students are supposed to develop their own meanings using their thinking skills, in this category it can be said that academics predominantly focused on students' critical thinking skills. Therefore, it appears that while the structural aspect of this category is 'using thinking skills', the referential aspect is 'critically evaluating the evidence'. Although academics mentioned students’ connecting concepts with each other using their thinking skills in Category 2, they did not explicitly talk about critical thinking or critical evaluation. From that perspective, it seems that conception in Category 3 is more sophisticated than conception in Category 2.

In the fourth category, academics defined a self-regulated learner as someone who develops their learning skills to become lifelong learners. Academics think that if students develop their learning skills, they are more likely to develop as a learner. Acquiring skills that they did not have before, they are then more likely to continue learning after formal education (Broadbent & Poon, 2015; Wiliam, 2011). In this category, students are expected to take on their learning

responsibility entirely. In other words, it seems that academics aim to place students at the centre of their learning by giving them sufficient flexibility. Academics explicitly refer to students' intrinsic motivation in this category. Fong et al. (2019) argue that for students to take responsibility for their own learning, they should possess intrinsic motivation. It appears that academics in this category prefer to transfer responsibility for learning to their students so that students are more likely to develop their learning skills. It has been observed that students who developed learning skills will continue to learn even after university (Khiat, 2019; Kim et al., 2015; Long & Aleven, 2017). In other words, by the end of higher education, the student is expected to change as a learner. While the referential aspect of this category is 'becoming lifelong learners', the structural aspect is 'developing learning skills'. Since academics expect their students to have critical thinking after learning processes in this category, we can say that the Category 4 conception is more sophisticated than the Category 3 conception.

In conclusion, it seems that the conception in the fourth category is the closest to the definition as presented in self-regulated learning literature (e.g., Alotaibi et al., 2017; Broadbent & Poon, 2015; Chen et al., 2019; Handoko et al., 2019; Keyser & Viljoen, 2015; Lee et al., 2020; Panadero, 2017). Since the Category 4 subsumes the previous categories, we can say that it is the most complex and sophisticated category. So, a self-regulated learner is supposed to develop their learning skills and be able to learn by themselves. It appears that academics in this category talked the most about helping students take more responsibility to develop their learning skills. Interestingly, some academics seem to equate a self-regulated learner with a critical thinker as in the third category. Although critical thinking is described as the outcome of the learning process in the literature (Bartimote-Aufflick et al., 2010; Kahrizi et al., 2014), academics appeared to be talking about the importance of having critical thinking skills for students to become a self-regulated learner. As a consequence, for academics in the fourth category, students who have developed learning skills will highly likely continue to learn throughout their lives. For this reason, academics think that students will change as a learner at the end of higher education.

5.7 Summary

There are four categories in the findings as described above. In addition to the descriptions from academics of their concepts of self-regulated learners, some academics also describe how they use their written feedback to help their students to develop their self-regulated learning skills. Yet, their use of written feedback is different for each category. For example, while in the first category, academics use their written feedback to help their students learn the concepts and formulas provided by the structured programme, in the second category, written feedback is used to help students connect concepts with each other to develop their own meanings. While students in the first category are expected to follow programme instructions rigidly to learn content knowledge, students in the second category are allowed more flexibility because they are expected to develop their own meanings from content knowledge. In the first category, even if students can develop their own learning processes simultaneously when they try to learn content knowledge, the academics mainly focused on the development of students' content knowledge. Students who improve their content knowledge by using written feedback can also improve their learning processes because written feedback gives a chance to students to correct their own mistakes. It means that students are supposed to take responsibility to improve their content knowledge. In the second category, academics' aims are to help students improve their learning processes. In this way, students can engage with content knowledge as well. Students can improve their learning processes and the content knowledge at the same time. Students are given more responsibility to connect concepts with each other and develop their own meanings. It could be argued that written feedback in the second category may have a more positive effect on students' self-regulated learning skills because it gives more autonomy to students to improve their own learning.

In the third category, written feedback is used to help students develop their critical thinking skills, since academics think that students who have critical thinking skills are a self-regulated learner. Scager et al. (2014) assert that students who regulate their own learning are more likely to engage with the subject matter in-depth. So, these students are likely to use critical thinking when they evaluate an issue related to the subject matter. It seems that students are flexible to construct their own knowledge because they are encouraged to develop their own views. Students will set their own learning goals and then select a strategy to achieve the goals they set (Pintrich, 2004; Seker, 2015; Wolters, 2003). For students to achieve their goals, they need to assess their own performance (Boud, 1995; Butler & Lee, 2010; Panadero et al., 2016). In

this case, students identify their own weaknesses to minimise or eliminate them (Andrade, 2010; Yan, 2020). Therefore, self-assessment skills are important for students to develop their self-regulated learning skills (Clark, 2012; Teng & Zhang, 2020). The academics use their written feedback to help their students develop self-assessment skills in this category. For them, there is a relationship between self-assessment and critical thinking. Veenman (2017) argues that if students are able to assess their own work, they are more likely to develop their self-regulated learning skills as students regulate their own learning to overcome their weaknesses, they will then be thinking critically.

In the fourth category, the academics use their written feedback to help develop their students' motivation because they think that motivation is a crucial element in self-regulated learning. They think that students who have enough motivation are more likely to take responsibility for learning. The academics place importance on their students' confidence because motivation and confidence are in many cases inextricable. If students have confidence, they believe themselves to be able to improve their own learning (Honicke & Broadbent, 2016). Bandura (2006) argues that if students believe themselves to be able to reach their own goals, this equates to self-efficacy, so they are more willing to take responsibility to set their own learning goals. Therefore, academics try to avoid using harsh language in their feedback, so as not to lower their students' self-confidence.

To motivate their students, academics do not try to direct their students' learning in a rigid manner, because they think that if they give feedback with direct instructions about what the student needs to do to improve their work, they are less likely to take responsibility to regulate their own learning. Academics want to give their students more autonomy to help them take more responsibility for learning. In that case, students may organise their learning environment to construct their own knowledge within the context (Dann, 2014; Hughes & Hargreaves, 2015). This situation is more likely to improve students' learning skills as well (Kang & Keinonen, 2018; Mulliner & Tucker, 2015). Students know that they should not only follow the structured programme, but also set their own learning goals to improve their own learning. Students may conclude that learning is a process that they also carry responsibility for. Academics think that students who have developed learning skills most probably engage better with the subject matter. Thus, they can critically evaluate the subject matter to develop their own ideas. Students who managed to acquire learning skills might become a life-long learner (Czajka & McConnell, 2019; Khiat, 2019; Matsuyama et al., 2019) because this kind of student

will continue to learn after formal education (Panadero et al., 2017). For some academics, it the one of the most important abilities that students need to achieve in higher education.

