VNIVERSIDAD D SALAMANCA

DEPARTAMENTO DE TRADUCCIÓN E INTERPRETACIÓN
FACULTAD DE TRADUCCIÓN Y DOCUMENTACIÓN

Ethical motivation: Testing the impact of values and beliefs in interpreter education

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TÍTULO: **Ethical motivation: Testing the impact of values and beliefs in interpreter education**

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Abstract

This dissertation explores motivational aspects of interpreter education from the viewpoint of the ethics of care, using a mixed-methods empirical approach.

The main hypothesis is that ethical motivation directly influences participants' perception of the variables: perceived interest, perceived usefulness, and perceived difficulty. As a main objective, this study aims to improve educational practice in interpreting by offering a deeper understanding of how ethical motivation (including values and beliefs) affects perceived difficulty in interpreting exercises in groups of students and volunteers. As secondary objectives, the dissertation analyses results when performing retour interpreting in the language pair Spanish/English, and also examines secondary results with speeches from different settings. Participants are students of interpreting at university, and volunteer interpreters at Social Forums.

The dissertation is framed within the perspective of technofeminism and the ethics of care, and it explores ethical values and beliefs in the study of motivational aspects in interpreter education. Ethical motivation, and emancipatory ethical values and beliefs in particular, are studied in the spirit of technofeminism as an ethical approach to freedom of knowledge and research, where emotional and feminist aspects have been historically neglected. Constructing knowledge from a 4E cognition scaffolding brings long-neglected aspects, such as emotions, into interpreter education. Motivation not only belongs in the realm of emotions, it also feeds from other feelings and perceptions the interpreting students may have, largely influencing the way they see their educational process, and themselves. The values and beliefs explored through the framework of the ethics of care are present here not just in the study of motivational constructs and variables but, crucially, in a wider perspective where femininity, embodiment, and ethical choices are at the heart of educational activities and research.

The results on ethical motivation, and on retour interpreting provide relevant conclusions, not just pedagogically speaking, but also in ethical and motivational

terms. The results are clear and simple: participants did not care whether they were interpreting into A or into B; their perception of interest, usefulness and difficulty varied solely according to the topic or the context of the video (whether from a Social Forum, or an institutional setting). The different groups of participants valued Social Forum videos higher than institutional videos, both in perceived interest and perceived usefulness. The empirical results obtained for ethical motivation are of very high statistical significance. The motivation elicited by videos of Social Forums is sharply higher for every student group tested, and even stronger for the Malmö Social Forum group of ad-hoc volunteer interpreters. In all settings, as ethical motivation increases, perceived difficulty decreases.

Thus, ethical motivation directly influences perceptions of interest and usefulness in participants, in a positive manner, as well as perceived difficulty, which decreases as the positive motivational variables increase. Furthermore, retour interpreting is not perceived as more difficult than interpreting into A, which may encourage the inclusion of retour interpreting as an integral part of the curriculum.

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Introduction

> The subject of my research, as an object of study, does not resemble at all a subway line, where one goes from one stop to the next automatically. It is more like observing an ecosystem. Something new occurs all the time. A new unforeseeable variable always intervenes. Depending on the light and the time of day, or on the season, everything we have observed changes once again. The ecosystem expands and also suffers from illnesses or is invaded. It contains different species to be analysed individually and in their natural chain. It is not an easily controllable object of study, it has a life of its own. (Calvo Encinas 2010, 1, my translation)

This quote by Elisa Calvo Encinas describing her own experience in a translation class reminded me of my teaching experience with interpreting students. In the interpreting lab ecosystem most issues pertaining to teaching and learning cannot be studied in a linear manner. The same occurs with student motivation, our focus in this dissertation, as variables keep changing: one student has had three cups of coffee this morning, another didn't sleep well last night, another has family problems, a fourth one is thinking of their weekend and forgets to review the glossary, another needs a very good mark in the subject in order to keep their scholarship and becomes competitive in a non-constructive manner. Their emotions vary; their motivations depend on some factors I can work with, others that are completely out of my reach, and even others that are out of theirs. One student may be deeply moved by the subject of the video they are interpreting on gender violence; another may be reminded of a life episode they want to forget; a third one is well rested and manages to focus, while their friend simply has a bad day. Their investment in the interpretation may also be motivated by workplace relationships, or who they are sitting next to in the booth.

In this dissertation I will adopt Calvo Encinas's idea of an ecosystem in the translation classroom, where variables change and individuals are studied separately and as a group (in an environment that cannot be easily controlled) forming a complex object of study, as is a group of students in the interpreting lab. To take Calvo Encinas's metaphor further, I will argue that the ecosystem is affected by climatological factors out of one's reach, but also by how a carer chooses to water, feed, spruce up, prune, and landscape the garden, and what nutrients are available. As in any classroom, materials and methods vary according to the lecturer and the context in which teaching and learning takes place, as does the overall pedagogical approach.

Pedagogical approaches in interpreting can vary from school to school and from one classroom to the next: from the traditional, transmissionist method of the master teaching the apprentice (see Franz Pöchhacker 2010, 1, or Barbara Moser-Mercer 2015, 304) at one end of the spectrum, to post-pandemic approaches, at the other end of the spectrum. The latter, influenced by the fields of education and second-language acquisition, sociology, and cognition, include constructivism, collaborative learning, situated learning, experiential learning, or studies in self-efficacy, such as those by Woo Kyong-Jo and Hyang-Ok (2022), Jing Liu (2021), and Da Yan and Qiongqiong Fan (2022), to mention but some. An interpreting lecturer can choose where to place themselves, and their class, within this wide pedagogical spectrum; there exist, in between, a variety of worldviews, methods, curricular choices, and specific exercises that may be useful in the students' learning process at any given moment, and at different points of the teacher's own learning curve. Lecturers learn from experience, from research, from teaching; the way they teach changes, as have pedagogical approaches worldwide. Even the way we refer to training and education in interpreting has evolved.

Claudia Angelelli (2006) noted that, "in many interpreting programs and short courses, there is a tendency to use the term 'training' in both degree and nondegree programs, instead of 'education' or 'professional development,' respectively" (23). More recently, Catherine Way (2020, 179) frames the distinction between training and education as a dichotomy between vocational and academic approaches, and advocates for "preparing whole, critical thinking citizens and providing professional training to meet industry demands" (179). In recent literature on interpreter education (see, for instance, Bontempo and Napier 2009, 149; Hunt, Cagle, and Metzger 2019, 119; Pöchhacker 2018, 141; Jie Liu 2020, 104; and Pokorn and Južnič 2021, 3), the word education is preferred when speaking of university education, and training when speaking of other types of courses and internships.

In what follows, I will speak of interpreter education as explained by Angelelli (2006, 24). In this dissertation, education will refer to the teaching and learning of interpreting techniques (such as consecutive or simultaneous interpreting); it will be understood as incorporating other aspects as well, such as ethics, social commitment, or critical thought. These aspects can be found in approaches to ethical thought, such as education for citizenship (Cortina Orts, Conill Sancho, and Domingo Moratalla 2001), the spirit of the hacker ethic (Himanen 2001), or in the communally shared values of the ethics of care (Fisher and Tronto 1990) from a feminist perspective, regardless of the purpose of this training, be it vocational or academic.

Ethics can be understood as moral thought, or as the study of morality (Etxeberria 2002, 2013), and metaethics, as the study or reflection upon the discourse of ethics in a given context, or the way we look at ethics in a given profession—be it translation and interpreting (Hortal 2007), teaching (Martínez Navarro 2010), or research and academia (Mellinger and Baer 2021). Today, it is from this metaethical perspective that factors such as xenophobia, sexism, and "aporophobia," or hatred towards the poor (Cortina 2022), play a key role in every aspect of education, cutting across all disciplines and professions.

After many years of teaching interpreting in academic contexts, and trying to make interpreting exercises more motivational by choosing or creating materials which would sustain the students' interest, while also being useful to them as future professionals, it became clear to me that there was a difference in persistence and sheer drive between students who wanted to become translators, and those who wanted to become interpreters. In the university where I teach and most of the research has been conducted, undergraduate students in translation and interpreting go to class together for three years. In the first two years they focus mostly on improving their three languages and attend general translation classes. They begin introductory interpreting courses in the third year; then, they specialise in either translation or interpreting in the fourth year of their studies, selecting either the translation or interpreting itinerary. Students who intend to choose the translation itinerary still have to sit a compulsory introductory interpreting class, and sometimes seem to lack motivation in this class; students who plan to select the interpreting itinerary in their fourth year (their last year before graduation) in general show more motivation in this class. In both itineraries, certain topics in the speeches chosen for the interpreting exercises, among other factors, seem to elicit more enthusiasm on the part of students, motivating them to work more, while other subject matters simply do not spark as much interest.

I found similarities in a non-academic context after being involved in several Social Forums. A social forum is a summit bringing together social movements and social actors such as NGOs or trade unions, among others, sometimes coming from different countries; the first social forum was the World Social Forum in Porto Alegre (Brazil), organised in 2001:

> The WSF [World Social Forum] is the set of initiatives of transnational exchange among social movements, non-governmental organizations (NGOs) and their practices and knowledges of local, national or global social struggles carried out in compliance with the Porto Alegre Charter of Principles against the forms of exclusion and inclusion, discrimination and equality, universalism and particularism, cultural imposition and relativism, brought about or made possible by the current phase of capitalism known as neoliberal globalization. (Sousa Santos 2004, 9)

The WSF Charter of Principles defines it as "an open meeting place for reflective thinking, democratic debate of ideas, formulation of proposals, free exchange of experiences and interlinking for effective action, by groups and movements of civil society" (World Social Forum Charter of Principles 2001). In these forums people often speak in various languages, including marginalised languages, sometimes with the help of a network of volunteer interpreters called Babels specifically created to support Social Forum initiatives (Brander de la Iglesia 2010).

In various social forums where I interacted with volunteer interpreters, I realised these volunteers were driven by a sense of purpose to interpret that was similar to that of university students who had chosen the interpreting itinerary in that they too were very keen to learn as much as possible in a short time. Yet it seemed to me, intuitively, that there were also important differences in the motivational goals and rewards of the students and the volunteers. Volunteer interpreters for social forums seemed to be motivated by the idea of helping others by enabling communication among social actors (Babels 2002), that is, it seemed to have to do with the values that had pushed them to volunteer as interpreters for a cause they perceived as fair. This led me to ask myself some preliminary questions.

First, I wondered to what extent motivation was triggered by the volunteers' alignment with the social movements they were volunteering for. It further struck me, when working with volunteers in crash courses designed to introduce them to simultaneous interpreting, that they may not be perceiving the exercises' difficulty in the same way as university students. Bearing in mind that simultaneous interpreting is a complex cognitive task, especially when done by volunteers without previous training, I wondered if their enthusiasm, or passion, was the driving force pushing them to practice what is usually thought of as a difficult task for the sake of what they viewed as a good deed. It surprised me, as an interpreting teacher, that the volunteers seemed not to be as aware as the students had been that the task could be perceived as difficult. Very few volunteers gave up after trying to interpret simultaneously for the first time, despite being tired after the first attempts, as is usually the case with interpreting students. I asked myself whether thinking of a task as difficult makes it even more so, and the implications this could have, for example, when interpreting into a B language.

I asked myself how motivation can affect the perceived difficulty of an exercise, and therefore, how motivation impacted the learning process of both the students and volunteers. Then I wondered if their values and beliefs were affecting their motivation and, as a consequence, their learning. Where did this motivation come from? Could it be replicated in the classroom? Could students be motivated in the same way the volunteers had been motivated by their ethical stances? Finally, I asked myself whether there existed specific class materials which could motivate my students and volunteer interpreters alike.

At first I looked for answers in the field of educational motivation, then in the field of applied ethics in psychology, and in applied ethics in other professions. I found that previous research in psychology had explored how motivation affects learning (Meece, Pintrich, and Schunk 2014, 5; Meece and Agger 2018), and that ethical beliefs may shape peoples' actions (Peirce [1887] 1992), such as deciding to volunteer for a cause they regard as being fair, or persisting in a task or in their education, which may be a key factor in summoning motivation in school (Meece, Pintrich, and Schunk 2014, 128; Renninger and Hidi 2016).

Mark Halley (2019) explores, from the viewpoint of social movement theory, the reasons behind interpreters' participation in the 1988 protests at Gallaudet, a university catering to the needs of the deaf community, after the appointment of a hearing President by the university board. Through a series of interviews with the interpreters involved in the protests, he asks how and why they were motivated to interpret for the protesters, and concludes that it could be explained by a sense of collective identity, as well as by ideologically-structured action. In this case, human rights and postmaterialist values weighed heavily in the decisions made by interpreters. The possible explanations include moral components such as values and beliefs, although one interpreter he interviewed does appear to have at first wanted to participate only because it seemed to her an exciting adventure; she did later realise the far-reaching implications of her role as an interpreter for the deaf community worldwide (Halley 2019).

People's motives to act may vary as time goes by; "because intrinsic motivation is contextual, it can change over time" (Meece, Pintrich, and Schunk 2014, 277; see also Locke and Schattke 2018) and because their moral standards develop through experience (see also Noddings 2002; McNeel 1994, 27; or Kember 2016), such as volunteering for social movements. Studies focusing on moral development in college students already hint at the fact that certain activities such as travelling, volunteering, student exchanges, and additional years of higher education can improve empathy and, therefore, moral development, cutting across a variety of fields and professions (McNeel 1994, 27; Kember 2016).

If we look at the way other professions have dealt with ethical and emotional components, Pekka Himanen (2001, 19) offer a computer engineer's take on the ethics of free knowledge and collaboration—the Open Learning Model—together with enthusiasm or passion for their work, championing the sharing of free software and computer codes which they create motivated by the challenging work per se. Internal and external perspectives complement each other; in fields such as bioethics, scientists and doctors themselves contribute to creating the ethical framework of their profession, but also experts in applied ethics, such as Beauchamp and Childress

(2019), show that the different professions are not so dissimilar when it comes to dealing with difficult choices, ethical dilemmas, and motivations.

The more I looked into the ethics-motivation equation, the more I realised the ecosystem(s) I wanted to understand and improve had to be tackled creatively, from a variety of viewpoints, but, most importantly, from a variety of disciplines, including: translation and interpreting studies, psychology, ethics, and didactics. I also realised that such interaction was not so much crossdisciplinary (where disciplines come together) but interdisciplinary (where boundaries between disciplines start to become diffuse).

During my research I was not working closely with experts in other disciplines (only consulting them to ask a few questions). Yet I was not alone when doing my research: the students and the volunteers (coming from different fields and professions) played an active part in improving our joint teaching and learning practice. Still, the research required me to see things from angles and dimensions that did not come naturally to someone trained as an interpreter as I had been; and although I could not put myself in the shoes of a psychologist or an expert in applied ethics, I could acquire some perspective from those disciplines by reading the relevant research and learning to ask better questions. While I was importing knowledge from other disciplines, I could perceive at the same time that my research could perhaps be relevant, in turn, to some of the disciplines I was learning from. Indeed, the exploration of motivation and the variables influencing motivational processes, in so far as ethical values are concerned, calls for the use of a variety of perspectives from different fields of study, as the ecosystem I was studying was composed of different layers, some of which, like ethics and didactics, cut across all disciplines. This ecosystem and, in particular, motivation and ethics in the context of the interpreting lab, was something that had to be studied as a whole. Although one can separate the variables to be measured to try to understand how they work independently, they affect one another inextricably as do the other factors in the ecosystem.