In summary, it can be argued that all academics try to help their students improve their learning. Furthermore, many academics emphasise that students need to take responsibility for their own learning. Academics may report differently about how students should take responsibility to improve their own learning, and it appears that academics have their own descriptions of a self-regulated learner because four different categories emerged. Although academics use some common terms to define a self-regulated learner, their use of these common terms is different from the current literature on the topic. Subsequent to the descriptions and methods, academics use their written feedback to help develop their students' self-regulated learning skills according to their learning and teaching perspectives. Therefore, their different purposes of written feedback show in how they affect students' learning skills as well. However, though it may be argued that although the probability of students' developing their self-regulated learning skills differs in these categories, it is clear that students in all areas of this study can develop their self-regulated learning skills.

Chapter 6: Conclusion

6.1 Introduction

In this chapter, I answer the research questions to emphasise the central outcomes and contributions of my study. There were two research questions in this study that aimed to explore academics' perceptions about self-regulated learning and how they believe they use their written feedback to help develop their students' self-regulated learning skills. There are broadly two types of feedback: summative and formative (Baird et al., 2017; Black & Wiliam, 2018; Dann, 2014). While formative assessment aims to monitor students' progress in the learning process, summative assessment aims to determine what students have learned and what they have not learned (Brookhart, 2001; Taras, 2005). That is, the former refers to the learning process, whereas the latter refers to the learning outcome (Clark, 2012; Dann, 2014). Since I aimed to explore how academics believe they help develop their students' self-regulated learning skills, focusing on formative feedback seemed more related to self-regulated learning because Dawson et al. (2019) argue that the purpose of formative feedback is to help students develop their understandings and learning skills over time. In other words, formative feedback is more about the development of learning processes (Evans, 2013; Hawe & Dixon, 2017). Black and Wiliam (1998) argue that formative feedback can be provided in written form to students, and it may have a positive impact on student learning. Since there are a lot of studies that examined the relationship between self-regulated learning and some elements of formative assessment such as self-assessment and peer-assessment (e.g., Andrade, 2010; Brown, 2011; Clark, 2012; Hawe & Dixon, 2017), I aimed to explore the relationship between self-regulated learning and written formative feedback in more depth in this research because there are few studies that examined the effect of written formative feedback on student self-regulated learning. For these reasons, I focused on academics' perceptions to explore how they believe they use written formative feedback to help develop their students' self-regulated learning skills.

Since the purpose of this study was to get a deeper insight into academics' perceptions about self-regulated learning and how they believe they use their written feedback to support their students' self-regulated learning skills, I did not aim to evaluate or judge whether academics can describe self-regulated learning as presented in the literature. Similarly, I did not intend to

measure whether or not what academics do in relation to their written feedback is actually effective but rather focused on what academics think it does or achieves. For this reason, this study aims to present a wide spectrum of self-regulated learning and the use of written feedback to develop students' self-regulated learning skills. The findings of this research indicate that academics have their own understandings of self-regulated learning. The findings also show that academics use their written feedback according to their perceptions of self-regulated learning. Academics describe self-regulated learning depending on their perceptions of learning and teaching and then they design their written feedback to serve students' self-regulated learning skills. So, having presented and discussed the results of my study in the previous chapter, the purpose of this chapter is to reflect on how this data addresses the two central research questions of the study; how do academics conceptualise self-regulated learners? And how do they think their written feedback supports the development of self-regulated learners? In order to do this, I will start by discussing results of the first research question before going on to discuss results of the second research question. The chapter also includes discussion on the contribution of the work to existing theory and practice in relation to self-regulated learning and written feedback. I will also address some of the limitations of the work before going on to consider what future research might be undertaken in this field. I will end up the thesis with closing remarks.

6.2 Research question 1: How do academics conceptualise self-regulated learners?

Four different conceptions emerged from the data in relation to academics' perceptions of self-regulated learners. These are 'self-regulated learner is a student who tries to understand concepts introduced in the degree program', 'self-regulated learner is a student who connects concepts with each other to develop their own meanings', 'self-regulated learner is a student who develops their content knowledge to be able to critically evaluate the evidence to develop their own perspective', and 'self-regulated learner is a student who develops learning skills to change as a person to become a life-long learner'. In the first category, academics expect their students to attend lectures, do the prescribed readings the course offered and understand concepts and materials introduced by tutors. In other words, academics predominantly expect their students to develop the content knowledge of the course. In the second category, academics expect their students to connect concepts that they learnt in the course with each

other to develop their own meanings. Since academics refer to students developing their own meanings by connecting concepts with each other, they expect their students to develop their learning processes. But, at the same time, academics do not mention the development of students' learning skills. In the third category, academics expect their students to have critical thinking skills. Although academics refer to critical thinking skills, they do not mention self-regulated learning processes explicitly but researchers (e.g., Kahrizi et al., 2014; Keyser & Viljoen, 2015; Roth et al., 2016) argue that students might develop critical thinking skills after self-regulated learning processes. In the fourth category, academics expect their students to develop their learning skills by taking responsibility for their own learning. Academics believe that if students take responsibility for their own learning, they will likely construct their own knowledge of the course content by regulating their own effort and environment. In other words, students will likely go beyond the course content to develop a more sophisticated understanding of the discipline. Academics in the fourth category assert that students who managed to construct their own knowledge are likely to become life-long learners as it is the indication of students having acquired advanced learning skills.

As we move from the first to the fourth category, perceptions of self-regulated learner develop. That is, while perceptions of self-regulated learner described in the first category are the simplest, we can say that the most sophisticated perceptions of self-regulated learner are described in the fourth category. In the fourth category, academics' perceptions are aligned with the traditional definition of self-regulated learning. However, it might be argued that the definition of self-regulated learning theory in the literature may be too strict to consider a variety of perceptions that exist in academics' experiences. In this study, it appears that self-regulated learning exists on a spectrum in academic practice which deserve recognition and scholarly discussion. It is important to acknowledge the differences that exist in practice to support academics in developing their understandings of self-regulated learning and how to best support students. It might be argued that practice is complex and that needs to be brought to the forefront when academic development and academic practice gets discussed. Since the data reflects what people think in practice, understanding the differences may help us think about student support and other forms of academic development.

Whilst categories in this study are hierarchical, I am not trying to argue that there is only one ideal view of self-regulated learning but rather that differences are likely to exist depending on individual academics, their perceptions, and experiences. For instance, in the first category,

academics predominantly focus on students' learning outcomes rather than learning processes development and they think that students need to learn what tutors teach them and rigidly follow instructions given by the degree programme. In the second category, although academics focus more on students' learning process development, they do not emphasise the development of students' learning skills so that students are not expected to go beyond the course content to develop a more sophisticated understanding of the discipline. In the third category, even though academics expect their students to critically engage with the subject matter, they do not argue the importance of student learning skills development and steps of self-regulated learning that students need to follow. While students need to regulate their own effort and environment to critically engage with the subject matter, academics do not talk about how students develop their critical thinking skills. Thus, it can be argued that self-regulated learning is viewed differently by academics in their own practice.

6.3 Research question 2: What are academics' perceptions about how their written feedback enables their students to become self-regulated learners?

It seems that academics' use of written feedback depends on their perceptions of self-regulated learning so that they use their written feedback differently to help students develop their self-regulated learning skills. For instance, in the first category, they provide written feedback to enable their students to develop predominantly their content knowledge. Although academics in this category may help develop their students' learning processes through written feedback, their focus is on learning the content knowledge of the course. Teng and Zhang (2020) argue that a learner is someone who develops content knowledge and learning skills together. However, in this category, academics did not clearly mention the development of students' learning skills in their use of written feedback. In the second category, academics provide written feedback to help students develop their learning processes because academics believe that if students develop their learning processes, they will likely improve their content knowledge as well. Although academics talked about the importance of developing learning processes, they did not explicitly talk about the importance of developing students' learning skills.

In the third category, academics give their written feedback to help students develop their self-assessment skills because academics believe that if students have more advanced self-assessment skills, they will likely become more effective self-regulated learners. Yet, academics described self-regulated learners as critical thinkers. Therefore, they talked more about critical thinking rather than self-regulated learning skills. In the fourth category, academics provide written feedback to help students develop their motivation because they believe that if students are sufficiently motivated, they will likely take more responsibility for their own learning. This might help develop students' learning skills (Ryan & Deci, 2017; Teng & Zhang, 2018; Trevino & DeFreitas, 2014). Thus, academics think that these students are highly likely to become life-long learners. Although some researchers (e.g., Dawson et al., 2019; Leenknecht et al., 2021) urge that written feedback may support the development of students' motivation and learning skills, it appears that they do not mention that they use written feedback to help their students become life-long learners. Hence, it might be argued that this research adds that academics think written feedback can have a positive impact to help students become life-long learners.

The findings in this study indicate that although the ways academics in the fourth category use written feedback align with traditional ideas presented in the literature about how to develop self-regulated learning skills (Broadbent & Poon, 2015; Chen et al., 2019; Handoko et al., 2019; Keyser & Viljoen, 2015; Lee et al., 2020), the ways academics in other categories use written feedback are not in line with traditional self-regulated learning literature. Likewise, the use of written feedback of academics from the first category to the fourth category also goes from simple to more sophisticated. However, according to the findings, all academics think that their written feedback supports their students to develop self-regulated learning skills. Thus, we can argue that academics see self-regulated learning as more complex in practice and there are differences in their perceptions about where self-regulated learning starts from. Academics' experiences and perceptions present us with a more nuanced understanding of how self-regulated learning is understood in practice, and this needs to be recognised when considering ways in which to support academics in developing their practices for student self-regulated learning.

6.4 Contribution of the research to theory and practice

The findings indicate that although there are four different categories, all academics aim to encourage their students to take responsibility for their own learning. However, the data shows that academics' perceptions of learning and teaching affect their practice and expectations of their students. For example, while academics predominantly expect students to follow tight parameters to increase their content knowledge in the first category, academics expect students to take significantly more responsibility for their own learning to construct their own knowledge within the context of the course of study in the fourth category. This shows that according to the different categories, students are supposed to use different strategies to improve their learning. It might be argued that although students are able to get a deep insight into the discipline they study in all categories, the possibility of students' getting a deep insight into the discipline in the fourth category is the highest because academics focus on students' acquiring advanced learning skills. Panadero (2017) asserts that self-regulated learners are learners who have advanced learning skills to be able to use different strategies to get a deep insight into the discipline they study. Since academics in the fourth category focus on students' acquiring advanced learning skills, this category is the most compatible with existing definitions of self-regulated learning presented in the literature. We can say that this supports existing literature theoretically. Other perceptions described in category 1, category 2, and category 3 also help us look at self-regulated learning from different perspectives so that findings in this research help us see how self-regulated learning can be viewed differently by academics in practice.

As a first implication, therefore, we can say that most academics have their own understandings of self-regulated learning which might have been developed over time and with experiences. For instance, while academics predominantly refer to students' content knowledge gain in the first category, academics expect their students to connect concepts with each other to develop their own meanings in the second category. In the second category, although academics' explanations seem to align with traditional definition of self-regulated learning, they did not predominantly mention the importance of students' learning skills development. Academics in the third category equated self-regulated learners with critical thinkers. Although students are likely to become more effective critical thinkers after self-regulation processes (Bartimote-Aufflick et al., 2010; Kahrizi et al., 2014), critical thinkers and self-regulated learners are not the same conceptions. Thus, it might be suggested that academics should be supported by workshops or other training programmes to help them reflect on their practice and views of

self-regulated learning, to share their experiences. This situation is likely to help academics enrich and diversify their understandings of self-regulated learning.

A second important implication is that academics believe that they are able to use written feedback to help students develop their self-regulated learning skills. Although there are many studies which aim to understand how written feedback helps students improve their learning in higher education (e.g., Arts et al., 2021; Hansen, 2020; Hyland, 1998; Kumar & Stracke, 2007; Mahfoodh, 2017; Nicol, 2010; Page, Gardner & Booth, 2020; Suzuki, Nassaji & Sato, 2019), it appears that there are few studies which aim to investigate how written feedback supports students to become more effective self-regulated learners (e.g., Nicol & MacFarlane-Dick, 2006). This study presents some ideas about how academics think they support their students through written feedback to become self-regulated learners. Although academics' perceptions in the fourth category are in line with the existing theory of self-regulated learning, other academics' use of written feedback might also be used to support students to develop their self-regulated learning skills. It can be asserted that written feedback used by academics in all categories presents different views of usages for practitioners. So, we can argue that according to the findings, we need to acknowledge different functions and formats of written feedback and how these relate to different aspects of self-regulated learning.

Whilst written feedback is used to help students predominantly develop their content knowledge in the first category, academics aim to develop their students' learning processes through written feedback in the second category. The data indicates that there are three types of written feedback in both categories. In the first type, academics aim to correct their students' mistakes in their work. In the second type, in order to give more responsibility to their students, academics show students' mistakes in their work, but they do not give the correct answer as they expect their students to correct their own mistakes. In the third type, academics do not show students' mistakes in their work, but they aim to help their student identify their own mistakes and ways to improve their own work as academics believe that they give more responsibility for learning to their students in this way. Although there are overlaps between types of written feedback in the first and second categories, there are differences between these two categories. Whilst academics' priorities are to help develop their students' content knowledge in the first category, academics in the second category aim to predominantly help develop their students' learning processes. When we go from the first type to the third type of written feedback, students are given more responsibility for their own learning step by step.

Therefore, it can be argued that the third type of written feedback puts students at the centre of their learning. Although students can develop their self-regulated learning skills by making use of three types of written feedback, the third type of written feedback might be the most helpful for the development of self-regulated learning skills. Veenman (2017) puts forward that the more learning responsibility the student is given, the more the student will develop their self-regulated learning skills as students are likely to organise their learning environment more independently of their teachers. Czajka and McConnell (2019) argue that if students are more at the centre of their learning, their motivation will likely improve for learning so that they may become more effective self-regulated learners. Although some studies (e.g., Small & Attree, 2016; Vattøy, Gamlem & Rogne, 2020; Voelkel et al., 2020) assert that written feedback should tell students what they need to do to improve their learning, the findings in this research indicate that tutors' helping students identify their own mistakes and ways to correct them rather than give instructions to them is likely to enable students to develop their learning skills. We can say that this is the third implication of this study.