Thus, we will explore the ecosystem of the interpreting lab through the lens of motivation studies in psychology, care ethics, applied ethics to education, applied ethics to the professions, ethics in information technology, and feminist action research as a paradigm for social change in education (not only as a research methodology). First, we will narrow down our specific object of study (ethical motivation in interpreter education). In order to do so, I will borrow Paul Pintrich and Dale Schunk's (2014) definition of motivation from the field of psychology:

> *Motivation* is the process whereby goal-directed activity is instigated and sustained. [...] Motivation involves goals that provide the impetus and direction for activities. Cognitive theories of motivation are united in their emphasis on the importance of goals. Goals may or may not be well formulated and may or may not change with experience, but the point is that individuals are conscious of something that they are trying to attain or avoid (4)

In their landmark work, motivation is described as a "goal-directed" process, rather than a product. Such perspective allows us to consider motivation as driven by a combination of internal and external factors which change over time, starting towards a goal and then sustaining action in the longer term towards that goal, with those internal or external factors affecting extrinsic or intrinsic motivation changing constantly (5). To our purposes, this means that, when interpreting, the relationship between positive motivation and its negative counterpart, lack of motivation, can be described as a delicate equilibrium. A student's motivation will be subject to motivational variables, extrinsic or intrinsic, which will either increase their motivation or decrease it in the short term (while interpreting, while preparing for the class) and in the long term (while completing their degree or in their professional careers).

To mention one very common short-term example in an interpreting class: a student may get tired, lose focus and miss a sentence; instead of quickly trying to render the next sentence in full, the gap may provoke a momentary lack of self-esteem, or even sadness, shame or anxiety (Korpal 2021), provoking in turn a momentary loss of motivation and, therefore, loss of focus, resulting in complete silence for the next few sentences, until they gather their wits and manage to interpret again. That is, they manage, in a few seconds, to control the situation, to increase intrinsic motivation sufficiently to be able to manage all the complex cognitive efforts involved in simultaneous interpreting, and to concentrate again (Moser-Mercer 2005; Mouzourakis 2006; Seeber 2011; Meece, Pintrich, and Schunk 2014, 318).

Daniel Gile (1999, 153) already described these cognitive efforts in professional interpreting and called his theory the "tightrope hypothesis", as the interpreter attempts to walk a metaphorical mental tightrope when interpreting a speech. Other authors such as Alexandra Rosiers, Eyckmans, and Bauwens (2011), or Timarová and Salaets (2011), have added student perceptions of anxiety and motivation in exploratory studies and call them soft efforts, as opposed to the hard cognitive efforts—listening and analysis, memory, production, coordination (Gile 1999). Interestingly, Gile has as of late started to incorporate both motivation and ethics into his model, if only briefly:

> When humans are forced to deploy effortful activities, as a result of a phenomenon called "ego depletion", they are less inclined to take on new effortful activities later. This intrinsic "laziness" of human cognition, which ties in with Zipf's principle of least effort in human behaviour (1949), is not unrelated to relevance theory. It also draws attention to the potentially important role of motivation, be it under a personal ethical philosophy, under a code of ethics or under the threat of sanctions if sufficient effort is not devoted to achieving quality. (Gile and Lei 2020, 264)

At the beginning of their education, students in interpreting have not yet learnt to master the soft motivational equilibrium taking place at the same time as Gile's hard efforts, at various levels, which in turn affect concentration in the task at hand. Another of these soft skills is the capacity to concentrate to a very high degree, what Amparo Jiménez Ivars and Daniel Pinazo Calatayud (2013a) call "focused attention", measured as "attention span" (Padilla Benítez 1995), which could be described as the capacity for maximum concentration or complete focus despite juggling all these difficult tasks (or, precisely, because they are doing so).

Psychologists call this "sustained attention" (Fortenbaugh, DeGutis, and Esterman 2017) or "engagement" (Renninger and Hidi 2016). This focus is perhaps aided by a strong feeling of empathy towards the speaker (Korpal and Jasielska 2018), but not necessarily so, as professional interpreters work for people whose values they may or may not share. Thus, values influence empathy in students, as does moral development understood as a change in those values (McNeel 1994) as well as a change in the capacity for empathy. Preliminary studies may hint at the fact that empathy may be a fundamental part of ethical awareness in interpreting students (Brander de la Iglesia 2011). Soft skills such as empathy and motivation have been taught and learnt through practice, although scholars call for incorporating them in interpreter training (see, for example, Valero-Garcés and Peñalver 2021).

When students perform a task they like (a task they find interesting or useful) they concentrate more; "the choice of task matters" (Waloszek 2021). Applied to interpreting, this would mean that when students interpret a speech they like (a speech they find interesting or useful) they would concentrate and empathise more, they would seldom seem to lose focus. Contrariwise, when they interpret something that bores them (they find it uninteresting or not useful), they lose focus more often; they fall off the tightrope (Gile 1999), to use Gile's metaphor.

This phenomenon has been approached from different angles by studies in psychology. One such angle is the concept of "perception of interest" (Harackiewicz and Knogler 2017, 340), affecting human "persistence" (Meece, Pintrich, and Schunk 2014, 15) in a given task; for example, a maths task at high-school level. In tasks like maths, or interpreting, persistence ultimately influences the result, which in early studies in psychology was expressed in the form of "successfully completing the task" (Sansone and Harackiewicz 2000a, 447). Other authors such as Walkington (2013) or Harackiewicz and Knogler (2017, 340) speak of "learning outcomes" in motivation studies applied to educational settings.

When, for example, a child is given a maths task, she might perceive it as too difficult from the start, she might think it is not useful for her future, or may find it boring. This child exemplifies the states of interest provided by Hidi (2000, 311) and Renninger and Hidi (2016), as well as later approaches to the development of interest in the classroom (Harackiewicz and Knogler 2017, 342); any one or a combination of these factors (together with many more internal and external motivational variables) make her less likely to complete the task. On the contrary, if the same child perceives the task as attainable, values it as a useful exercise for her education and is interested in it, she is more likely to complete it successfully in the short term and could perform better in maths in the long run as well, as explained by Sansone and Harackiewicz (2000b, 446), Elliot, Dweck, and Yeager (2017b), and Locke and Schattke (2018, 24). Success and performance, however, are not directly a part of the object of study of this dissertation.

In order to explore what makes a student more motivated to do their best, and how the lecturer can understand and improve their learning process, we will add, on the one hand, an ethical dimension to the efforts in Gile's cognitive "tightrope" and, on the other, we will add to the resulting picture a motivational perspective to these ethical aspects. In other words, we will first look at interpreter education through the lens of applied ethics and then from the point of view of motivational studies. Thus, we will study ethical motivation in interpreter education.

In what follows, ethical motivation will refer to the interest triggered by a person's ethical values and beliefs (Narváez and Lies 2009). For the purpose of this dissertation I will adopt the expression "ethical motivation" coined by Narváez and Lies (2009) in educational psychology, and develop its definition in the following manner: ethical motivation is the process by which values and beliefs serve as a trigger to increase perceived interest and perceived usefulness in a task by an individual. Ethical motivation may affect the student's perception of the importance of the task (Wigfield and Eccles 1992, 265), and may therefore help to better perform that task. This may be of educational value when attempting to improve the learning process—we will *not* understand ethical motivation as the will to act ethically or, as Christopher Branson puts it, "to really want to act ethically" (2014, 295), when talking about facing an ethical dilemma in business ethics.

If we simplify how these factors affect the processes in which motivation intervenes in cognition while interpreting, we could look at motivation as a spectrum. We could use the image of a volume wheel, where one could show graphically how total motivation increases for the better as if one were simply turning the volume up. Interpreting lecturers would be able to consciously work on one or more of these variables in order to motivate the students, by finding out what the students perceive as interesting, for example, and using precisely those topics in the class.

There are variables affecting motivation positively, such as perceived interest or perceived usefulness, as we have seen. At the other end of the spectrum there are variables, such as perceived difficulty of a given exercise, which affect emotions, and motivation, for the worse (Schutz and Pekrun 2007; Brown 2018). This could be shown graphically as minus motivation. It is interesting to know, from a didactic perspective, that variables influencing motivation negatively can sometimes be reversed. Lecturers can work on improving these negative variables, for example, by focusing at first on exercises perceived as less difficult, or by trying to ascertain why difficult exercises are seen as such by the students (Meece, Pintrich, and

Schunk 2014, 321). Some of these negative motivational aspects are anxiety, stress, previously existing negative perceptions of difficulty, negative perceptions of interest or usefulness (see De Groot and Pintrich 1990, 40; Meece, Pintrich, and Schunk 2014, 9).

These and other findings are key to the study of education in general, as well as in the teaching and learning of complex tasks such as interpreting. In this sense, the practice of simultaneous interpreting provides a more than apt research ground: it is a a psychologically-contingent task involving a cocktail of cognitive efforts and problem-solving under time constraint in stressful environments (see, for example, Kurz 2002). Simultaneous interpreting as a task may thus prove to be of special interest when observing motivational processes in the classroom and may help to lead to a better understanding of the ethics-motivation equation, applicable not just to this field, but to education in general.

Ethical motivation in interpreter education is the object of research of this dissertation. The initial hypothesis of this dissertation (H1) is that ethical motivation directly influences participants' perception of two motivational variables—perceived interest and perceived usefulness—while also affecting perceived difficulty in interpreting students and ad hoc volunteer interpreters alike. Perceived interest and perceived usefulness, in the definition of ethical motivation, are variables which, respectively, integrate the constructs values and beliefs (see, for example Meece, Pintrich, and Schunk 2014, 294). Thus, we will be looking at two of the variables positively affecting motivation in simultaneous interpreting: perceived interest and perceived usefulness, as well as a third one, perceived difficulty, which negatively affects motivation (Brown 2018, 5).

More specifically, we will first study the ethical motivation of trainee interpreters pertaining to two ecosystems (E1 and E2): E1 features students in an interpreting lab at two separate universities, and E2 comprises volunteers in the context of Social Forum related events, both constituting a purposeful sampling population (Tomal 2010, 30). Data will be collected first in an empirical fashion, following a mixed-methods approach, in order to determine "intervention goals" (Coghlan and Brydon-Miller 2014, 502). As David Coghlan and Mary Brydon-Miller put it: "In principle, the intervention is continuous because problems that demand solutions arise all the time" (502).

In brief, we will collect data on self-perceived participant motivation for specific interpreting exercises (videos of speeches) by asking questions about participants' perceived interest, perceived usefulness, and perceived difficulty after interpreting each video, by means of both questionnaires and open-ended written questions. This will be followed by a focus group at the end of each academic year or crash-course.

In comparison with undergraduate interpreting students, volunteer interpreters constitute an interesting contrast population to explore ethical motivation in interpreting, because volunteering in NGOs and other selfless acts performed in situations where no extrinsic rewards are involved are generally thought of as indications of having reached high stages of moral development (Zilber 2017, 12). Social Forums treat topics such as human rights and other post materialist values, including feminism. If this is true, ad hoc volunteers could perhaps be described as a group of empathetic and ethically-motivated people, capable of values such as responsibility, connectedness, and care according to moral development theories, such as the ethic of care (Gilligan 1982).

Although Kohlberg's moral development studies in children (1973) have long been invalidated (Gilligan 1982; Noddings 2002), his moral development scale has continued to be used in the field of psychology (see, for example, Boss 1991; Einolf 2010; McNeel 1994, 28; or Zilber 2017, 12), and also in fields like translation and interpreting studies (Dean 2015). Other authors, such as Esther Monzó-Nebot and Melissa Wallace, have pointed out that most models studying moral development are based only on the values of male participants, ignoring the female population (Monzó-Nebot and Wallace 2020b, 23).

It has been long proven that moral development in women and girls is different to men's, as explained by Carol Gilligan in her landmark work *In a Different Voice, Psychological Theory and Women's Development* (1982), and that similar phenomena may occur in women's perception of difficulty, according to Jacobs and Eccles (1985), who studied perceptions of difficulty in girls performing math (see also Wigfield and Eccles 1992, for sex-differentiated perception of values; and Jiang, Simpkins, and Eccles 2020, for the latest takes on gender and motivation). In this dissertation, gender has been considered as a variable, although more than 90% of student interpreters in this study are women aged 20–22 and can therefore not be accurately compared to a sufficient number of male counterparts.

As we will see, ad-hoc volunteers, on the contrary, are of varied age groups, genders, cultures, and backgrounds. We will try to find out to what extent ethical motivation influences these volunteers without formal training afforded to undergraduate students of interpreting, and how, in turn, students can profit from heightening their ethical motivation in acquiring interpreting techniques.

The main objective of the research undertaken for the completion of this doctoral thesis is to improve educational practice in interpreting by offering a deeper understanding of how ethical motivation (including values and beliefs) affects perceived difficulty in interpreting exercises in groups of students and volunteers (MO1). This main objective will be subdivided in specific objectives, in order to operationalise our research, which are the following: to determine whether the students' perceived difficulty decreases proportionally as perceived interest increases (MO1.1); to determine whether perceived difficulty varies with perceived usefulness (MO1.2); to identify how ethical motivation affects students' perceived difficulty (MO1.3); to identify ways in which ethical motivation in students can be triggered and sustained (MO1.4).

The participants of the study are (E1) students of simultaneous interpreting from and into English and Spanish in two universities—Heriot-Watt University (HW) and the University of Salamanca (USAL)—, as well as (E2) ad-hoc volunteers in Social Forum-related events. The participating students in this purposeful sample were chosen for their language combinations and for the fact that in both universities retour interpreting, that is, interpreting into their B-language, was part of the curriculum, which meant exercises both from and into English could be introduced regularly in the classroom and thus retour interpreting could be added to the study.

The students also constituted a homogeneous population of similar age. Fourth-year students in HW and USAL had acquired roughly similar levels of expertise, as both institutions shared similarities in their curriculums: after two years of languages and translation studies, the students went on their Erasmus year, and started interpreting in their third year. By the fourth year, when I taught them, they had already acquired basic interpreting skills. The ad-hoc volunteers were chosen because they participated in Social Forums and related events where I taught crash-courses, because of their language combinations, and because retour interpreting is a usual practice in this type of event.

Retour interpreting is a revealing exercise to determine perceived difficulty; in a preliminary study comparing perceived difficulty, interest, and usefulness in participants when performing retour from, and into, Spanish and English (Brander de la Iglesia and Opdenhoff 2014), results pertaining to one retour exercise were described. These results showed that motivational variables (including the perception of difficulty, interest, and usefulness when practising interpreting) were strikingly different between students in two academic settings (USAL and HW) on the one hand, and ethically-driven ad hoc volunteer interpreters, on the other. This raised a number of questions on the specificity of retour interpreting as an additional variable, and the influence of ethics on the motivation of students and volunteers when performing such a complex task, which will constitute our secondary objectives (SO).

In order to find out more about the influence of motivational variables when performing the specific task of retour interpreting, as part of the secondary objectives of this dissertation we will be measuring the variables of perceived difficulty, interest, and usefulness in students and volunteers when performing retour interpreting (SO). Increasing ethical motivation could arguably ease the learning process of what can be perceived as a difficult task by undergraduate students (Brander de la Iglesia and Opdenhoff 2014). Indeed, retour interpreting was traditionally seen in Western schools not just as difficult, but as outright undesirable (Seleskovitch 1999, 62). In humanitarian contexts, however, bilateral interpreting, including retour, is a sought-for skill (Brander de la Iglesia and Opdenhoff 2014), as it is not easy to find a sufficient number of professional interpreters with the required mother tongue (Opdenhoff 2011), especially for languages rarely taught in interpreting schools. Revealingly, volunteers may ignore that certain traditional codes historically prevented professionals from interpreting into B (Brander 2010), and their perceived difficulty may not be as high, and therefore not influence their motivation. Indeed, the hypothesis that volunteer interpreters, perhaps blissfully unaware of the history of difficulty of retour interpreting, may find it less difficult than students of translation and interpreting has been suggested (Brander de la Iglesia and Opdenhoff 2014). Comparing retour interpreting experiences between these volunteers and undergraduate interpreting students may be particularly revealing of the effect of perceived difficulty on motivation.

For these secondary objectives, we will proceed as with the definition of the main objectives, but this time applied to retour interpreting (interpreting into a B language): to determine whether the students' perceived difficulty varies as compared to interest perceived when interpreting in retour (SO2.1); to determine whether perceived difficulty varies with perceived usefulness when interpreting in retour (SO2.2); to identify how ethical motivation affects students' perceived difficulty in retour (SO2.3); to identify ways in which ethical motivation in students can be used to improve the learning process when interpreting into their B language (SO2.4).

Lastly, we will try to compare results obtained for students and volunteers, still as part of our secondary objectives. We will endeavour to determine whether volunteers and undergraduate students' perceived difficulty varies as compared to each other (SO3.1), and also interpreting in retour (SO3.2). We will also determine whether volunteers and undergraduate students' perceived interest (SO3.3) and perceived usefulness (SO3.4) vary as compared to each other.

The following outline sketches the main (MO) and secondary objectives (SO) of this dissertation:

Main and secondary objectives

MO1: to improve educational practice in interpreting by offering a deeper understanding of how ethical motivation (including values and beliefs) affects perceived difficulty in interpreting exercises in groups of students and volunteers.
MO1.1: to determine whether the students' perceived difficulty decreases proportionally as perceived interest increases
MO1.2: to determine whether perceived difficulty varies with perceived usefulness
MO1.3: to identify how ethical motivation affects students' perceived difficulty
MO1.4: to identify ways in which ethical motivation in students can be improved.

SO2.1: to determine whether the students' perceived difficulty varies as compared to interest perceived when interpreting in retour
SO2.2: to determine whether perceived difficulty varies with perceived usefulness when interpreting in retour
SO2.3 to identify how ethical motivation affects students' perceived difficulty in retour
SO2.4: to identify ways in which ethical motivation in students can be used to improve the learning process when interpreting into their B language

SO3.1: to determine whether volunteers and undergraduate students' perceived difficulty varies as compared to each other
SO3.2: to determine whether volunteers and undergraduate students' perceived difficulty varies interpreting in retour
SO3.3: to determine whether volunteers and undergraduate students' perceived interest varies as compared to each other
SO3.4: to determine whether volunteers and undergraduate students' perceived usefulness varies as compared to each other.

In this dissertation, an empirical methodology will be used, taking a mixed methods approach. The methods used here are those of the social sciences, namely from education studies, but also partly from applied ethics, psychology and, of course, translation and interpreting studies (TIS). Feminist research, and action research in particular plays a key role in the empirical approach and in the qualitative and quantitative analysis of the data collected, not just as a methodology but as a paradigm as well (Monzó-Nebot 2007). As Esther Monzó-Nebot puts it "action research as a paradigm implies the acknowledgement of the scientific community as agents of conscience. It offers the opportunity to take a stand from the viewpoint of civility, to be responsible for vulnerable individuals and act on their behalf" (12 , my translation). Feminist action research therefore allows us to use postmaterialist values such as human rights and feminism at every level of the research undertaken.

Action Research, as a paradigm, provides not only a methodological framework per se (Nicodemus and Swabey 2015), but also an added ideological background within an educational setting, creating a wider sociological framework:

> remedying power imbalances, not just between human actors but also between our species and the rest of the biosphere. As a paradigm, action research is clear about its political message of positive social change and practical knowledge creation. This focus on equality and democracy requires inclusion, and collaboration and participative decision-making amongst actors. Also, action research strives to liberate the human mind, body and spirit towards a critical consciousness. (Coghlan and Brydon-Miller 2014, 34–35)

This ethical approach to action research will be put in practice at various levels. An action research spiral will be designed as a method for transformative research in the classroom, leading to educational change (Elliot 1993, 175; Waters-Adams 2006, 1; Nicodemus and Swabey 2015). From the subject matter of the speeches chosen for practice—favouring ethical themes treating, for example, ecology or feminism—to the use of critical pedagogy and ethics in the readings provided in class, or the participatory focus groups in order to assess yearly results, the approach presented involves an ethical paradigm, in the practical form of an action research spiral.

The spiral was carried on and repeated in interpreting classes at university in the space of ten academic years. The subsequent quantitative analysis constitutes a major focus of this dissertation, as more participants fulfilled the tasks assigned. In volunteer interpreting events, where the number of participants was smaller, quantitative methods are understood as an initial exploration of the data seeking for qualitative, transferrable results.

The methods of data collection adopted in this dissertation include a variety of tools in order to better answer the preliminary research questions about ethical motivation, as well as the specific objectives pertaining the particular variables we wish to study in this dissertation. First, quantitative Likert scale questionnaires (see Appendix 1: Questionnaire 1) measuring participants' perception of interest, usefulness, and difficulty, to be filled in after each interpreting exercise, will be used in the classroom and in Social Forum crash-courses. This will be combined, in order to triangulate our findings, with qualitative open-ended questions in which the participants will be able to explain the answers they gave in the questionnaires, as well as interviews and focus groups which will be recorded and subsequently transcribed. The statistics program SPSS will be used in order to determine possible correlations between the variables involved.

In accordance with studies in other fields involving complex tasks, such as maths problems in education (Eccles and Wigfield 2002; Jiang, Simpkins, and Eccles 2020) or experiments with matchstick riddles (Spielberg and Azaria 2022), the expected results would be, firstly, that students' perception of interest and usefulness increases as perceived difficulty of the exercises involved decreases. Thus, students perception of interest and usefulness and, therefore, their motivation, may increase as the subject matter of the speeches is closer to their values and beliefs. It would also be expected that the results be similar when the participants are performing retour, which is an added variable in an already complex task such as simultaneous interpreting.

When performing retour, students may be more aware of the difficulty involved than volunteer interpreters, whereas volunteers may be more interested in the values and beliefs involved in the exercise. Lastly, it is expected that volunteer interpreters—as compared to students—demonstrate a similar degree of perceived difficulty, that is, that their perceived difficulty will be lower, as interest and usefulness increase.

These results would allow us to choose specific exercises, materials, and speeches according to the interests of the students for a specific subject, as the perceived interests of the students may vary from those of the lecturer, thus taking into account the students as empowered participants in the teaching and learning process. Knowing whether perceived interest and usefulness vary with respect to perceived difficulty may help the lecturer trigger and sustain ethical motivation in the classroom, and to adapt the curriculum accordingly. Using results from ethical motivation in students in previous academic years, the lecturer can create her own ethical criteria for the inclusion of new videos, thus fine-tuning the procedure after each academic year.

With the above-mentioned hypothesis, objectives, research questions, and expected results in mind, this dissertation will have a general outline consisting of two parts. The first part will include the first two chapters. I will first contextualise interpreter teaching and learning as a state of the art, including studies in self-efficacy, recent studies about stress in remote interpreting, retour interpreting, and ethics in interpreter education. In the last section of this chapter, feminist ethics approaches and the ethics of care will be applied to interpreter education. The second chapter will give the basic theoretical foundations on ethics and motivation, where I will provide a theoretical framework for the concept of ethical motivation. For this, I will explore theories borrowed from applied ethics to other professions, such as computer engineering, linked to motivational aspects studied in psychology. The second, empirical part, will include three chapters featuring the design and methods of the empirical study within the larger framework of action research methodologies, followed by specifics on data analysis, results obtained, and discussions. Finally, I will present the conclusions of this dissertation.

The present thesis, though written in English—therefore following the stylistic conventions of that language—will be presented in a Spanish university and will follow Spanish conventions in the structure and methodological approach of a Spanish dissertation.

Chapter 1

Contextualising educational research in interpreting: The ethics of care in interpreter education

> IS [interpreting studies] is not alone in the testosterone-washing of history. Most of the authors of the articles cited and a majority of the scholars discussed throughout this book are white, temporarily abled, and presumably heterosexual men. This is not because women, LGBT individuals, persons of color, or persons with disabilities have not contributed or attempted to contribute to the thinking about these issues. Their work has greatly influenced the study of interpreting, but they have been systematically hidden throughout history. As they have remained in the closet, institutionalized, or been responsible for care work at home, white, temporarily abled, presumably heterosexual men have been able to take center stage. (Roy, Brunson, and Stone 2018, 9)

Cynthia Roy, Jeremy Brunson, and Christopher Stone (2018) are some of the first to criticise, if only as a preliminary note in the introduction to their book, the androcentric ethos prevailing in interpreting studies as part of the academic profession. The collective ethos of a profession can be understood as the prevalent spirit guiding professional practice and its unwritten or tacit standards (Enstad 2017) which include its "ideals, values, norms, and sanctions" (Etxeberria 2002, 21). From an ethical perspective, a profession is a group of people who share a common occupation and, from an ethical perspective, who work in what they consider to be a morally permissible way (Alavudeen, Rahman, and Jayakumaran 2008, 45). From their ethos, professional communities may develop a distinction between deontological norms and the study of morality or ethics (Etxeberria 2002).

The ethos of IS within academia as a profession (Lynch and Ivancheva 2016; Merton 1973) can be understood at various levels: first, within society as a whole, because it is a profession receiving influence of the ethos of the community it is set in. Secondly, it also comprises the ethos of interpreting as a profession, as interpreting lecturers are often also professional interpreters—when speaking of interpreting as a profession, Robin Setton and Erich Prunč (2015) describe the ethos as the customs and habits which vary in different periods and cultures. Thirdly, it includes the ethos of interpreter education and of teaching as a profession (Lévy 2015; Martínez Navarro 2010) in the school of thought or institutional framework that scholars belong to. Fourthly, the ethos of the IS community is present in the academic production of its members, be it in the form of lectures, conferences, or academic writing, including also tacit or hidden values, as portrayed in the quote above explaining the androcentric ethos of interpreting studies, where female authors and minorities are denied equal opportunities (Roy, Brunson, and Stone 2018). Such inequalities vary from one country to another, where the four waves of feminism have started reaching the professions, including interpreting, and academia, quite differently depending on how each society is advancing.

In short, the four waves of feminism have touched academia and universities of the West in varying degrees (David 2016). The first wave focused on women's suffrage and legal inequalities in the Western world, such as access to university, among others. The second wave consisted in tackling political and cultural inequalities and oppressive structures within society, such as equal access to a teaching post or equal pay. The third wave highlighted racial and gender differences, and made feminists more aware of the status of minorities and women in the developing world (for example, through the use of affirmative action in the access to jobs).

The fourth wave has started recently in different countries of the West and advocates for the further empowerment of women and minorities, such as trans people, through the use of new technologies as a means to stand up against violence and injustice. For example, in university this can translate as including feminist issues as transversal themes in the curriculum. The fourth wave of feminism highlights the role of men in co-responsibility, and also brings emotions into the feminist equation as a pressing issue, encouraging women, but especially men, to express and understand emotions, among other issues. Both positive and negative emotions have started to appear in the literature of interpreter education, as we will see later in this chapter, and this may in time perhaps affect interpreter education and the way students express emotional issues in interpreting.

Professionals have the responsibility to transmit their ethos in a critical manner to younger members of their profession, and the method used by interpreters has traditionally been that of the master teaching the apprentice (Pöchhacker 2010, 1), a top-down transmissionist approach, including values, beliefs, and norms passed on from one generation of interpreters to the next (Sawyer 2004, 50). But norms can vary with the context and the times (Sevillano and Olivos 2019, 185). These norms can also be tacit, as part of the hidden curriculum, as David Sawyer explains:

> the hidden curriculum instills values and beliefs that shape future members of the professional community. If, for example, simultaneous interpretation into the non-native language is not offered officially in the curriculum and remains in the hidden curriculum, students may come to believe that it is not a legitimate practice. If court interpretation or translation theory is not offered in the curriculum, students may have the impression that such content is not valued in the professional community (12). (Sawyer 2004, 42)

As Sawyer hints at, translation theory (and research in general) was not present until very recently in interpreting classes in many schools, and students received only practical training. The past situation of interpreting lecturers as both freelance workers and part-time teachers in educational institutions or universities may have affected the development of educational research in interpreting. Daniel Gile argues that the status of interpreter lecturers may have affected research in interpreting in general in certain Western schools:

> In IS, up to well into the 1990s, virtually all researchers were practicing interpreters who had to share their time between well-paid interpreting, unpaid research and relatively poorly paid training work. Training programs prided themselves on their professional orientation as opposed to an academic one, and, with a few exceptions, little if anything was done in terms of infrastructure to facilitate research. (Gile 2009, 146)

In the last two decades, however, the institutional status of the interpreting lecturer has evolved; the academisation, or professionalisation of the interpreter teacher and/or academic has, in turn, allowed lecturers to invest more time on research into interpreter education, which may be one of the factors contributing to the appearance of other pedagogical models in translator and interpreter education, such as collaborative learning, with roots in critical pedagogy (Kanpol 1999) and values similar to that of the Open Learning Model defended by early supporters of free knowledge (Himanen 2001).

The Open Learning Model is based on values such as freedom of education, as are other emancipatory approaches (Freire [1970] 1996) which have influenced, with a certain *décalage*, first translation and then interpreter education at the turn of the century (Kiraly 2000, 2015). Emancipatory approaches to teaching share some common political stances, such as freedom of education, also present in feminist approaches to ethics based on equality (Fisher and Tronto 1990, 53) and in the defence of the right of minorities and indigenous peoples to be understood and express themselves in their own language (Córdova-Hernández, Vásquez Jiménez, and Velasco García 2022). Interpreting from and into a B-language is part of this emancipatory trend in interpreter education, as is the responsible use of new technologies in order to bridge the digital gap.

Translator and interpreter education has also welcomed the influence of disciplines such as second-language acquisition (Pym and Ayvazyan 2017), the philosophy of education (Biesta 2015; Phillips and Siegel 2015), and educational psychology (Locke and Schattke 2018). One such field is motivation studies applied to education. This area has experienced considerable development in the last decades: from a goal-oriented approach, focused on measuring the outcome, or performance, of the student (Sansone and Harackiewicz 2000a, 447), to a more process-oriented definition and exploration of motivational variables, including the perceptions of students in teaching and learning (Zaky 2020). Similarly, studies in interpreter education have treated goal-oriented approaches such as excellence or quality as a product, with topics such as admission (Angelelli and Jacobson 2009), assessment (Angelelli and Jacobson 2009), and evaluation (Hurtado Albir 2007), but there has also been a process-centered development, parallel to the sociological turn in translation studies (Diaz Fouces and Monzó-Nebot 2010; Inghilleri and Harding

2010), with contributions on deliberate practice (Calvo 2015), experiential training (Kiraly and Massey 2019), self-reflection (Whyatt 2022), curricular aspects (Sawyer 2004), and collaborative methods imported from translator education. The study of ethics in the sister field of translation has a long tradition (see, for example, Carbonell Cortés 1998). In interpreting, however, the treatment of ethics from the viewpoint of postmaterialist values such as human rights, and feminism, has been slower to appear. Gender aspects in interpreting and intercultural communication have not been widely treated (see, for example, Nevado Llopis 2014; Pozo Triviño et al. 2014), as they have been in translation studies (Vidal Claramonte 2018),or from the point of view of wider translation and interpreting studies (Monzó-Nebot 2023). We will try to apply these findings insofar as they are essential for the understanding of our object of study (ethical motivation in interpreter education) within the perspective of humanitarian values in the ethics of care, with the promotion of equality as a key ethical value.