As a fourth implication, in the third category, academics think they use their written feedback to help develop their students' critical thinking skills. To do that, academics transfer information to their students through written feedback to teach them how to construct a critical argument. Then, academics reduce knowledge transfer to give more responsibility for learning to their students. Academics think that students can evaluate their own works with the help of written feedback in this way. In other words, academics aim to help develop their students' self-assessment skills because they think that students can improve their critical thinking skills if they have more advanced self-assessment skills. It is an important implication because some researchers (e.g., Butler & Lee, 2010; Mahlberg, 2015; Orsmond & Merry, 2013; Yan, 2020) assert that self-assessment is one of the most important elements of self-regulated learning. Panadero et al. (2016) argue that the more advanced self-assessment skills students have, the more they can improve their self-regulated learning skills. Interestingly, although academics talked more about critical thinking and self-assessment skills, they do not mention self-regulated learning and its other components explicitly.

Academics in the fourth category suggest that students' motivation should be supported by written feedback to help them take more responsibility for their own learning. For instance, academics believe that if the language of written feedback does not direct students' learning, students will likely have more autonomy for their learning. So, students can decide by

themselves what they need to do to develop their own learning. In this case, we can say that this type of written feedback gives students more responsibility for their learning. Some academics in the fourth category also recommend that the language of written feedback should not be harsh not to damage student motivation. Harsh language in written feedback is likely to negatively affect students' self-confidence. Academics suggest that its language should be supportive to develop students' self-confidence. Students who have higher self-confidence are more likely to have higher self-efficacy (Bennett, 2011; Dawson et al., 2019). Students' having higher self-efficacy might lead them to be more motivated for learning (Pajares, 2008; Putwain et al., 2013). Thus, these academics argue that when written feedback is designed, students' self-efficacy should be considered to help develop their motivation. This might be the fifth implication of the study.

The sixth implication is that academics think written feedback may enable students to become life-long learners. Academics in the fourth category believe that if students have advanced learning skills, they will learn how to organise their learning environment to construct their own knowledge within the context of the course of study. In other words, academics suggest that students should be in the foreground of their own learning. Carless and Boud (2018) argue that if academics provide well designed written feedback to their students, students might be encouraged to set their own learning goals, develop their own learning strategies, assess their own learning progresses to overcome their weaknesses to achieve the goals they set. Academics in this study think that if students learn how to regulate themselves to construct their own knowledge, they will continue to learn after formal education because it means that students have developed new skills. Although the literature (e.g., Arts et al., 2021; Dowden et al., 2013; Hanh & Ramnath, 2016; Page et al., 2020; Suzuki et al., 2019) explains well how written feedback supports student learning, this study adds that academics believe that written feedback can be used to help students develop their self-regulated learning skills so that they might become life-long learners. Thus, since written feedback practices described in this study appear something very important and resourceful, academics can consider using them to help develop students' self-regulated learning skills.

As a result, according to the research findings, tutors can help their students develop their self-regulated learning skills with the help of written feedback. To support students' self-regulated learning skills, tutors should provide personal written feedback to their students because students can feel that they are valuable for their tutors so that their motivation is

likely to increase. Thus, students might take more responsibility for their learning. Tutors should talk about their students' performance and work rather than their students' abilities in their written feedback. Students are more likely to make an effort to develop their works because they refer their weaknesses to their lack of effort rather than lack of ability. Tutors should use supportive language in their written feedback to help develop their students' motivation because if students have enough motivation, they are more likely to take responsibility for their learning. Tutors should also provide information in written feedback to help their students to be able to evaluate their own performance and work because students who can evaluate their own performance are more likely to identify their own weaknesses and their own ways to develop them. In addition, tutors should give as much responsibility to their students as possible with the help of written feedback because students can learn to set their learning goals, develop their learning strategies, and monitor their own progress to achieve the goals they set in this way. This might lead students to develop their self-regulated learning skills with time. Finally, training courses and workshops should be given to tutors to help them understand how to use more effective written feedback to help develop their students' self-regulated learning skills.

6.5 Limitations of the study

Before giving final thoughts, it is important to acknowledge the potential limitations of this study. One of the potential limitations is related to the participants because although I aimed to interview the equal number of academics from each department and the equal number of Assistant, Associate and Full Professors, I could not meet this target for some reasons explained in the Methodology chapter. This situation could have prevented me from finding possible variances between departments and academic status more robustly. Second, although a sample of thirty-seven is a reasonable number in the phenomenographic research (e.g., Forster, 2013), collecting data from different universities is likely to present a wider representation of academics' perceptions because I interviewed academics from only one UK institution which is Durham University. Researchers may consider interviewing academics from different universities as this is likely to give more opportunities to obtain more diverse and rich data. Third, all data in this study are based on interviews. Even though this situation seems a potential

limitation, researchers used only interviews in the most of high-quality phenomenographic studies (e.g., Ashwin, 2006; Khan et al., 2016; Khan & Markauskaite, 2017; Rosewell & Ashwin, 2019). Kettunen and Tynjälä (2018) state that "qualitative studies' findings are unique in their respective contexts; nonetheless, transferability to other settings and groups may be possible" (p. 7). Thus, this study results might be useful for researchers who want to conduct the research in similar contexts in other universities. However, Kettunen and Tynjälä (2018) argue that the aim of phenomenographic research is to deeply explore a specific phenomenon rather than provide a generalisable result.

Finally, although the findings of this study assert that written feedback may have positive impact on student self-regulated learning skills, there were only academics as participants. Collecting data from students might help researchers better explore the effect of written feedback on students' self-regulated learning skills because researchers can compare academics and students' perceptions to identify whether there are discrepancies between their perceptions. Thus, researchers conducting future studies by involving students might provide additional perspectives to get a deeper insight into understanding the effect of written feedback on student self-regulated learning skills. Researchers might consider these issues in future studies to present more refined results and show how these perceptions are developed and the place of experience within that.

6.6 Suggestions for future research

According to the findings, there are four different perceptions of self-regulated learners. However, academics' perceptions in the first, second and third categories differ from the definition of self-regulated learning presented in the established literature (e.g., Handoko et al., 2019; Keyser & Viljoen, 2015; Long & Aleven, 2017). Despite this, academics in the first, second and third categories described self-regulated learning from their own unique perspectives. Since there are relatively small number of academics who participated in this study, future studies should be conducted to see whether other researchers from different higher education contexts reach similar results. By building on this research, academics' perceptions and experiences might provide much information that helps us get a deeper insight into the complexity of understandings of self-regulated learning. So, we might need a much more

nuanced understanding of how self-regulated learning is understood in practice because getting insight into how self-regulated learning is understood in practice is more likely to influence how it might be developed and supported in educational contexts.