In this chapter we will contextualise interpreter education by summarising the state of the art of contributions directly applicable to our object of study. First, we will look at the evolution of approaches to knowledge acquisition in translator and interpreter education, which increasingly includes emotional aspects such as motivation, as part of a shift from a purely technical acquisition of interpreting skills seen as transmission of knowledge, towards a more emotionally woke paradigm. Examples of this are studies on self-efficacy in interpreter education (Jiménez Ivars, Catalayud, and Ruiz i Forés 2014; Jing Liu 2021), and studies linking motivation and ethics, such as Hubscher's concept of "ethical stress" (Hubscher-Davidson 2021) in the age of information, where the predatory behaviour resulting from globalisation, and the use of new technologies may clash with ethical stances and create a cognitive dissonance, or ethical shock. Indigenous languages and minorities do not thrive in such unfairly competitive systems and oftentimes disappear into the digital gap; changing traditional norms, such as those on directionality in interpreting, may be one way of improving the situation in interpreter education. Finally, we will tackle the teaching and learning of ethics in interpreting from a feminist ethics perspective. Thus, we will go from ethos to ethics in the teaching and learning of interpreting, and from the prescriptive transmission of knowledge to the occasioning of feminist ethical thought.

1.1 From chalk-and-talk to occasioning knowledge in interpreter education

> Application in a social action context can thus be coined as a further (fourth) principle of situated learning: we do not just learn because we absorb 'facts as 'information', but because we navigate with others in a given environment and so learn to act in specific situations. The object of education should therefore not be restricted merely to the imparting of information, but must instead extend to the use of this information in interaction with the organisational environment. (Risku 2016, 5)

A clue to unravelling all the changes that have taken place since the COVID pandemic, but also in the few years before, could be the shifting understanding of the concept of knowledge. If knowledge used to be considered as facts and information, as argued by Hanna Risku in the quote above, knowledge has been further freed from a transmissionist approach and towards a more open paradigm. Knowledge is now increasingly understood first as a type of collective intelligence in the information era (Lévy 1997). These advantages for the Western world, however, have not yet reached the vast majority of the planet; when used wisely, knowledge could also be a means to achieve dignity and justice in the ethical use of new technologies (Royakkers et al. 2018), including rights such as the freedom to share knowledge, the freedom to teach, and the freedom to learn (Demiray and Sharma 2009). However, this is far from being the case in most of the world. Revolution does not come without a dark side:

> all technological revolutions have given rise to both advantages and disadvantages which are unequally distributed following pre-existing patterns of inequality. Letting those with shared privileges imagine the futures for their imagined communities may force us to repeat the cycle. We need to ask who stands to benefit, and who may be left behind. (Monzó-Nebot 2023)

Interpreter education in the West in 2023 is immersed in a post-pandemic remote interpreting era where the very essence of intercultural communication is in constant change, as humans use new technologies to create novel ways of seeing and understanding the world. In translation studies, Risku speaks of the "continuous knowledge generation process" by lecturers and students in the classroom (Risku 2016, 1), and of creating knowledge through collaboration:

> Nowadays, both research and teaching practice alike are focusing their efforts on finding out how students can develop knowledge through collaboration. In the field of didactics, for example, the current focus lies on the emergence and establishment of collective fields of knowledge, their interaction with cognition at the individual level and the knowledge dynamics which result (see Risku and Peschl 2010). (1)

Knowledge in translator and interpreter education as defined by Don Kiraly (2015) constitutes the pillar of his post-positivist approach, which he himself describes as "apparent chaos" in the classroom:

> Knowledge is not something that can be (dis)-covered empirically or rationally; instead 'knowing' is a nonlinear process of context-dependent embodied and enactive meaning-creation involving myriad interrelated knowing systems, from neurons to brains to individual minds through communities of practice and on to cultures and societies (and in fact the environment as a whole). (Kiraly 2017, 13)

From a critical, metaethical perspective, the world changes with the knowledge we share or produce together, or teach and learn, in a classroom, but also by what we ignored, either because it was overlooked, yet remained in the back of our minds as tacit or implicit knowledge, or because it was erased on purpose (Tryuk 2021, 406). The latter is specifically the case of postmodern feminist perspectives in our area of studies, which are lacking in most contributions in interpreter education. As Esther Monzó-Nebot and Melissa Wallace (2020b) remark:

> Considering the dominant identity as the point of departure to finding the universal truths of the empirical world, science has created knowledge on specific subtypes of individuals and objects, but has presented the results as universal, in that way neglecting but also discouraging the analysis of diversities which were deemed too particular to lead to real conclusions, too complex to design properly 'scientific' studies. (18)

Thus, the meaning of the word "knowledge" varies across different approaches. The volume edited by Lieven D'hulst and Yves Gambier (2018) brings together different contributions in the form of "modern" thought (*A History of Modern*

Translation Knowledge: Sources, Concepts, Effects). The volume includes a chapter on interpreter training by Amparo Hurtado Albir (2018), one of several useful states of the art published in the last few years on the history or the basics of interpreter education. Other comprehensive literature summarising previous trends in interpreter education include: Bogusława Whyatt (2022) in Ferreira and Schwieter (2022); Pawol Šveda (2021); Julie Johnson (2021) in Albl-Mikasa and Tiselius (2021); Robin Setton and Andrew Dawrant (2016); Junying Liang and Qianxi Lv (2019); David Sawyer, Frank Austermühl, and Vanessa Enríquez Raído (2019); and Cornelia Zwischenberger, Karen Reithofer, and Sylvi Rennert (2023). The entries on interpreter teaching and learning in all of these recent volumes agree on the description of what has been the basis of interpreter education in the last fifty years. In the words of Barbara Moser-Mercer (2015):

> For interpreting, this mainly refers to instructional practices in a group setting, as shaped by a given CURRICULUM and also including the complex issue of ASSESSMENT. Nevertheless, interpreting pedagogy embodies more than the sum of its parts – the skill components, course syllabi, exercises and learning materials; ideally, it represents the incorporation of a theoretical view of the skill to be trained into a learning model that offers the flexibility needed to accommodate different cognitive styles, variable degrees of aptitude, and preferences for specific forms of learning, such as master–apprentice models, collaborative learning, tutor support and peer tutoring. (304)

Andres Dörte and Martina Behr (2015), and Holly Mikkelson and Renée Jourdenais (2015) wrote, as well, thorough summaries on interpreter education, which were published at the same time as Don Kiraly's application of postpositivist educational thought to translation and interpreting education—though he insists that he is, in fact, not applying anything as such, but "re-inventing the wheel, because we will then have our own wheel and not merely a borrowed one" (Kiraly 2017, 8). His earlier essay (Kiraly 2015), as well as his follow-up paper (Kiraly and Massey 2019), in which he further develops some of the main themes of his model, presents the tornado-like picture of "swirling, interactive vorteces" (Kiraly 2017, 26), which have indeed occasioned knowledge—instead of instilling or eliciting it—as well among researchers in translation education (fig. 1.1).

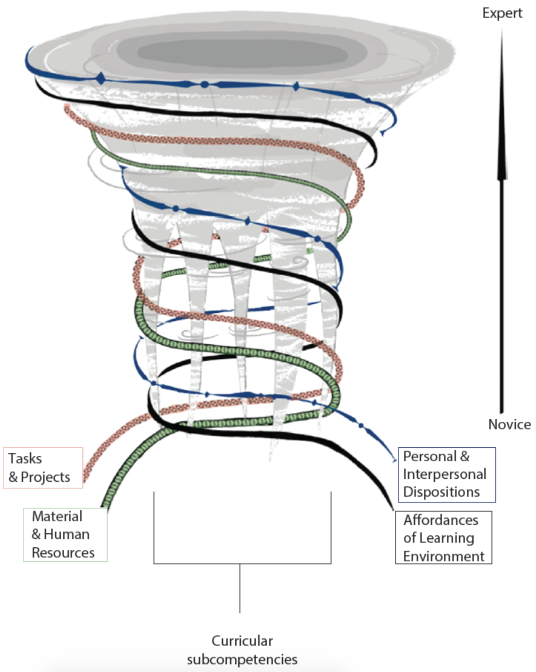

Figure 1.1: An Emergent Model of Translator Expertise (Kiraly 2017)

Kiraly's model has not yet fully reached interpreter education, though his previous work (Kiraly 2000) is more widely known (see, for example, Leticia Santamaría Ciordia 2017). Predictably, Kiraly's whirlwind, which had been gathering up for some time (Kiraly 2003, 2006; Kiraly, Hansen-Schirra, and Maksymski 2013; Kiraly 2017) became a "tornado" just a few years later, and has all but started: it is travelling the world, leaving a trail of—in his words—"messy" curriculum transformation behind it (see, for example, Way 2019; or Haro Soler and Kiraly 2019), and providing much food for thought. His approach invites for a complete change of mindset in most interpreting classrooms—occasioning knowledge—which may be easier said than done, as the limits between contextualised learning and traditional on-the-job training are diffuse:

> It is interesting to note that, while collaborative, project-based classes have been widely proclaimed to be an 'innovation' in translator education, the question arises as to what extent this type of pedagogical praxis can be considered innovative. After all, professional translation work itself has always been contextualized. A real-world client, teamwork, the use of necessary

> and available tools to complement the work of the translator's mind, the incessant tackling and resolution of new problems on the basis of experience with old ones—these are and always have been fundamental characteristics of the translator's habitus. (Kiraly 2017, 12)

Descriptions of what interpreter lecturers do in their classroom feature activities such as mock conferences, which have existed since the creation of the first interpreting schools, as Maren Dingfelder Stone (2019) explains. Other activities and practices in the teaching of interpreting, such as each lecturer's use of their university's Learning Management System (e.g., Moodle), are sometimes more focused on self-study than classroom practice, including the separation of subcompetences to be acquired with specific exercises (Dingfelder Stone 2019), in an increasingly realistic manner (Setton and Dawrant 2016), for example by using increasingly difficult videos and real-life recordings of interpreting situations.

Kiraly's model can easily include any and all subcompetences that the lecturer wishes to exercise separately in the classroom because he made a point not to define what these subcompetences were, as there is no consensus as of yet upon this subject in the different schools of thought (Kiraly 2017). His model allows for input from different curricular subcompetences in that, in his view, competence is occasioned by using elements from four strands (projects, resources, dispositions, and environment). Kiraly's dynamic technicolor drawing of complex, four-strip vortices is so generic in nature that it can accommodate different translation and interpreting teaching methods, and different postmodern approaches to teaching and learning. His vortices are somehow appropriately reminiscent to a ceilidh of spinning action research spirals, and not at all out of step with the sociological and ethical implications of the action research approach to education in translation and interpreting studies (Haro Soler and Kiraly 2019). Kiraly's kinetic depiction of co-emergent translator competence is, however, in stark contrast not only with the static top-down transmissionist inheritance of the master teaching the apprentice, but also with a variety of traditional viewpoints such as: the acquisition of subcompetences in a practical manner, without any reference to theory; the metacurricular compartmentalisation of subcompetences in education; the idea that translator and interpreter education is a complicated system, as opposed to a messy, unpredictable, and complex system, such as an anthill or the brain (Kiraly

2017). Kiraly's vision of a fractal scaffolding that can also learn and therefore changes constantly is in stark contrast, finally, to viewing interpreter training as a mechanistic activity. From his perspective, studying translation and interpreting as a mechanistic activity does not explain intuition (11).

It seems some types of intuition *can* be measured (Lufityanto, Donkin, and Pearson 2016), as can other soft skills such as motivation, empathy, or self-efficacy. Hanna Risku (2016), for example, studied situatedness in a group of students and, among other constructs, tested whether her students felt they were involved in a research project, and whether they felt it was relevant, using the seven principles of situatedness: "collaboration, construction, self-organisation, application in a social action context, use of shared artefacts, feedback, and reflection" (Risku 2016). In further work, she uses both cognitive approaches and situated learning in her groundbreaking work and shows that sociological and cognitive approaches complement each other in training (Risku and Rogl 2022, 33).

We find earlier mention of such "soft skills" in Šárka Timarová and Heidi Salaets (2011)—which they opposed to the expression "hard skills," used to refer to the acquisition of interpreting techniques in simultaneous or consecutive interpreting. Timarová and Salaets (2011) measured cognitive flexibility, learning styles, achievement motive, and debilitating stress in groups of interpreter trainees. It is interesting to note that some of these participants were already training as conference interpreters, others had chosen a masters' in liaison interpreting, while the third, control, group was still in their third year of translation studies and had not yet chosen whether they wanted to become interpreters or not, though we are not told why; whether because they did not like interpreting, whether they thought they would not be able to achieve a pass grade, or any other possible reason for this self-selection. The convenience of aptitude testing, or lack thereof, as Timarová and Salaets (2011) explain, is not void of controversy—and still is, twelve years later, from a pedagogical and ethical point of view. Cognitive flexibility, motivation in learning, and positive reactions to stress were found to be desirable traits to look for in applicants being selected for an intensive one-year conference interpreting master's degree, and findings about negative anxiety were consistent with earlier results from similar studies by Jiménez Ivars and Pinazo Calatayud (2001).

These findings are of interest to both translation and interpreting lecturers wishing to find out more about the learning styles and habits of their students in order to improve them throughout the semester. If cognitive flexibility can be measured, then perhaps it can be bettered by means of tailored exercises, and then it could be measured again to see if there is an improvement. Measuring cognitive flexibility could perhaps be of use not with the aim of preselecting the best future students but in order to improve such cognitive flexibility in all students of translation and interpreting as early as possible in the curriculum. If, as the study suggests, self-selected conference interpreters suffer less from negative stress than the control group (and, predictably, the general population), it would be in the interest to humanity to find out exactly why. As Timarová and Salaets (2011) point out:

> By comparing self-selected interpreting students to a control group of third-year bachelors students, we found that those who self-select for interpreting are cognitively more flexible, are more achievement-driven and suffer less from stress. Similarly, successful conference interpreting programme graduates were found to be cognitively more flexible, to suffer less from stress and to benefit more from positive anxiety than the control group. Unsuccessful conference interpreting students, on the other hand, did not show any difference in cognitive flexibility and differed from the control group only in that they too suffered less from stress. (Timarová and Salaets 2011)

The choice of wording in Timarová and Salaets (2011) corresponds with similar, earlier, literature on motivation in psychology; the term success as a desirable performance was used to focus on the role of the student in failure, as if education was merely a means to an end; the change of focus from performance to the improvement of teaching and learning is in consonance with the shift from product-oriented research in motivational studies in education to a more process-oriented viewpoint (Sansone and Harackiewicz 2000a, 447), including integration-oriented approaches towards the common good as a social aspect of education. In recent literature in psychology, the expression learning outcome is preferred, as it shifts the focus of the blame away from the student when the outcome does not correspond with what the student, the teacher, the school, or the surrounding society desired. As Timarová and Salaets (2011) aptly quote at the beginning of their paper, in principle, anyone with sufficient knowledge of two languages can train as an interpreter, given time and sufficient means, in a context without *numerus clausus* and financial constraints. A few years later, Kiraly (2015) went one step further when speaking of learning outcomes:

> Rather than focusing on static states, without depending on computer-like metaphors like inputs and outputs, and without focusing on initial states and learning outcomes, the model attempts to depict learning as emerging incessantly through lived experience in an ever-changing environment that both simultaneously hosts learning and is changed by and through that learning. (Kiraly and Massey 2019, 13)

Perhaps, like with whirling dancers, once the vortices gain enough traction, the swirling goes increasingly faster and the teaching and learning process is powered by its own centripetal force, like a spinning top. From the outside, it seems that all is still, and each student is doing their best with the tools and the help provided. The spinning nature of motivational forces in interpreter education leads to a pertinent question for the purpose of this dissertation: What is the driving force, the impetus behind the swirling? Why does the swirling start and how fast does it go? What, exactly, makes Kiraly's vortices swirl?