The findings of this study indicate that the number of academics who described self-regulated learners as students who have critical thinking skills is the highest so that critical thinking is one of the most important skills for academics in this study. When academics describe self-regulated learners, they tried to describe who good critical thinkers are. Therefore, these academics also use their written feedback to support their students' critical thinking skills. Future studies might be designed to explore academics' perceptions of critical thinking and self-regulated learning to obtain more explicit views from them. This may help researchers distinguish academics' perceptions of these two terms. Distinguishing critical thinking and self-regulated learning is important because students can develop their critical thinking skills after self-regulated learning processes (Khiat, 2019; Lee et al., 2020; Teng & Zhang, 2018). It means that self-regulating processes are likely to lead students to develop their critical thinking skills (Kahrizi et al., 2014; Tseng et al., 2015). Kim et al. (2015) assert that students who regulate their own learning may engage with the content knowledge of the course. Chen et al. (2019) argue that students engaging with the content knowledge might become more effective critical thinkers. So, academics understanding the differences between self-regulated learning and critical thinking might help their students first develop their self-regulated learning skills and therefore their critical thinking skills.

The findings indicate that academics think their written feedback is beneficial to help develop their students' self-regulated learning skills. Although written feedback described in the fourth category is aligned with the current theory to develop students' self-regulated learning skills because academics focus more on the development of students' motivation, written feedback forms described in other categories are also beneficial to help develop students' self-regulated learning skills. For instance, in the first and second categories, written feedback is used to help develop their students' content knowledge and learning processes, respectively. In the third category, academics focus more on the development of students' self-assessment skills. Written feedback used in the first, second and third categories might affect students' self-regulated learning skills from different perspectives, but future research might be conducted to see whether our results are supported by different studies. Thus, we are likely to help academics to be able to use their written feedback more effectively to help develop their student' self-

regulated learning skills because academics in all categories give important and resourceful ideas about their use of written feedback.

In this study, some academics emphasise the importance of motivation to help students become more effective self-regulated learners. They think they use their written feedback to help develop their students' motivation because academics believe that if students are more motivated, they are likely to take responsibility for their own learning. Some academics claim that if the language of written feedback is harsh, students' motivation can decrease because their confidence can be affected negatively. Some academics assert that if they use imperative language in written feedback to direct their students' learning, students' motivation is likely to decrease because students are not given enough flexibility in this situation. Giving flexibility to students is very important for them to become self-regulated learners since, in this instance, they can set their own learning goals, develop learning strategies, and monitor their own learning progresses to be able to achieve the goals they set (Handoko et al., 2019; Teng & Zhang, 2020; Veenman, 2017). The findings of this study indicate that there is a relationship between motivation and self-regulated learning. For this reason, researchers might design future studies to explore this relationship in more depth to provide additional views about it. Since some academics in this study believe that written feedback can help develop student motivation, for future studies, researchers can also aim to explore the effect of written feedback on student motivation in more depth.

Academics in the fourth category assert that a self-regulated learner is a learner who takes responsibility for their own learning to construct their own knowledge of the course context. So, academics think that their written feedback is likely to enable students to construct their own knowledge. Some researchers (e.g., Dawson et al., 2019; Hanh & Ramnath, 2016; Henderson et al., 2019; Kippers et al., 2018) argue that written feedback might be very beneficial to help develop students' self-regulated learning skills as it gives more responsibility for learning to students, but it seems that they do not mention written feedback can help students construct their own knowledge. It can be argued that constructing knowledge with the help of written feedback might be one of implications of this study. Academics also believe that if students managed to construct their own knowledge in the course, they will likely become life-long learners because it means that students have acquired advanced learning skills so that they will continue to learn after formal education. Similarly, whilst some researchers (e.g., Babo et al., 2017; Nicol & McFarlane-Dick, 2006; Sadler, 2013; Wylie & Lyon, 2015) claim that

written feedback is likely to support the development of students' learning skills, it seems that they do not assert that written feedback might enable students to become life-long learners. Thus, becoming life-long learners with the help of written feedback can also be one of the important implications of this study. While these are important implications of this study, these results need to be supported by future research. Therefore, researchers can design future studies to explore them in more depth.

The findings of this study indicate that students can develop their self-regulated learning skills. Students who entered higher education can develop their self-regulated learning skills with time (Broadbent & Poon, 2015; Chen et al., 2019; Roth et al., 2016). Therefore, there might be differences between specific groups of students. For example, students who are in the third year of undergraduate studies can regulate their own learning better than those who are in the first year. In other words, students who are in the third year may have more advanced self-regulated learning skills than those who are in the first year because, at the beginning of undergraduate studies, students may not use their written feedback effectively to improve their learning. But students are likely to act on written feedback over time as they can get used to it. Students who learn how to act on written feedback are likely to develop their self-regulated learning skills over time (Clark, 2012; Kim et al., 2015). Likewise, there could also be differences between undergraduate and postgraduate students because postgraduate students are likely to know how to act on written feedback better than undergraduate students. Interviewing academics to explore their perceptions about the possible differences between these specific groups of students might help us see more aspects of self-regulated learning. Future research might be conducted to explore differences in the development level of specific groups of students' self-regulated learning skills.

Finally, before conducting this study, I aimed to interview equal number of academics from each discipline and equal number of Assistant Professor, Associate Professor and Full Professor to identify variances between disciplines and academics' career level. However, I could not meet this target. Hence, the data did not allow me to make any claims based on disciplines and career stage of participants. In other words, there were no disciplinary differences and differences depending on academics' career level in the findings of this study. For future studies, researchers may consider interviewing a more balanced cohort of academics from different disciplines and different career levels to be able to better compare academics'

perceptions and in turn identify possible variances between different disciplines and different career levels.

6.7 Closing remarks

There are many studies which aim to combine formative assessment and self-regulated learning (e.g., Hawe & Dixon, 2017; Nicol & MacFarlane-Dick, 2006; Panadero & Romero, 2014; Panadero et al., 2017), but the originality of my study is to offer the analysis of tutors' perspectives about understandings of self-regulated learning and how they believe they use their written feedback to help develop their students' self-regulated learning skills in higher education. Academics in this study claim that they can help their students develop their self-regulated learning skills through written feedback. However, their perceptions of self-regulated learning are different from each other so that their uses of written feedback are different, too. This research indicates that academics think written feedback described in all categories might be helpful to develop students' self-regulated learning skills. Since perceptions of self-regulated learning described in the categories go from the simplest one to the most sophisticated one, the use of written feedback in the fourth category is the most sophisticated feedback. For academics in the fourth category, if students managed to develop their learning skills, they will become life-long learners because they have learnt how to learn in higher education. Students who have acquired advanced learning skills are likely to organise and regulate their learning environment to construct their own knowledge because they set learning goals, develop learning strategies, and monitor their learning progresses to achieve their own goals (Roth et al., 2016; Ryan & Deci, 2017). If students have got sufficient motivation, they are likely to follow these steps to improve more sophisticated understanding of the discipline. Academics believe that they can help develop their students' motivation by using written feedback. Students having stronger motivation are more likely to take more responsibility for their own learning. As a result, academics think that students might change as a learner with the help of written feedback. All in all, academics in this study expect their students to become self-regulated learners, and they act for this purpose.