Hanna (Risku 2010) may have started to answer these questions, firstly when she speaks of approaches putting together cognitive and social research, such as distributed cognition, where "practice and process meet halfway" (Risku and Rogl 2022, 16), secondly when she quotes (Jakobsen 2015) and his centripetal and centrifugal opposed research foci, where researchers either study the brain, or translation in the workplace situation where it takes place (Risku and Rogl 2022, 45). To an interpreter, the spinning is reminiscent of Gile's centripetal and centrifugal model of lexical availability (Gile 1995), whereby one's ability to remember specific vocabulary increases centripetally the more it is used; knowledge and learning increase exponentially the more you learn, as does motivation. The spinning is understood, thirdly, when Risku explains the third principle of "situated learning" (Risku 2016):

> According to the core hypotheses of the new approaches in the fields of cognitive science and epistemology, knowledge as integrated patterns of expectation and information in behaviour and activities is created in the actors. This leads us to a third principle of situated learning, namely self-organisation. From an epistemology and cognitive science perspective, it

> seems plausible that knowledge is always based on existing knowledge, and that it is our own experience which we integrate in our knowledge structures– not the structures of the reality as such (see e.g. Maturana and Varela 1980; von Foerster 1972). Thus, knowledge cannot be something fundamentally new, nor can it depict reality. (Risku 2016, 5)

The construction of knowledge and the ability to organise previous knowledge in order to add upon existing structures—the more you learn, the easier and faster it gets—explains the scaffolding model, and the spinning of the vortices in Kiraly (2015). We will now try to explain the impulse to build, and to keep on spinning.

1.2 Emotion in interpreter education

As Caroline Lehr (2020) explains, historically, emotional aspects such as motivation had not been taken into consideration in traditional cognitive studies in translation:

> This neglect is all the more striking as, in the past few decades, psychological research has increasingly acknowledged that emotion is central to the organization of human cognition and that "few thoughts are entirely free of feelings and emotions influence thinking" (Ellsworth & Scherer, 2003, p. 572). (294)

In her chapter, Lehr treats the subject of emotions in cognitive studies in translation in a thorough summary, explaining that their neglect has lately been addressed and, in the last few years, some translation scholars such as herself have started to underline the importance of emotions in cognitive studies and in translation studies (Lehr 2020). As Fabio Alves and Arnt Lykke Jakobsen (2020) point out, the meaning of the translated or interpreted message is in the people, not merely in the symbols:

> Meaning is not in symbols. Meaning is in people. It has its origin in perception but can also be activated by symbols in humans who know how to generate meaning from them. This second construal, now often referred to as situated or 4EA cognition, rejects the mechanical and finite nature of the computer as a model of the mind and prefers metaphors that highlight translation as a living, biologically grounded activity, somewhat like a complex eco-system in which there are all kinds of organic systems in constant interaction and adaptation. (5)

Cognition in interpreting, in this instance, follows the sister field of translation in the slow incorporation of emotional aspects; pioneering studies, mirroring trends in the field of psychology, at first did not focus on emotional states in interpreting (Padilla Benítez 1995), with the exception of early studies on negative emotions such as stress (Kurz 2002). Lately, however, the study of emotional aspects in the field of interpreting has gained momentum with the exploration of aspects such as emotional stability (Bontempo and Napier 2009), and the introduction of 4E cognition (embodied, embedded, enacted, and extended) into the interpreting equation (Kumcu and Öztürk 2021).

Applied to interpreting, 4E cognition refers to the fact that interpreting takes place in an environment, in the body of the interpreter, in the mind of the interpreter and that the people in the interpreting context, including the interpreter, also have emotions (Kumcu and Öztürk 2021). The abbreviation 4EA includes affect in the equation, meaning that when interpreting, in the interpreter's mind, body, and the environment or context affect also plays an important role. An example of research taking into account all aspects of the wellbeing of the interpreter is developed by Jiqing Dong and Graham H. Turner (2016) on the ergonomic impact of interpreting agencies and their workplace on their performance, from an ethnographic perspective.

In interpreter education, a special issue edited by María González-Davies and Vanessa Enríquez-Raído (2016) includes several studies where interpreting lecturers adopt current trends in translator and interpreter education and, to a greater or lesser extent, 4E cognition. One study by Jun Pan (2016) is on situated interpreting education with the use of step-by-step scaffolding; another by Manuela Motta (2016) describes the evaluation of a blended collaborative environment for deliberate practice. Van De Walle et al. (2020) took their students to interpret in mock consultations with medical students, which is another way of introducing a quasi-real-life context with a safety net. Of special interest to this dissertation is an article including not only the latest approaches, but also emotional aspects by Won Jun Nam (2016), whose interpreting students were sent, among other placements, to an organisation reuniting Korean adoptees with their biological families.

There have been several recent studies including emotional and affective components in the study of interpreting, some of which take into account collaborative methodological trends, but most of which focus on the cognitive issues at stake, with the novelty of focusing on emotional and motivational aspects of interpreter education. Some focus on the study of negative emotions such as anxiety (Zhao 2022), or stress (Korpal 2021, 401), and their positive or negative influence on interpreters and students in different settings such as conferences or public service interpreting (Darias-Marrero 2020). Soňa Hodáková (2021), for example, focuses "on the relationships between the psychological (two different types of anxiety and motivation, and causal uncertainty), the cognitive aspects of the personality (working-memory functions, e.g. concentration, fluctuation of attention) and performance in simultaneous interpreting" (Hodáková 2021). She builds on the results of her earlier study on the "influence of motivation orientation on the quality and stability of motivation performance" (Hodáková 2019), where she observed when anxiety affects performance for the better, and when anxiety produces undesirable results in performance.

Other authors study ways to foster positive emotions, for example by improving focus through the use of mindfulness in the interpreting class (Jiménez Ivars and Pinazo Calatayud 2013b; Johnson 2021), or by working with the students on their self-efficacy (see, for example, Jiménez Ivars, Catalayud, and Ruiz i Forés 2014; Lee 2014, 2017; Jing Liu 2021). According to Albert Bandura (1986), self-efficacy can be defined as "people's beliefs about their capability to produce designated levels of performance that exercise influence over events affecting their lives" (Jiménez Ivars, Catalayud, and Ruiz i Forés 2014, 168). According to Amparo Jiménez-Ivars et al.,

> If people believe they will be efficient at handling a task, they will execute it with all their available personal resources, without resistance. Consequently, their ability will improve due to the added motivation and absence of mental distractors. This belief in task efficacy affects the choice of behaviour, the amount of effort to be applied to perform the task, perseverance and the ways in which individuals use their cognitive resources or emotional reactions derived from the task. (168)

Thus, if a lecturer points out what students have done well, instead of underlining what the students did wrong, self-efficacy will be enhanced (169). Similarly, from the perspective of student evaluation, Lara Domínguez Araújo (2019) tackled the elusive subject of giving feedback in conference interpreting education by comparing the points of view of trainers and trainees. Interestingly, some of the students in her study seemed to be aware that receiving feedback on two or three essential items needing correction helped them more than a detailed itemised feedback, although it was not a generalised perception (Domínguez Araújo 2019), as it depends as well on the different personalities of the students (Rosiers, Eyckmans, and Bauwens 2011), on how they react to different types of feedback, as well as on previous negative or positive experiences. Based on the work of Bandura (1977), Jiménez Ivars, Catalayud, and Ruiz i Forés (2014) distinguish four sources of self-efficacy:

> There are four sources of self-efficacy (Bandura 1977, 1986): past performance accomplishments, vicarious experiences, verbal persuasion and physiological states. [...] In order to assess one's self-efficacy, one weighs up and combines

> perceptions about one's capacity, the difficulty of the task, the amount of effort required, the external help (if any) and the quantity and characteristics of the successful or failed experiences (Schunk 1995). One must be careful, however, not to become complacent about one's success. Bandura (1997) suggests that letdowns after easy successes and intensifications after failure (more effort) are common sequences in competitive struggles. The continued setting of challenging goals and positive reactions to substandard performances help to elevate the intensity and level of motivation. (Jiménez Ivars, Catalayud, and Ruiz i Forés 2014, 169)

Thus, the lecturer will have to reach an equilibrium between encouraging the students and correcting their mistakes, which will also depend on the personality of each student, in line with the work by Alexandra Rosiers, June Eyckmans, and Daniel Bauwens (2011), who found that translation and interpreting students have different perceptions of their personalities overall, although that did not affect the quality of their production in sight translation in the early stages of training.

It has to be noted that there are many factors that can influence this equilibrium: lecturers have different personalities; there are also situational, gender, or power relations in the institutional context, and lecturers have preferred ways of providing feedback, among other factors. In this line of work, Caroline Lehr (2020, 303) compared the effects of positive and negative feedback in translators who had received either positive or negative feedback on a previous translation task:

> With this aim, translations from translators who had received either positive or negative feedback on a previous translation task were compared. The feedback induced emotions that were clearly separated on the positive–negative axis. Moreover, the comparison of translation evaluations between the two groups showed higher ratings for idiomatic expression and stylistic appropriateness after positive feedback, criteria that can be attributed to the creativity category, and higher ratings for terminology after negative feedback, a criterion that can be attributed to accuracy in translation. (298)

The effect of positive and negative feedback on students may differ from responses to feedback in an interpreting class in that the student who has just received a correction on the part of the lecturer often has to continue interpreting immediately afterwards (either another speech or the rest of the previous exercise), with very little time to process the feedback which will have an immediate effect on their self-perception.

Whereas translation students have more time to learn from their mistakes, and to internalise new information received in the form of revision, in order to improve the quality of their work (Mellinger 2018), in interpreter education feedback and revision need to be tackled carefully, bearing in mind the psychological state of the student, and whether criticism is doing more harm than good, especially in novice interpreters. Finding the right equilibrium between constructively correcting the students and encouraging them is no easy task, especially when practicing an emotionally-contingent task as is interpreting, requiring immediate stress management.

Interpreting lecturers have traditionally tackled the need to withstand stress in various manners: it could be that the time-old tough love approach (i.e. stressing the students in order to help them withstand future stressful situations)—which is still used by many, albeit in "short but targeted doses" (Setton and Dawrant 2016, 218)—could arguably still have its benefits for specific drills, though this remains to be proven empirically. It seems, though, that when Setton and Dawrant (2016, 218) speak of short doses they are perhaps tacitly implying that longer-term doses of the tough love approach could be counterproductive and perhaps affect the students' self-esteem negatively in the longer term.

The tough love approach in interpreting differs from the regular transmissionist approach (when teaching any other subject, such as translation or maths) in that it is based on the premise that the stress experienced in classroom drills or in an interpreting exam situation will prepare the interpreting student for the stress in a real-life interpreting situation (Korpal 2016), in a sort of incremental exposure to stress, similar to methods used by medical doctors in producing incremental tolerance to allergies, for example. The consequences of this practice, positive or negative in the students' character and self-esteem in the long run, and in generations of interpreters, remain to be studied; it could very well be that it worked on the toughest survivors, but perhaps not on those who quit in the process or who were never given the opportunity to interpret because they were filtered out in early stages of training.

Though the fact that such filtering has been taking place would make sense intuitively, pursuing empirical proof of how the tough love approach affects students would have research ethics implications, as one cannot stress the students with the sole objective of proving a point, especially when different personality traits may yield different learning outcomes at different moments in time. Studying how other stress-prone professions deal with the teaching and learning of stress management may give us hints in the light of coping strategies explained by Bontempo and Napier (2009), although the ethical implications of preselecting students using personal information other than marks in previous studies may also pose ethical problems, especially in a public institution. Adapting the objectives according to the student population, especially in undergraduate courses where relatively young students of both translation and interpreting share the same class in the early stages of interpreter education may be a constructive manner of using information about character differences. Indeed, what works with one student may not work with another, or what elicits good results one day may not do so at another point of the learning curve with the same class, or in the following school year. As Lehr explains, emotional competences have been seen in general either as a personality trait, or as a type of intelligence (Lehr 2020). If emotional competences are indeed traits, some can be worked on, but not all:

> Debates on the status of emotional competences as intelligence or trait have given birth to a tripartite model, which tries to capture all aspects of emotional competence and posits three levels: knowledge, abilities and traits (Mikolajczak et al., 2009). The knowledge level refers to the complexity and breadth of knowledge about emotions; for example, our knowledge about which emotion regulation strategies exist and how efficient they are. The ability level of emotional competence refers to the ability to apply such knowledge in an emotional situation and to implement a given strategy. It focuses on what people are able to do. Finally, the trait level of the tripartite model refers to people's tendencies to behave in a certain way in emotional situations (304).

Lehr suggests that both emotion regulation strategies and a theoretical background (knowledge) on how emotions work could be important in translator education (305). Pioneer interpreters, who either learned on the job without training, or survived early methods and drills, and the transmissionist approach on the part of experienced colleagues (Kaminker and Tall Leibrich 1955), may have done so drawing from inner strengths, such as intrinsic motivation, or personality traits such as grit, or even processes developed in adversity such as resilience, though again this supposition cannot be empirically proven.

In order to achieve an equilibrium in the use of positive and negative feedback, a lecturer might, for example, forgo terminological accuracy at the beginning of the academic year and focus on a given student's self-assuredness; give individual feedback in tutorials and not in front of the class in specific cases; or insist in correcting time and again, for one week, one specific aspect in all the students, such as *décalage*, using visual signs while they are interpreting in the booth. Correcting in general, avoiding reference to a specific student, is a safe approach in the first few weeks, while the lecturer is getting to know the students and does not yet appraise the tolerance each of them has to positive and negative feedback.

Indeed, surprisingly, some students feel uncomfortable receiving positive feedback for lack of habit, lack of self-worth, or even in fear of jealousy on the part of their peers, among other possible reasons (Domínguez Araújo 2019). Perhaps lecturers, depending on the context and the idiosyncrasies of the group of students in question, may wish to make students aware of what skills they are working on with each approach, so that if there are any external factors that may be affecting their motivation—such as family problems or previous trauma—they themselves can be aware of what is happening in their learning process, and why, in order to minimise the negative impact of excessive stress by feedback.

1.3 Ethical stress in the information era

Stress can take many forms. Translators and interpreters may experience "ethical stress," a term used by experts in occupational stress in fields related to healthcare and social work, which Séverine Hubscher-Davidson (2021) treats in depth in her chapter on ethical stress in translation and interpreting. She first conceptualises and then defines ethical stress, as follows:

> [...] existential psychology emphasises the need to be true to oneself and to take responsibility for decisions made (Taylor 2007, 91). Ethics-related stress has been formally defined as an occupational stress "resulting from disparities in the ethical values and expected behaviour of employees" (DeTienne, Agle, Phillips, and Ingerson 2012, 377–378). Put simply, when one's values and actions are at odds, this creates a specific kind of stress which can lead to dissatisfaction or even to leaving one's employment. (416–17)

As she explains, ethical stress occurs when the alignment between values and actions is compromised (417). These constructs are of special interest to this dissertation in that, contrariwise, ethical motivation can occur when values and actions *do* align in a given job or assignment, perhaps leading to the opposite of the consequences mentioned above, when a student's values and beliefs align with job requirements or specific tasks. Perhaps enhancing ethical motivation can lead, in turn, to ethical decision-making and, in the line of the study by Lehr (2020) on positive feedback, to enhanced creativity in translation and interpreting education.

Jiqing Dong and Graham Turner (2016, 97) examine the situation of public service interpreting in the UK from the point of view of ergonomics, describing a disheartening landscape despite the growing professionalisation of interpreting, as the externalisation of interpreting services has led to institutional resort to the use of agencies which, for the most part, do not take into account human factors and thus contribute to ethical stress among interpreters:

> The pursuit of higher quality service in the PSI field has little to do with respect for knowledge or a shared "service ethic" (Wilensky 1964) shaped through years of professional training. Rather, it comes as a result of the bureaucratic measurement and external monitoring, which force interpreters to behave in a manner considered professional. This professionalisation process of PSI is therefore initiated "from above" rather than "from within" (Evetts

> 2011), signalling a shift of work sovereignty from individual interpreters to the organisational (agency) managers. (98)

Dire conditions as explored by Dong and Turner (2016, 98) which apply to many Western countries, including Spain, are a reality that has to be tackled in the interpreting classroom by exploring translator and interpreter's rights as workers; as a role-play situation, in the form of ethical dilemmas; the writing of theoretical essays after reading on the topic, or visiting the field, for example, in order to prepare students for the cognitive dissonance they will encounter in real-life situations. Whether students are training in conference or public service interpreting, they can be made aware of the unethical practices that exist in the profession and be ready to recognise predatory behaviour, such as the devaluation of services (Dong and Turner 2016).

Globalisation has provoked many drawbacks in the translation and interpreting sector, in parallel to the advantages of its professionalisation (97), but also, on a more optimistic note, many opportunities for diversification and growth. Translators and interpreters are placed in a position to mediate between cultures and worldviews, or to take on new job descriptions emanating from the technologies that make the world so much smaller, and larger to the point that our profession cannot be understood without technology (Torres del Rey 2022, 153). In interpreter education, it is now easier to hear the voices coming from different countries, such as China, or more inclusive ethical traditions developed in parallel for many years, such as sign-language interpreting (Espada-Chavarria et al. 2023). Researchers can learn about a great number of approaches from other fields that are applicable to interpreter education. Open access publications may be of help in the elimination of social barriers.

Remote interpreting, which for many years was only used anecdotically (Riccardi, Marinuzzi, and Zecchin 1998; Moser-Mercer 2005; Mouzourakis 2006), became the norm for many months during the COVID lockdowns. Danuta Przepiórkowska (2021, 137) carried out a survey in Poland to study the reaction to simultaneous interpreters after the pandemic. The results in her paper entitled "Adapt or perish" are surprising: 88% thought remote interpreting would still be used after the pandemic; 58% offered that option to clients; out of 132 participants, a little more than half of the respondents were open to the regular use of remote interpreting and responded positively, whereas 32% felt forced to perform in remote, and still did so, while only 22% refused to accept it (Przepiórkowska 2021).

Similarly, in interpreter education, different studies have reviewed ways in which lecturers are adapting to online learning (see, for example Hubscher-Davison and Devaux 2021; Mazzei and Aibo 2022; Yan and Fan 2022; Ferri, Grifoni, and Guzzo 2020; as well as the first attempts to teach interpreting online Gracia García 2005). Neagu and Georgescu (2020) briefly explain the advantages and disadvantages of ICTs in the teaching and learning of interpreting. The ergonomic implications of remote interpreting and online learning include health issues such as the quality of sound, and the tackling of problems emanating from distance or solitude, which also belong to the domain of deontology and the rights of workers to a healthy environment.

Other than essential health requirements, many of the implications of online interpreter education are shared with online education in other fields, such as computer engineering or localisation. Jesús Torres del Rey (2022) mentions that new technologies such as machine translation, augmented reality, or artificial intelligence will impact "the practices and experiences of cross cultural and cross-language communication, often providing useful applications and new concepts such as multimodal video sentiment analysis, image or subtitle generation, and automatic signed language translation" (2022, 178). The technology that is already changing interpreting practice includes "speech to-text (and speech-to-text-to-speech) translation, image-guided translation, and video-guided translation" (178). The present and future impact of these technologies on interpreting and on interpreter education, remains to be seen, however. The use of new technologies must benefit ecological and, therefore, human needs (179). In the words of Kiraly,

> The next step beyond social constructivism, in my view, is into the realm of 'complexity thinking,' from the ecological cosmology of Fritjof Capra (1997) to the fractal world of Benoît Mandelbrot (1983) and from enaction (Maturana and Varela 1980) to emergence (Clay et al. 2009). (Kiraly 2017)

This ecological transition, which could include the democratisation of cognitive technologies that "assist, augments or simulate cognitive processes or that can be used for the achievement of cognitive aims" (Ienca 2018, 1), may have an effect on the cultural evolution of humans (Ienca 2018). On the other hand, situatedness and embodiment (Risku 2010) can perhaps be thought of as specific knowledge that only humans can contribute to the environment. Monzó-Nebot (2023) applies the ethic of care to machine translation, revealing hidden risks in the androcentric and universalist conception of new technologies in the age of artificial intelligence:

> From a care ethics perspective, our journey to the automation of translation and the substitution of human translators has failed societies as regards attentiveness, responsibility, competence, responsiveness, and plurality. Remedies taken so far have shown good will, but require extensive improvement. If the first goals of MT were clearly satisfied with uncaring translation outputs, its expansion to virtually every single area of human experience has been burdened by its origins. (Monzó-Nebot 2023)

The use of new technologies in interpreting, with all their faults, have at times suffered from the prejudice of an inherited ethos; first regarding the quality of sound in emerging technologies—even after those technologies reached acceptable levels of quality—but also when speaking of the simple digitisation of tools and materials for training, among other issues. Technology, can—and already is—being used for undemocratic purposes, when it falls in the wrong hands. That is why scholars in the field of cognitive technology such as Marcello Ienca (2018) insist that

> it is the responsibility of technology governance bodies to align the future of cognitive technology with democratic principles [...] an approach to the democratization of cognitive technologies based on six normative ethical principles: avoidance of centralized control, openness, transparency, inclusiveness, user-centeredness and convergence. (267)

These principles very much coincide with those of the Open Learning Model presented by Pekka Himanen (2001) in his ethical approach to the field of information technologies based on the hacker ethic, which we will mention in the following chapter. In interpreting, this emancipatory approach to the use of new technologies has been applied by authors such as Córdova-Hernández, Vásquez Jiménez, and Velasco García (2022) when adapting free software computer programs and other tools to the teaching and learning of interpreting from and into indigenous languages in the Mexican region of Oaxaca.

1.4 Towards emancipatory retour interpreter education

Languages spoken by minorities and indigenous peoples throughout the world disappear when they are not used by the administration, or in educational and cultural contexts; the right to use one's own language in court through an interpreter, for example, is one way the translation and interpreting community may be key to the preservation of these languages (Córdova-Hernández, Vásquez Jiménez, and Velasco García 2022). In settings such as public services, the use of interpreting from and into a second language has been a regular practice, but in conference interpreting in the West, the use of retour has been curtailed, as it has been in the classroom, for historical and political reasons (Brander de la Iglesia and Opdenhoff 2014; Brander de la Iglesia 2019).

The preservation of minority languages, and the importance of a variety of settings in which interpreting must take place both ways—into A and into B—in order to ensure the rights and obligations of all citizens, are only two of the reasons for the need for the practice of retour interpreting to be reevaluated in our field of study. Matthias Apfelthaler (2020) summarises the different traditions in translation and interpreting directionality in his overview of the latest research trends. As he puts it, after years of focusing on prescriptive viewpoints, the study of retour has moved onto a more empirical direction, in order to challenge prescriptive beliefs:

> Research on directionality started out as an almost separate sphere where many of the concepts and criteria from mainstream translation and interpreting research were curiously absent and prescriptive statements reigned supreme. Today, driven by empiricism, it has adopted a much more descriptive discourse, albeit often with a somewhat emancipatory message, to ensure that non-native translation and interpreting—and their protagonists—receive the objective, fair treatment they deserve. (156)

In the classroom and in professional life, retour interpreting education can be emancipatory in several ways, for the users of the interpretation, for the professionals providing it, and for the interpreters-to-be: dispelling prescriptive beliefs about the quality of retour, its difficulty, and stress is, in itself, an emancipatory exercise in critical thought.

Some prescriptive statements may have been true when they were created (AIIC 1979, 69); by way of example, more than half a century ago, it may have been the case that the language level of many interpreters was not good enough to provide decent quality when interpreting into B (71), and so that it was preferable to use it only as a linguistic exercise (Skunke 1977). Similarly, depending on the language combination, it could have been true that two decades ago, the level of English B of students of translation and interpreting in Spain may have been different to what it is now, although one can only speculate, and find ways to include such comparisons in future research.

A good level of the second language seems to be, nevertheless, the main logical prerequisite when trying to perform retour interpreting. It would follow, logically, that any empirical study on retour performance, on the product and its quality should, first and foremost, state the level of B-language proficiency of the subjects involved. The fact that Setton and Dawrant (2016, 217) provide a clear set of guidelines for lecturers wishing to include retour interpreting in the curriculum is a clue pointing to the fact that this practice has been taking place for years in the interpreting market (Opdenhoff 2011), as well as in the classroom, despite prescriptive traditions.

Another clue pointing to the sustained interest in the opportunities offered by the practice of retour, in the market and in teaching, is the proliferation of research attempting to find empirical evidence concerning common assumptions about various forms of production quality (including linguistic expertise, such as explicitation, lexical availability, etc.), as well as stress and anxiety when performing in retour.

Ewa Gumul (2017) found that the use of explicitation is more frequent when students interpret into a B language. She then investigated, among other issues, whether there is a relationship between stress and directionality, showing that student interpreters use strategies of economy of expression in order to cope with growing stress, as the students in her study reported more stress when performing retour (Gumul 2021). Similarly, Rosiers, Eyckmans, and Bauwens (2011, 64) found that when performing a sight translation at the beginning of their training, students of translation were more anxious when speaking into their B language than students of interpreting, even if the quality of production was similar. They point to the fact that the way these students perceive themselves, and not their character traits, affects their anxiety.

These recent findings on stress and anxiety in the process of retour interpreting in students match results pertaining to the study of production in professional interpreters in retour, for example, on the quality and strategic choices made (Doubalová 2019). In her study, Jana Doubalová looks at the decision-making and problem-solving of experienced interpreters performing retour interpreting of legal speeches—although the small number of interpreters in the study (7), the variety of language levels, and knowledge of specialised legal terminology make it difficult to generalise her results. Her analysis of the production of the interpreters shows that the strategies used vary with directionality, and also that the level of difficulty of the speech must be taken into account, as directionality was not significant when interpreting the least challenging speeches.

Jeanne Disdero-Lee (2019) looks at the comments her students made in the framework of Gile's efforts model in her small-scale case study featuring five novice simultaneous interpreting students performing retour. The students had done consecutive into B in the previous year of their studies and stated, for example, that the lack of lexical availability in their B language caused them to make mistakes. The study does not yet, however, bear in mind whether these students learned to solve these problems in their retour in simultaneous by the end of the year, after more practice, although the author intends to replicate the study. Thus, it seems the further study of the perception of difficulty on the part of students performing retour interpreting, along a period of time and at the end of their studies, could be a telling factor to understand differences between learning to interpret in retour and into the mother tongue, as we will see in further chapters.

Still, the way students perceive the difficulty of retour interpreting may be influenced not only by the speech itself, but also by other factors such as: their language level; their intrinsic motivation to perform at that moment; the fact that retour interpreting is increasingly used (Opdenhoff 2011; Pokorn and Južnič 2021) and therefore might be perceived as useful for their future professional careers; or by the inherited understanding of what has traditionally been considered a difficult exercise in some schools of thought in interpreting, to the point of neglect. As Matthias Apfelthaler (2020) indicates, the evolution of the status of retour interpreting in the profession, in training, and in research, has brought to light ethical implications which will need to be addressed if research into retour interpreting is to move beyond prescriptive statements, and towards a more empirical and emancipatory approach.

The treatment of ethical issues in interpreter education in general has also evolved; from a transmissionist approach in the prescriptive teaching of deontological codes to the newest trends featured in recent literature on ethics in translation and interpreting (Koskinen and Pokorn 2021). In the next section we will not deal with the former, though normative solutions are indeed an essential part of the profession that students need to get acquainted with as well (Valero Garcés and Martin 2008, see, for example; Angelelli 2008), and although normative and ethical approaches do not have clear limits but combined perspectives in which one or the other prevails (Etxeberria 2013). We will focus instead only on the latter and, more specifically, on the most recent literature on ethics in interpreter education, as seen from the perspective of feminist ethics.

1.5 The caring turn: Ethics in interpreter education from a feminist perspective

> Whether we speak of situated cognition (Risku 2002), translation in situation (Vienne 1994), or problem-based learning (Inoue 2005), a task or concept model is inauthentic to the extent that it ignores the ethical dimension. (Washbourne 2013, 35)

Kelly Wasbourne provides an overview of—mostly Anglophone—studies in ethics that can be applied to the teaching of ethics in translation and interpreting. He proposes alternative frameworks and perspectives to that of the traditional transmissionist approach to ethics in our field (45), and speaks of the "hidden curriculum" (Hafferty 2010) to explain that sometimes tacit ethical teaching takes place in the classroom which "erodes ethical commitments by secretly transmitting, or self-replicating a culture of narrower, self-interested, less empathetic interests and perspectives" (Washbourne 2013, 37).

One alternative perspective to the traditional transmissionist approach to ethics is the more empathetic framework presented by feminist ethics and, in particular, the ethics of care. Although Washbourne mentions Simone de Beauvoir and feminist ethicists such as Nel Noddings in his paper, he does not address an ethical perspective towards gender in the teaching and learning of translation, nor did most authors a decade or more ago, including scholars treating the subject of ethics in translation and interpreting.

Ethical contributions in our field encompassing both translation and interpreting studies, are as of late presenting frameworks that include or are at least open to, other perspectives such as: moral development, applied ethics, feminist or LGBT aspects (see, for example, Basalamah 2021; Hubscher-Davidson 2021; Lehr 2020; Pöllabauer and Topolovec 2021; Tryuk 2021), with some of them applying their findings to translator education (Pacheco Aguilar and Dizdar 2021). It may be probably up to feminist translation scholars such as Emek Ergun to push this agenda forward:

> Together, these theories emphasize the urgency of developing an intersectional, transnational, decolonial, and interconnectionist ethical framework of feminist

> translation with a revised conceptualization of borders, inter/subjectivity, and solidarity. That is, third wave feminist translation scholars have claimed a broader political and ethical agenda of social justice on a transnational platform. (Ergun 2021, 125)

Whereas the field of translation has included gender studies for longer (Simon 1996; Flotow 1997), has created a tradition of feminist perspectives (Flotow and Kamal 2020; Ergun 2021)—and even started to think about reflecting it in historical accounts (Vidal Claramonte 2018)—interpreting studies has only begun to publish varied contributions that could be classified within gender studies applied to interpreting (Vázquez Fernández 2019; Du 2020); from the earliest context-driven contributions on interpreting for midwives during childbirth using sign-language interpreting (Bramwell, Harrington, and Harris 2000), to empirical approaches such as the study of hedging and connective markers used by male and female interpreters (Magnifico and Defrancq 2020), or the study of gender in diplomatic interpreting in China (Ma 2022).

Gender in interpreting education has been treated in the specific context of training interpreters for migrant women who have suffered gender violence or are victims of human trafficking (Pozo Triviño et al. 2014; Marey Castro and Triviño 2020). In Australia, feminist education has been introduced in the interpreting curriculum (Norma and Garcia-Caro 2016). In their paper, Caroline Norma and Olga García-Caro (2016) explain that, in the context of gender violence, the interpreter is required to forgo impartiality and stand by the victim:

> Social work theorist Audrey Mullender (1996) argues that, in allowing little room for "social commitment" and for change to be made to professional practice, interpreter codes of ethics actually "collude with continued harm to women and children" (p. 170). Mullender alternatively recommends that victim safety and self-interest should be placed above interpreter "neutrality." She notes that a lack of knowledge of what violence against women really involves leads professionals to "completely fail to recognise what danger they place a women in by their failure to stand by her" (p. 173). (9)

If the interpreter conveys the voice of the social worker, including her ethical choices, when the social worker chooses humanity over impartiality, so does the interpreter. While transmitting the social worker's message, she is as well impersonating her voice; not just in her choice of a soothing tone, but also transmitting her feminist education, her eye contact or lack thereof, her manners, and her choice of words, conveying in every form possible that she is there to help the victim. Placing the victim's safety above all else could arguably be the case in other contexts, and in interpreting for other professions where the human factor or the humanitarian ethics dictated by a given context surpasses deontological codes of interpreting. Indeed, in much the same way as international law supersedes local norms, humanitarian ethics or—arguably—the universalisation of certain moral values (such as preserving a child from harm) would prevail over less fundamental codes of practice (legally and morally).