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APPENDIX A

Interview guide

1. What do you think are the purposes of formative assessment?

2. Do you think formative assessment helps to support student motivation?

3. Can you please describe how you go about giving written feedback to your students?

4. To what extent do you think written feedback helps to support student learning?

5. Which one is more helpful to increase student motivation, formative feedback, summative feedback, or both of them?

6. How would you describe a self-regulated learner?

7. Can you bring some examples from your own experiences from working with students?

8. Do what role does written feedback play in supporting student self-regulated learning?

9. What do you think are difficulties in providing effective written feedback to your students?

10. How would you describe a student who has critical thinking ability?

11. To what extent does student self-regulated learning ability affect student critical thinking?

APPENDIX B

A sample of an interview

Interviewer: What do you think are the purposes of formative assessment?

Interviewee: I think there are multiple purposes, not just one. So, I think one of the key purposes is to contextualize the grade. I mean, a number doesn't say much, and the weird thing about the UK score 100, it is kind of suggesting certain percussion that is not really there. So, contextualizing what this number means is important because, for a student, it is not quite clear what 66 is. My colleagues and I give the same number of grades, but we mean different things. So, there is like the common understanding of cut points like 70, 65, 60, you know, but within that range, it is kind of open, so the feedback is kind of contextualizes the grade. That is the first thing. The second thing is to provide you with much more detailed written feedback in terms of what you did well and in which areas you might want to improve. So, it helps contextualize the grade, but it also provides more information than the grade itself. I think those main two purposes.

Interviewer: Do you think formative assessment can improve student motivation?

Interviewee: Yes, I think it can. Surely it can. Whether or not it's going to be as effective as the kind of quality of the human interaction between you. I'm not so sure, so I'm strongly biased towards real human interaction away from kind of remote or mediated human interaction, which would be written feedback and verbal feedback. But at the same time, I think good quality written feedback can be really encouraging if there is explicit encouragement in it. And there should be, and this is just my own view, I guess, but I think there should be explicit efforts to make it all written feedback to affirm and recognize what is good in the work or in the student. And if that's there, I would think that written feedback can be incredibly powerful in generating internal motivation. If it's only critical, if it's only like you should have done this, you should have done this, and you should have done this, I would think it would be very demotivating. So, I guess the question of how much does written

feedback contribute to internal motivation is going to be directly indexed I would say to what's actually in the written feedback and whether the person has gone out of their way to say what was good to observe, what was good to kind of encourage and respond and complement what was good at the same time as offering constructive you. This is how you can improve.

Interviewer: Can you please describe how you go about giving written feedback to your students?

Interviewee: So, our grading sheets look in the way that there is like a matrix of different criteria that we look at, so you know structures one how well the argument is developed, empirical resources used, evidence provided you know theoretical foundations, I like a range of different things. So, I tend to kind of reading essays full and then kind of go over the matrix. From that matrix, it tells me which grade area the student is. And I set the grade, and then I kind of contextualize the feedback based on kind of the key criteria that I grade. So, where you have been really bad, I tell you what you did, what was missing and that could have improved this and where you are really good I kind of highlight this was then particularly well especially this in this aspect. So, I try to provide feedback on both like good parts and bad parts and on most of the matrix elements, not necessarily all of them every time but most of them, especially the ones really good and really bad.

Interviewer: Do you think your students can benefit from your written feedback?

Interviewee: That's a good question. So, I mean, like the question is whether they read it, right. So, there are people in our school who believe that actually, for formative assignments, we shouldn't give grades; we should just only give feedback. Students really want to have grades. The grade seems to provide some kind of information that is relevant to them. I guess what they can't really see in the feedback is am I in 2:1, 2:2, first category or am I below 2:2, and they kind of want to know where they are. So, I guess instead of a grade, I just said this is a 2:1 essay or 2:2 essay or first-grade essay that would be sufficient for them. Without the grade, just the feedback, they kind of miss that element or another element. Now, some students will only look at the grade, and if they kind of satisfy their expectations, they won't

necessarily look at the feedback. If the grade defies their expectation, so they are lower than they think they should be, then they will read the feedback. So, that means for me; I tend to encourage my tutors to be quite harsh in the formatives because the way that I get the students to read the feedback is if they are kind of shocked how their grade is compared to what they expect. So, that's how I kind of try to create a sentence for them to read it. I do also mention that they might read it to improve, but I find that formative helps narrow the grade band because the students are quite good, and they are expected to be good. They don't necessarily read the feedback, so they don't come that much better, but the students that are bad read the feedback and become better. So, it kind of help reduce in quality to some extent. That's my experience, but again, I haven't collected data and analyzed that actually, and it is kind of very subjective. This is how I feel going on from observing students.

Interviewer: To what extent do you think written feedback helps to support student learning?

Interviewee: So, if they actually read the feedback, they will know which areas they need to improve, so I tend to tell them to look, especially with the formatives again; I give feedback on summative as well. But I can only re-observe the learning effect throughout my course because once I give them summative feedback, I don't know whether they take forwards because they might not have a course with me again. So, I don't know. Often the course is very different. So, I can't really see whether they build on that, but in formatives, you can see very clearly given the same topic and same courses so forth. The idea is if they read the feedback, they will know which areas they need to improve. This shouldn't form them on how they might want to adapt their learning strategy with the material. So, if, for example, they find that their theoretical argument is really weak, but they are really good at empirics. They might have been really kind of learning examples, learning empirical facts but not really learning theoretical foundations. It might shift to focusing less on ok let me understand the constitutional differences between Switzerland and New Zealand to you know what is the constitution, what is that concept of the constitution mean, how it is thought about by different theorists, why do some theorists like rigid constitutions, another theorist argue for flexible variable constitutions. So, the feedback informative should ideally inform whether their learning strategies are correct and where they might want to adapt their learning strategy to kind of improve their performance in the summative.

Interviewer: Which one is more helpful to increase student motivation, formative feedback, summative feedback or both of them?

Interviewee: Well, I hate. Well, I think those words are stupid. I mean again, you know I wouldn't use a formative, a summative on I have to keep reminding and asking myself which is which or I might say the one word, or you know I mean what you mean is some of the ends of the marks of the final assessment and some of them don't and the ones that don't are called formative. And the idea is I suppose that you are learning how to do the essay. Your first piece of work is kind of experimental, in the second one is you know more definitive, but students sometimes say you know they get a first-class mark for the first piece of work you know they get a less good mark for the second one. And they are upset about that, but that's because it's not really; the model is wrong. I mean, these are two pieces of work; only the second mark counts; maybe it's just the wrong system, maybe. I suppose you know if you have; the assumption is there are two assessments in most of our courses that count. You know we tend to have two assessments that are marked to contribute to the final mark. So, if you have an exam, then only one of the essays will count. If you don't have an exam, you might have two essays and no exam, and then both essays will count. I think it's felt if you have more than two, then it puts pressure on the student, so I think that's what it's about really, formative, and summative distinction is just you know we can't. If you have a continuous assessment, you mustn't have too many assessments to put pressure on those that would put pressure on the student. One consequence of that, though is that a lot of students don't do the formative because the consequences of not doing so are not so serious.