If the interpreter's priority lies in being faithful to the concepts of ethics and justice, as opposed to following prevailing codes, she could sometimes adopt the ethical norms of other professions, depending on the specific needs and the ethical stance required, in so far as she is conveying the message as if she were that person and in that context her role requires it. Similarly, Robin Dean (2015) explains that sometimes sign-language interpreters may have to make assumptions about what the users need and intend in order to convey them, and explains the importance of knowing how to put shared values as moral principles before codes of practice:

> SL interpreters do not have to *take a side* (and ally with the deaf person or be a member of the professional team). Instead, they can be aligned with the justice-based values inherent in social institutions. Practitioners can understand how their practice decisions either are or should be informed by the values of that setting (e.g. patient safety, informed consent) just as these are informing the decisions of the other practitioners. This will allow for interdisciplinary ethical dialogue and the identification of shareable ideals. According to many in the field of moral psychology, this type of collaborative, principled-reasoning is the most advanced form. (262)

Also with the user's best interest at hand, and inspired from ethical approaches in applied ethics to the medical profession, Graham Turner and Brett Best (2017) use the distinction between "defensive" interpreting and "expository" interpreting:

> The premise of defensive interpreting is that by prioritising practitioner self-interest, the best interests of the clients are necessarily subordinated. The common 'do no harm' refrain is directed toward the avoidance of harm to the interpreter's comfort or reputation while regard for potential harm to consumers is secondary. Expository interpreting, on the other hand, is what

> professionals are obliged to strive for by putting clients' best interest before their own. (116)

The simplicity of this distinction makes its application in interpreter education more interesting and adaptable in almost any didactic situation, real-life example or case study, by frankly asking students whose best interest is at hand, and starting the conversation from an externalist viewpoint borrowed from medical ethics. According to Beauchamp (2003), this would be a bottom-up approach based on finding solutions for ethical practice, not on a set of rules that have to be fulfilled (top-down). This kind of approach may help start conversations about ethical issues in interpreter training. Beauchamp, however, as did Rawls before him, argues for the use of "coherentism", or reflective equilibrium, in applied ethics, understood as: "reflective testing of moral principles, theoretical postulates and other moral beliefs to make them as coherent as possible" (11). Coherentism is a way to look at research in ethics in which considered judgements—such as the wrongness of racial discrimination, sexism, violence against women, or terrorism, to name a few—are adjusted in order to create more general paradigms:

> The goal of reflective equilibrium is to match, prune, and adjust considered judgements in order to render them coherent with the premises of our most general moral commitments. We start with sound judgements of moral rightness and wrongness, and then construct a more general and more specific account that is consistent with these paradigm judgements, rendering them as coherent as possible. We then test the resultant action-guides to see if they yield inconsistent results. If so, we readjust these guides or give them up and renew the process. We can never assume complete stable equilibrium, so the pruning and adjusting can be expected to occur continually. (11)

In a recent seminal conference, Carol Gilligan spoke to students of nursing about her life work, her book *In a Different Voice* (1982), and how, being trained as a psychologist, she became a scholar of feminist ethics, creating a theory called the *ethics of care*. She explains that what she considers her groundbreaking work, the work for which she was most attacked as a feminist, is posterior to the book she became famous for; this was her work with adolescent girls in a school, which showed that the moral development of girls is different to that of boys, when earlier psychologists such as Kohlberg (1969) had come to regard the moral development of women and girls as inferior. In her words, which are worthwhile quoting in full, she observes:

> what psychologists had called development—you know, milestones on the road to rationality, autonomy, and maturity—was in fact an initiation that forced, in the name of rationality, autonomy, and maturity, a separation of the mind from the body, thoughts from emotions, and the self from relationships, that is, the privileged masculine qualities from the kind of idealised, but devalued, feminine qualities. [...] As Damásio says, "the separation of thought from emotion, once considered the *sine qua non* of rationality, is in fact the manifestation of brain injury or trauma" [...] so psychologists had been reading, basically mistaking trauma—an initiation which had some of the hallmarks of trauma—rewriting history, loss of voice, and memory, with [moral] development. I mean, this was astonishing! And like a healthy body resists infection, a healthy psyche resists the loss of those capacities [...] essential to our ability to survive and thrive. So girls were resisting an initiation that would compromise their relational capacity [...] in the name of morality and, in other words, that resistance was a healthy resistance to a loss that was both psychologically and politically costly. (Gilligan 2022, 1:14:30)

When ethics is absent in the curriculum, having the students—mostly young women—prepare and then work in the interpreting lab on speeches such as this one by Carol Gilligan can be a starting point for enriching discussions in two languages, interpreted or not, regarding feminist ethical approaches to the profession. Themes can range from how girls and women's moral development has been studied, to the idea that interpreting has been seen traditionally from a cognitive viewpoint as separated from emotion (Lehr 2020), and how this is starting to change; topics can involve the students' continuing education and how these theories affect their approach to self-practice, their motivation during their studies and beyond, situatedness in interpreting, etc. Has the dire separation of cognition and social approaches to interpreting research been a result of a sexist worldview in psychological research? Is it now being addressed, and how?

Including feminist, anti-racist, anti-aporophobic, and even ecological ethical aspects in the ethical curriculum and in the interpreting class is a way to introduce ethical aspects at the core of the teaching and learning process. The lecturer can speak of climate change, but also practice ecology in the classroom at every level, and promote volunteer interpreting for NGOs, etc. Applying feminist education in our field of study would include a variety of ethical choices on the part of the lecturer; from the use of gender inclusive language (Monzó-Nebot 2021b), for instance, to including materials with videos of women of colour as speakers, instead of the traditional institutional recordings which are dominated by white males; providing essays by female authors from less privileged backgrounds, and quoting female and queer researchers whenever possible. As Monzó-Nebot (2023) explains in depth when applying care ethics to the field of translation and interpreting:

> Care ethics expands how we think about right and wrong by claiming that we should be sensitive to the differences caused by social classifiers. It requires us to acknowledge that societies stratify groups by unequally distributing privilege and oppression, and to be empathetic in understanding that these group inequalities translate into different affordances and possibilities to obtain cooperation from others. All in all, we need to accept that the social power each and everyone has to live our lives is contingent to an existential luck of being born to specific social groups. (Monzó-Nebot 2023)

On the one hand, mass social movements such as Me Too have brought feminism to its fourth wave, affecting society, and especially the student population, which is composed mostly of women in our field of study (Du 2020). On the other, it seems gender has been taken into account in many other fields much sooner than in interpreting and in interpreter education. The same occurs in academia in some countries; in Spain, universities are applying new laws on equality in university at very different speeds. Some universities in Catalonia have finished their fourth equality plan—meaning they are implementing more equality measures, and much faster—, while others, such as the University of Salamanca, are still working on the second plan, where the gender gap shows differences in promotion and, therefore, in wages (Massó Lago, Golías Pérez, and Nogueira Domínguez 2022). Unfortunately, this shows that some workplaces are kept in the second wave of feminism and therefore back in the twentieth century by the powers that be, despite attempts by trade unions in negotiating committees to speed up the needed reforms.

While the younger generation of students have been comfortably riding the fourth wave of feminism—the speeches they prepare show to what point they are aware of these issues—, university staff could arguably still be living in the second wave in many educational contexts; the stages in equality plans and the amount of research done from a feminist perspective in interpreting and in interpreter training may bear witness to this fact.

The technological and feminist revolution of the fourth wave has not yet reached the practice of conference interpreting either, despite the feminisation of the profession. In the literature, no conscious effort has been made to include feminist ethics in the way we think and talk about ethics in the profession, nor of moving past the transmission of codes of practice to a more critical, metaethical approach (Marzocchi 2017, 219). Insisting on the separation of conference interpreting from other modalities when it comes to ethical aspects, Carlo Marzocchi (2017) revealingly points out that interpreting has not yet reached post-industrial status when it comes to seeing ethics in the profession from a sociological approach. Beauchamp (2003) defined as internalism, or ethical aspects of the profession treated solely from within, the fact that professionals themselves think of the best interest of all those belonging to that professional community.

In this sense, it could be argued that interpreting as a profession has not even reached the first wave of feminism, when in some countries a simple code of practice seems to be of more value than, for example, a gender violence victim's wellbeing and her basic human rights as defined by international law (Norma and Garcia-Caro 2016). For as long as women have to fight for their basic human rights and their right to be heard, the first wave cannot give way to the second.

Arguably, even though the interpreter may be bound by different cultural, ethical, and legal norms to those of the other actors in a given context, for as long as she has to convey the speaker's message to another, or transmit another's message to them, she will also be interpreting the ethical underpinnings of the actors involved, and must therefore understand their ethical stances in depth. Thus, when one of the actors involved has had their human rights curtailed, such as in cases of gender violence or human trafficking, the victim's wellbeing prevails above any other ethical aspect; the minimum common denominator becomes the defence of basic human rights, regardless of the country where the interpreting situation takes place or status of the actors involved. The interpreter, as a mature, ethically-developed person capable of critical thought can be free to make these ethical choices, and trained, accordingly, to understand them.

In the next chapter we will use a feminist perspective in order to travel from the field of applied ethics to the professions to the field of motivation in education. In doing so, we will explore educational ethical constructs such as perception of interest, perception of usefulness, and perception of difficulty, linked to concepts such as self-efficacy, from feminist viewpoints. By looking at feminist ethical and motivational constructs shared by both fields, we will endeavour to better understand ethical motivation, as well as the values and beliefs provided by approaches such as the ethics of care and technofeminism.

Chapter 2

Theoretical framework: Ethical and motivational foundations

2.1 The caring hacker: Feminist hacker ethics as a coherentist approach to ethical education

> The hacker ethic is an ancient creed. It goes something like this. Since information really longs to be free, and since the quest for knowledge should not be inhibited by passwords or protection schemes, it's okay if you intrude, lurk, look—but don't touch. Mature hackers have always worried about the kidz with no ethics at all. These kidz usually hit ethical puberty. (St. Jude, Sirius, and Nagel 1995)

Jude Milhon (aka St. Jude) was among the first recognised female white-hat hackers in history (Halvorson 2020, 211). She was known for having founded Cipherpunks, an organisation dedicated to fight corruption, and also for having pioneered the defence of the female sexual revolution on the male-dominated Internet (with the motto "Girls need modems!") although she did not write specifically on the subject of feminism (211). Milhon was followed by many others, from pioneer female hacker Natasha Grigori, who founded ACPO (AntiChildPorn.org), an organisation which outlived her and is still fighting against child pornography on the Internet (Adam 2005, 143), to younger feminist hackers such as Tennisha Martin, founder of #BlackGirlsHack, or the female and queer hackers of the organisation

FemHack, based in Montreal. Thus, to the ethical quandaries about information sharing of the early hackers are now added issues of the science of the artificial from a feminist perspective (Adam 2008). Lucy Suchman explains that feminist approaches such as cyberfeminism have multiplied in science and technology studies (Suchman 2008), following the works of Donna Haraway on situated knowledge in her *Cyborg Manifesto* (1991), and of Judy Wajcman 2004, who coined the term *TechnoFeminism*. The latest academic works include studies on human and non-human nature (Haraway 2016), and the volume edited by Cornelia Sollfrank *The Beautiful Warriors: Technofeminist Practice in the 21st Century* with novel approaches to ecofeminism (Sollfrank 2020).

At first many women were reticent to use technology that had been created by men and for men (Turkle 1988, 37), and most hackers, as well as the first academic authors to have published about the hacker ethic (Taylor 1967), were male. Journalist Steven Levy (1984) first named what until then had been the tacit ethos of a new profession in his book *Hackers: Heroes of the Computer Revolution*, and philosopher Pekka Himanen, in *The Hacker Ethic and the Spirit of the Information Age* (2001), offered an applied ethics take on the hacker ethic as a virtue ethics approach in reaction to the Protestant work ethic (Weber [1905] 2001). Himanen's perspective gave the hacker ethic added scholarly respectability, although the general public still understands the hacker to be a cyberspace pirate of sorts, confusing them with black-hat crackers, who steal code as a challenge or for monetary purposes or simply destroy computer systems lacking an ethically-driven purpose.

The word hacker refers to a person who is usually a computer engineer, or has learnt to code software to a professional level, and shares the code in the spirit of freedom of information with other similarly computer-savvy people (Plante 2017). White-hat hackers also typically access information that has been purposedly hidden from the public and which they consider should ethically belong to everyone, or which they believe needs to be exposed as illegal. Hackers do their work challenged by what they call passion or enthusiasm for their work (Himanen 2001), which can be described as an extreme form of motivation. The basic tenets of the hacker ethic are passion, freedom of information, caring, and creativity. Himanen underlines the importance of caring as a fundamental aspect of ethical behaviour:

> there is a third important hacker expression of caring, opposed to our time's survival tendency. That is the direct caring about those who are on the edge of survival. [...] people can direct resources from the egoistic economy toward those who are exploited by it [...] The logic of the network and the computer alienate us from direct caring, which is the beginning of all ethical behavior. We need more of the kind of thinking about the peculiar challenges of caring in the information age that some hackers represent. We will do well not to expect these thoughts to come from corporations or governments. Historically, such entities have not been sources of new ethical thinking; instead, fundamental changes have been initiated by some individuals who care. (134)

Caring in the hacker ethic translates itself also in the freedom to learn, and in its approach to education, the Open Learning Model. The early work on the hacker ethic, though written by men and from an androcentric perspective, constitutes an emancipatory pillar in that its main objective is freedom of knowledge and access to technology for all. In this respect, the hacker ethic, created from within a profession dealing with new technologies, does not only apply to hackers or professional computer engineers but to anyone creating content on the Internet or learning to use these technologies.

In the previous chapter, we have used the general framework of applied ethics to the professions presented by Beauchamp (2003) to distinguish internalism (ethical proposals from within a given profession), and externalism, or the study of ethics coming from a perspective outside the profession, such as general applied ethics, feminism, law, religion, or ethical approaches imported from other professions (5). We have also explained bottom-up models arising from specific cases—eg., after many agonising cases, euthanasia is now becoming more morally permissible (8)—and top-down models, such as applying professional deontology in translation and interpreting (Camayd-Freixas 2008). Mixed internalism and externalism, in Beauchamp' view, precludes cross-cultural values such as universal human rights, which is the reason why he proposes reflective equilibrium, or coherentism (Beauchamp 2003, 8), also defined in the previous chapter, where principles and beliefs are tested in a reflective manner.

A clear example in order to better understand coherentism is the ethics of organ transplantation, whereby many factors are taken into account, not just the main two: 1. expected years of survival of the patient, 2. time on the waiting list—which would not be coherent as they may eliminate each other—but also other ethical considerations, such as the urgency of the case, discrimination against the elderly, and fair schemes for allocation of monetary resources (Beauchamp 2003, 11).

Similarly, Monzó-Nebot (2023, 127) explains, using game theory, that ethical decisions from an androcentric perspective can leave out or discriminate against the most vulnerable. She distinguishes two types of ethical decision-making in game theory, Nash equilibrium, and perfect equilibrium:

> in the former, the game outcome is not necessarily the best possible outcome for all players. It only requires for each player to choose the best strategy for themselves considering the strategies of the other players. In a perfect equilibrium, the game outcome is the best possible outcome for all players and every player plays their optimal strategy. (130)

Indeed, what we think is the best possible outcome sometimes depends on prejudice or perspective, on the decision-maker's empathy, or on the simple act of consulting, or not, all the parties involved, but also on the deontological, ethical or metaethical approach. In the previous chapter we also explained the basic difference between prescriptive deontology based on professional codes, and ethics, or the study of morality (Etxeberria 2002). The third level, metaethics, could in turn be described as the way we think about ethics from a critical perspective (Darwall 2003). In the ethics of teaching as a profession (Martínez Navarro 2010), these three levels are of special interest to the educational process: first, we have a responsibility to teach professional ethics to future translators and interpreters; second, in order to do this ethically as members of the teaching profession, we have a responsibility to have a dialogue about how the study of this morality has come to be; third, from a metaethical viewpoint on the context in which the teaching and learning of this ethical thought takes place, there is the responsibility of improving and developing this ethical thought in a critical manner.