Interviewer: How would you describe a self-regulated learner?

Interviewee: I think it's an important aspect of what we should be about in higher education, and that is to encourage learners to develop the kind of skills that make them into life-long learners. So, a self-regulated learner for me, someone who develops the discipline and the passion for a subject which allows them to go beyond just trying to pass exams. I don't think a self-regulated learner is someone who says to the teacher, tell me how to pass the exam. I think a self-regulated learner is someone who comes, for instance, we do the reading prior to a lecture or to a seminar, someone who would take deadlines seriously for work into it is prepared to structure their work over a term rather than just at the last minute. But I think

more profoundly it someone who takes on the responsibility for their learning rather than sees lectures as lectures and the lecturers as the ones responsible for their learning. So, I don't mind if a student says I'd much rather do some reading this morning and come to the lecture. I don't mind if a student says can I do an essay which doesn't quite fit with the course, but it's something I'm really interested in. I'd much prefer students like that because what they're doing is following their passion. So, if they get a passion for the subject, then they regulate their learning very well.

Interviewer: Can you bring some examples from your own experiences from working with students?

Interviewee: I can see this most clearly because I work with small groups. In the second year, we have a course called research project. In the research project, students are assigned to tutorial 15 in a group, and they do a research project on a specific area of expertise of a member of staff. And it works in the way that in the first term, you kind of do reading with them on that topic, but you also try to kind of get them to start thinking about their own project then their own ideas. And one step, they have to write a research proposal for a 5000-word research project. That proposal is formative, which is graded and evaluated and is given feedback to and then the second term when they kind of work on their proposal, there is …….feedback where students in many conferences present their proposal and other colleagues give feedback and get another feedback from the lecture. And they hand in their proposal, and you grade it. So, in that particular context, I can kind of see very clearly one student kind of get my feedback from their first initial draft of a project, it helps them kind of clarify where they were on the right path and where they were going of attention where they need to focus on next because this is the first kind of research project that they ever do so they don't know how the process actually really works you know finding a question, from question developing, situating in the existing literature, developing a theoretical argument and so on. Where I can see bigger adaption is in the student conferences so each student has to read all proposals of their colleagues and they have to be prepared to discuss them because I randomly select students to start a discussion, so they have to be prepared to kind of say something on every proposal. And their learning is very fast in the sense that they do not all see how other students deal with some other problems that they have but also what kind of solutions they have. And they get a sense of their feeling of whether this is a good project or not. Their

colleagues first provide feedback, and then I also give feedback in that session. It really kind of helps them to kind of focus on how to solve certain steps on how to kind of think in a clear way to achieve a certain goal.

Interviewer: Do you think students here are sufficiently self-regulated learner?

Interviewee: Undergraduate students in Durham are really good. So, I mean I have worked at Princeton University and Rochester University before coming here, and Rochester is a private school, quite expensive, small, rural, similar to Durham. And Princeton obviously is high league school, you know very wealthy and very competitive to get in etc. and the students in Durham kind of up to the same level in terms of their engagement, activity, willingness to learn, also accept to be kind of throw into new areas, kind of learn how to grabble with things. So, I think undergrad students are very good, and kind of, you know, adapting and figuring out how to engage and learn a different kind of subjects. They struggle with the transition from high school to university, but they are very engaged in adapting and kind of being exposed to do things and kind of also figuring out what I like this, I don't like this and so forth. Master's students are really bad. Master's students are frustrating. Some way I feel like they have kind of decided what they think is right and good, and they just want to do that. So, exposing them to something new is very difficult because it gets very quickly blocked. I am a constructivist quantitative researcher; it is very hard to persuade them to look at something through a quantitative lens and to consider a quantitative perspective on a specific topic. So, I find them less flexible in their learning. That might be the case that you know learning becomes harder once you kind of found out what works for you, and you are less willing to kind of experiment because you feel like I found the optimum for me. But it might also be that the cohort of master's students that we get is very different from the cohort of undergrad students because the selection process is different. Students generally try to trade up for a master's, right. If you get a BA in Birmingham or Manchester, Durham is the trade up. If you get a BA in Durham, then MA in Durham is not a trade up. You try to go to you know LSE, King's, Oxford, and Cambridge.

Interviewer: What about your PhD students?

Interviewee: PhD students are again different because they are really selected, so I tend to be very clear in my selection. So, you go to my home page; you see like I outline very clearly what I want from my PhD students. So, I will not accept a PhD student if they don't kind of satisfy a certain level of engagement with material that I think is relevant. So, they are kind of like me; I don't really have to expose them too many new things. I don't really see whether they are as malleable, adaptable as undergrads.

Interviewer: Do what role does written feedback play in supporting student self-regulated learning? Do you think it has an effect on it?

Interviewee: If they read the feedback, think about the feedback what it means for their learning strategy. And then take the proper act. That's a three-step process which you know for any of the three steps can go on. So, it might be able to read it but think about it. Or they might read it, think about it but then not really draw any conclusions. So, and then it all depends on context. If it is formative feedback for summative that will look very similar to the formative, then they have more intensive to go through all stages. Then if it is formative that you know, so it can, but it can also not, I don't know. I mean, I try to kind of make the formative as relevant to summative as possible, but it is sometimes……because the formative allows you to do things better equally important to learning that is not identical to what you want to do in the summative.

Interviewer: What do you think are difficulties in providing effective written feedback to your students?

Interviewee: One of the difficulties is literally time. I mean, we have 170 undergrads every year. It is supposed to be growing to like 240 plus we have a lot of combined honours, liberal art students, PPE students take classes with us because we are social science. So, I mean, the classes that I had in terms of like first-year undergrad classes democratic political systems was like a class of 177. So, providing feedback on these essays is, you know, time-consuming. Even with, you know, five tutors that help etc., it is still time-consuming, so there

is literally an issue of time that is difficult. And the other thing that, to be honest, also makes it somewhat difficult is that everything now is supposed to be done online, so you know we only spend quite a lot of time in front of the screen. Also, having to actually read everything on screen and provide feedback online so it just makes more tiring. I find it harder. So, the time that we were able to kind of do written feedback, you know. I have now thought of thinking of actually kind of giving oral feedback because you can record on “Turnitin" as well. The challenge there is being, of course, as precise as you are oral than you are in writing. So, the meantime is an issue; the way that we have to give feedback is an issue and the fact that you want to do it fairly for all students, but you know it is sometimes harder for some than others. That is also sometimes difficult. So, I think these three factors are kind of limit my ability.

Interviewer: How would you describe a student who has critical thinking ability?

Interviewee: I think critical thinking ability is in the context of their reading of assigned work. So, my experience is that students often, when coming from high school, have never really learned how to critically read and engage with the text. When you assign them to do reading, they literally think it means I have to read every word on this, and I kind of highlight what I think is important and what has done is done. So, a student that really is a critical thinker is able to ask himself questions about the text while reading it and seeing whether text provides answers and if the text doesn't provide answers, kind of pulls out what he would think the text should have done to give an answer on this etc. So, for me, critical thinking is engagement with a piece of work critically by reflecting what it says and what you think it should say, what you are expecting it to say what you think might not be quite covered in the right angle. So, I don't think many first-year students; even second-year students, really have that ability when they come, so I try to kind of train them in the sense that I tell them, look I want you to engage with this, which means ask yourself to follow in a set of questions when reading this. I give them like one piece of here all kind of questions you can ask them, what is the question, why is this question relevant, why should I care about this, how does that build on existing literature, what does that contribute the knowledge, what is the theoretical argument, what underline the assumptions, do these assumptions make sense, how these assumptions reasonable, make the hypothesis follow directly from the theoretical argument,

what kind of logical steps have to be made in order to get this hypothesis, do these steps make sense, are they logically consistent.

Interviewer: Do you think critical thinking can be taught?

Interviewee: I think it can be taught. I actually think that students do improve over time, so again, the research project is a good example here because they have to kind of read articles every week or every two weeks and kind of discuss them in class, and you can kind of see that you can actually really use the questions. They are able to kind of come up with this article doesn't really do the same as this article, and this article tackles in different ways. I think this module of thinking about this makes more sense because it includes these elements then this one misses this piece. They are able to kind of compare, contrast, criticize in a deeper way than just kind of like, oh, this is a simplified module of this, so it is wrong. So, students often kind of, especially when you engage them with theoretical work, kind of say, oh, this is not good work because it doesn't capture the complexity of the world, but no module every does capture the complexity of the world. I mean, no subway map captures the complexity of the world, but a subway map in London is still quite useful because it tells you which trains you take, which ways you need to change things. That is the simplified version of reality, but it helps you to get around. That is the same as with theoretical modules. Getting them beyond like oh this really simply critique in the sense of like it doesn't capture the complexity, so it is not good. Getting the critical thing what can this module provide, what cannot it provide, how does this module differ from the other module and why is one module better than others that I think it can be taught and it is an important skill.

Interviewer: To what extent does student self-regulated learning ability affect student critical thinking?

Interviewee: Yes, because I think what happens very commonly with us is we will set the students' task and assignment, and we'll tell them a little bit about the area about what's expected they'll go away, and they'll start to do their own reading, their own research. And then they get upset because they realize that what you've said sometimes doesn't match with the information, and sometimes it seems to be wrong. And so they are basically they come

back and say, well, I'm not sure about this. I don't understand why you've said this when the information is showing this. They are being critical. And what's interesting is that the first part of that process is they always assume that they're wrong and they've made a mistake because this is where students are under stress and that you're right and so they come I'm really sorry, but I don't understand this, but this shows this. And the reason I haven't understood is because there is a conflict between the bits of information, and they've spotted it. They've been clever. They've worked it out, and then we need then to do is to say to them, this is great, if you really well pick this up and try to empower them into realizing that this critical analysis and to find things that are wrong is good. This is important, and it shows that they are now fending for themselves and they're being proper, you know, research and they are actually evaluating these critically deciding what's right, what's wrong, what is the majority view and things like this. So, I think it works; it can work again. Particularly in intensive pieces of work where we see the student movement once we have, we can have a dialogue so dissertations and projects and things that we can definitely do that with for the bigger bits of work or for big groups quite hard. And I get a handful of students who come to me after all my lectures to ask questions because they've been thinking about the things, I've been talking about to be reading the papers, and then they have questions because they want to know more, and they've been thinking critically. So, I know that there are some students, they are doing this because they're the ones that are brave enough to come and talk to me, and they know that learning is their own responsibility. So, that’s what I think.

Interviewer: I have finished my questions. Thank you very much for the interview.

Durham University
School of Education

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APPENDIX C

31/08/2018

Suleyman Yildirim

suleyman.yildirim@durham.ac.uk

Dear Suleyman

Tutors' perceptions of the role of written feedback in promoting self-regulated learning in students: A case study of Durham

Reference: 3180

I am pleased to inform you that your ethics application for the above research project has been approved by the School of Education Ethics Committee.

May we take this opportunity to wish you good luck with your research.

Yours sincerely,

Nadin Beckmann

Dr Nadin Beckmann

School of Education Ethics Committee Chair

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APPENDIX D

[15 JULY 2018]

Participant Information Sheet

Title:
You are invited to take part in a research study of "Tutors' perceptions of the role of written feedback in promoting self-regulated learning in students: A case study of Durham." Please read this form carefully and ask any questions you may have before agreeing to be in the study.

The study is conducted by Mr Suleyman Yildirim as part of his postgraduate studies at Durham University.

* This research project is supervised by Dr. Julie Rattray (Email: julie.rattray@durham.ac.uk) and Dr. Rille Raaper (Email: rille.raaper@durham.ac.uk) from the School of Education at Durham University.

The purpose of this study is to examine academics' (Assistant, Associate and Full Professor) perceptions regarding the effect of written feedback on student self-regulated learning skill at Durham University.

If you agree to be in this study, you will be asked to participate in an interview which will be collected by using a voice-recorder and taking notes.

Your participation in this study will take approximately 45-60 minutes.

You are free to decide whether or not to participate. If you decide to participate, you are free to withdraw at any time without any negative consequences for you.

All responses you give or other data collected will be kept confidential. The records of this study will be kept secure and private. All files containing any information you give are password protected. In any research report that may be published, no information will be included that will make it possible to identify you individually. There will be no way to connect your name to your responses at any time during or after the study.

* Personal data, as defined by GDPR, will be destroyed by my PhD graduation.

If you have any questions, requests or concerns regarding this research, please contact me via email at suleyman.yildirim@durham.ac.uk or by telephone at +447511072384,

This study has been reviewed and approved by the School of Education Ethics Sub-Committee at Durham University (date of approval: XXXX)

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Durham University
School of Education

APPENDIX E

Declaration of Informed Consent

- I agree to participate in this study, the purpose of which is to examine academics' perceptions about the effect of written feedback on student self-regulated learning skill at Durham University.
- I have read the participant information sheet and understand the information provided.
- I have been informed that I may decline to answer any questions or withdraw from the study without penalty of any kind.
- I have been informed that data collection will involve the use of recording devices (audio recorder and smartphone).
- I have been informed that all of my responses will be kept confidential and secure, and that I will not be identified in any report or other publication resulting from this research.
- I have been informed that any personal data will be destroyed by my PhD graduation.
- I have been informed that the investigator will answer any questions regarding the study and its procedures. Mr Suleyman Yildirim, School of Education, Durham University can be contacted via email: suleyman.yildirim@durham.ac.uk or telephone: +447511072384
- I will be provided with a copy of this form for my records.

Any concerns about this study should be addressed to the School of Education Ethics Sub-Committee, Durham University via email to ed.ethics@durham.ac.uk.

Date Participant Name (please print) Participant Signature

I certify that I have presented the above information to the participant and secured his or her consent.

Date Signature of Investigator

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Durham University is the trading name of the University of Durham