> When a teacher works conscientiously, perhaps very hard, to help her students to succeed, we often give her moral credit for caring. She seems to know what her students need, and acts faithfully on those beliefs. However, these are assumed needs, rather than expressed needs, and these teachers are often remembered as saying, 'Some day you'll thank me for this!' I have called such teachers 'virtue carers,' contrasting their mode of teaching with that of 'relational carers': they do not establish caring relations or engage in 'caring-for' as described in care ethics. As a result, their efforts to care often misfire, and the students who most need to be part of a caring relation suffer most. Care ethics emphasises the difference between assumed needs and expressed needs. [...] 'The relation in education is one of pure dialogue' (Buber, 1965, p. 98). (Noddings 2012, 773)

In this chapter we will first endeavour to better understand the relationship between the educational dialogue of care and ethical motivation. We will travel from ethics to motivation; first, we will explore the common areas of values and beliefs imbued in the ethic of care and its newest forms, such as techno-feminism, an ecological approach based on the hacker ethic (Toupin 2020), which shares many of its values: "feminist hacking entails a combination of technical competence, feminist principles, and socio-political engagement" (Sollfrank 2020, 10).

Then, through the study of these values and beliefs we will conceptualise ethical motivation in education as a practice that can be improved, where asking the students about their perceived interest and the perceived usefulness of a given task constitutes an essential part of the caring dialogue (Noddings 2012, 773). Perceived interest and perceived usefulness become motivational variables dependent on those values and beliefs that can be studied and worked on, in the spirit of the ethic of care.

Finally, we will see how negative perceptions of difficulty affect the ethical motivation equation, from a feminist perspective. Indeed, self-efficacy is also a belief (Jiménez Ivars, Catalayud, and Ruiz i Forés 2014), as is ethical efficacy (Washbourne 2013), and past experiences, empathy and emotions play a key role in education that has often been overlooked (Lehr 2020).

St. Jude's tongue-in-cheek quote at the start of this chapter (St. Jude, Sirius, and Nagel 1995) emphasized pioneer hackers' fear of learners touching the code, and thus the necessity of discussing the ethical issues arising from the use of novel technology with younger members of a then-new profession. She hinted at the fact that young professionals will eventually grow, and will also experience moral development. This way of looking at ethical education affected women more specifically because their access to technologies was actively discouraged, as was physically touching the computers (Adam et al. 2006). In contrast, new approaches to technofeminism call for the female touch: a hands-on approach to technology, with an emphasis on empowering and facilitating women's access to hardware and software around the world, as well as awareness of emotion and the scope of embodied technology, including the education in what could be called, from a metaethical perspective, asymmetries of consent, in which new technologies now play a key role (Sollfrank 2020).

2.2 From feminist ethics to ethical motivation in education: The freedom to care

> There is some, albeit still slender, evidence of the emergence of a different ethic among female hackers, one where political activism is to the fore and where explicit stances and actions are taken on topics such as child pornography rather than holding to an ideal of freedom of speech at all cost. This ethic combines an ethic of care from feminist ethics of care [...] There may be few of them, but they have the knowledge and control of technology that is central to the appeal of cyberfeminism. They are subversive, in that they use hacking for political end through "hacktivism," and at the same time they are unwilling to accept at face value the libertarian approaches of traditional hacker ethics toward equality and freedom of information. Art and aesthetics, even playfulness are combined with political activism, Care ethics is present but brought into the public sphere rather than remaining in the private sphere of mothering. (Adam 2008, 615)

In her chapter, Alison Adam provides criticism to several approaches to research into gender in the field of computer ethics. She criticises some methodologies used until then to compare ethical decisions taken by women and men (see also Woodcock and Murugesan 2006, in that they treat gender as a unitary variable and are therefore prone to fall into essentialist stereotypes; see Adam 2008, 600). This author tries to find out what feminist ethics can contribute to the ethics of information technology that goes beyond studies focusing on the low numbers of women in IT and how to solve the problem through education and encouragement. She argues that focusing on how to increase the number of women fails to change the deeper structural problems, as if women themselves, and not the power issues in androcentric institutions and professions, were to be blamed for their not choosing an overwhelmingly male profession where they feel they are not welcome and cannot be promoted equally.

Adam (2008, 608) then goes on to explore the links and differences between the hacker ethic and the ethic of care, namely the hacker ethic's claims to egalitarianism in Levy (1984). Adam warns that "care- and justice-based approaches may be complementary and we may be in danger of polarizing men's and women's experiences by emphasizing the differences between the two approaches" (Adam

2008, 592). Finally, she advocates for the construction of new approaches to ethics in which both the ethical care and the hacker ethic are put into practice:

> Feminist ethics is practical in its intent; therefore, all the difficulties apart, the best way of making at least a beginning to an alternative feminist technoscience or cyberfeminist ethics is by constructing an example where a masculine approach to hacking may be revisited and reshaped by an ethic based, at least partly, on the new politically inspired feminism. (Adam 2008, 613)

It could be argued that the construction of the new approaches Adam encourages in her chapter belong to a very specific group of women, and men, who at that point were inspiring the fourth wave of feminism (Schiffrin, Koc-Michalska, and Ferrier 2023). In the same volume as Adam (2008), however, the following chapter by Canellopoulou-Bottis and Himma (2008) thoroughly explores the digital divide from an ethical perspective, a situation that has not improved as much as it could have in developing countries, especially with regards to women (Trauth 2006; Trauth and Quesenberry 2023). It is noteworthy to observe that feminist ethics issues have been long separated from issues pertaining to the ethical implications of bridging the digital gap in the developing world. Much like in the axes of the multiple Social Forums (where the main political and social actors got together, belonging, among other political groups, to environmental, feminist and digital democracy activism) there has been great advancement in considering both feminist and technological aspects as cutting across all manners of political and social action for development.

The transversal nature of feminism and the digital gap has been reflected, in turn, in social movement theory, which has evolved in the last decade in its ethical approach to feminist ideals (Yulia 2010; Roth 2021). The values of social movements such as the World Social Forum, which include the feminist movement, the environmental movement, and hacktivism, among others, have evolved, as have ethical perspectives on the interactions between these values, and of the transversal nature of ethics and didactics. Indeed, feminist ethics is not solely a women's issue; it could be argued it includes men insofar as the power structures of patriarchy have been created by men and could therefore be brought down more easily with their unmitigated involvement. Feminist ethics belongs to humanity, as do the values of the fourth wave of feminism it shares, such as the use of technology, which is far from having reached women in developing countries with all its implications.

Technofeminism of the fourth wave is based both on the values of the hacker ethic and the values of the ethic of care, although the hacker ethic started out as a virtue ethics and the ethic of care was born as an interpersonal ethic. Both have developed towards each other's values: the hacker ethic has matured from its beginnings as an androcentric professional ethic arising against the Protestant work ethic of industrialisation, towards a more philosophical post-industrial approach including ecology, and the ethics of artificial intelligence; while the ethic of care has left the realm of motherhood, of the home, and of the private life, to lead a collective, emancipatory, and educational effort with its LGTBQ sisters and their coresponsible partners.

Such simplified generalisation of how these approaches to ethics have matured comes from the literature written by academics in the West, and cannot be applied globally to the practical day-to day sphere, for the reason that values vary according to the culture (Inglehart 2018). The Inglehart-Welzel World Cultural Map (Haerpfer et al. 2022) shows that values vary in different parts of the world. These authors classify values by groups of countries in the following manner: African-Islamic, Confucian, Catholic, English-speaking, Latin American, Orthodox European, Protestant, and West & South Asia. On the horizontal axis countries are shown according to their values (to the left, countries where survival values are still predominant, and towards the right, more sophisticated self-expression values). On the vertical axis of the Inglehart-Welzel map countries are shown from the most traditional, at the bottom, to the most secular in their values at the top. Thus, a hacktivist may have Confucian values and beliefs, and a feminist may have African-Islamic values and beliefs, for example.

In a field like translation and interpreting, where professionals can come from any country and may speak any language, and therefore understand at least two different groups of values and beliefs depending on their language combination, professionals must learn to navigate not only from and into different languages but also from and into separate worldviews, bridging values and beliefs, and helping people understand otherness and bring renewal through other viewpoints (Monzó-Nebot and Wallace 2020a). In this day and age, industrial ethical codes based on

Western values of the 1950s will have to evolve and be renewed, or members of the profession will endure cognitive dissonance or ethical stress (Hubscher-Davidson 2021) when their own values clash with those of their workplace (Sheneman 2016; Monzó-Nebot 2021a).

As the field of translation and interpreting becomes more and more technified, values based on industrial economies will have to give way to post-industrial and post-materialist models, as has occurred in other professions (Monzó-Nebot 2019; Monzó-Nebot and Wallace 2020b). The future of translation and interpreting is undoubtedly technological, with its advantages and disadvantages. If well used, new technologies could bring about the emancipation advocated by both the ethic of care and the hacker ethic. The figure of the "cyborg" (Haraway 1991), a hybrid between human and machine, precursor of cyber feminism, does not look now as futuristic as it may have been when it was first created:

> In Haraway's hands, the cyborg works as an ironic political myth initially for the 1980s but stretching into and finding its full force in the next decade and beyond, a blurring, transgression, and deliberate confusion of boundaries of the self, a concern with what makes us human and how we define humanity. In our reliance on spectacles, hearing aids, heart pacemakers, dentures, dental crowns, artificial joints, not to mention computers, faxes, modems, and networks, we are all cyborgs, "fabricated hybrids of machine and organism." For Haraway, the cyborg is to be a creature of a postgendered world. The boundary between human and machine has been thoroughly breached. (Adam 2008, 611)

The reality of many professions, however, clashes with both hacktivist and cyberfeminist theories. In her paper, Monzó-Nebot (2023) applies "a care-ethics lens searching for a realistic equilibrium in automating translation" (127) and discusses the disadvantages of this technology, namely that it is contributing to the oppression of minorised peoples and languages, that machine translation is contributing to the dehumanising and deskilling of translation, therefore impacting the wellbeing of professionals, and contributing to gender and racial bias, among other factors. Arguably, translators and interpreters adapting to this new technological era may adopt some of the values and beliefs that technofeminists have applied from the ethic of care. As Eva Turner (2006) explained, at a time when the subject of ethics was only starting to emerge in the profession of computer studies:

> Technology is only useful if it helps to improve the position of those who use it and thus feel an ownership of it. It should exist to empower those whose power is socially suppressed (Everts, 1998; Rathgeber & Adera, 2000; Taylor, 2002). Questions of access to computer technology for women all over the world whether for education, business, information, or leisure are an issue of equal opportunities, power, and democracy for women. We talk of virtual democracy, global village, information age, globalisation, global communication, etc, all concepts loaded with socially based meanings in which women have "globally" little representation precisely because of their exclusion from access to creation and uses of ICT. (1144)

In her chapter, Turner proposes an inclusive curriculum, mindful of gender, when including ethics in computer studies. This author advocates teaching about equal pay and breaking the glass ceiling but, in her proposal, the changes are not just programmatic, and in her own classroom: she puts forwards deeper, structural issues, within university departments, including teacher training and measures aiming to change the status quo of women in the institutions where computer ethics is taught. What Turner described as creating an "atmosphere of acceptance" (2006, 1145) where women would feel comfortable as students, lecturers, and future professionals, and men would receive ethical training in the spirit of the ethic of care, is a tacit description of the cognitive dissonance between androcentric values and beliefs taught in the classroom, and personal values of female computer engineers two decades ago.

Indeed, the values and beliefs taught in a classroom will prepare future professionals to tackle ethical dilemmas once they start working. These values and beliefs, whether tacit or part of the official curriculum, may clash with those of society, with the students' personal values, or with those still prevailing the profession. According to self-determination theory, cognitive dissonance occurs when the values and beliefs of a worker clash with the values of the profession (Ryan 2023). Arguably, cognitive dissonance can be anticipated and counteracted, ethical stress being the negative counterpart of ethical motivation.

As we will see in the next section, this motivational theory can also work contrariwise: the lecturer can observe the values and beliefs of the students, or those of society, and adapt them to teaching, to research, and to the practice of the profession. Lecturers can select exercises and activities that match students' values and beliefs, and introduce other viewpoints subsequently, if necessary. Applied to technofeminism, certain values and beliefs may motivate girls and women to pursue more challenging paths, while others may lead to them never reaching their potential. From this standpoint, ethical values and beliefs become motivational; they are the inspiration, the motor bolstering and maintaining the spin in Kiraly's spirals.

2.3 Ethical motivation in education

> Care theorists and character educators agree that the way to a better world is more likely to depend on better people than on better principles [...]. Neither group scorns fine principles, but history suggests that the prescriptive use of principles has not been effective. [...] Similarly, neither group rejects the use of reason or an education that helps people to use reason well, although care theorists may put greater emphasis on critical thinking (Thayer-Bacon, 2000). However, neither group believes that reason alone can motivate moral action. Highly educated people, well trained in the arts and skills of reasoning, have performed demonstrably immoral acts. (Noddings 2002, 1)

Ethicist Nel Noddings was a pioneer in applying the work of Carol Gilligan (1982) on women's moral development, firstly, to the field of ethics and, more crucially, to the field of education. Gilligan, as a psychologist, came upon the realisation that the moral experiences of women were not being taken into account and that their moral development focused on different outcomes to that of men in moral dilemmas. Together with the emotional aspect, Noddings accords importance to the development of values and beliefs in learning not just as a transmission of ethical knowledge such as rules, codes, or religion, but as the nurturing of moral development of students (Noddings 2002, 8). In her view, making students more aware of their feelings makes them pay more attention in class, as learning becomes more attractive, and moral motivation is improved. This is best summarised in her dictum: "To act morally, we have to be moved; we have to feel something" (153). Throughout her book this author underlines that the education of affect is essential to moral development, a process she calls "cultivating the moral sentiments" (153).

Psychologists such as Rest (1984) and Narvaez and Lapsley (2013) had started exploring moral motivation as "the ability to prioritise moral values relative to other values" (Rest and Narváez 1994, 23). As Schulman explains, from the point of view of positive psychology:

> motivational theories explain behavior in terms of some benefit or reinforcement to the individual doing the behaving. But morality is about getting reinforced by some benefit to another. Therefore, a theory of moral motivation has to account for the sources of this capacity to be reinforced by beneficial outcomes to others—an unusual challenge. Correspondingly, a theory of moral education has to figure out how to strengthen this capacity

> so that individuals become truly concerned about the well-being of others [...]. This, too, is challenging because traditional motivational research has been focused much more on how already-established reinforcers (like food, money, and praise) strengthen behavior than on how to go about strengthening reinforcers. (Schulman 2002, 499)

What Schulman puts in clear perspective is the conundrum psychologists from different branches of that field (cognitive, social learning, etc.), as well as philosophers, ethicists, and experts in education have tried to map, separately, for decades: the relationship between ethics and motivation. Firstly, from the field of psychology, academics have tried to understand the way values and beliefs move humans to act one way or another—whether based on empathy and emotional states, on models of virtue, or on moral principles. From the point of view of ethics, however, the study of the boundaries between ethics and motivation have traditionally focused on the stages of development of values and principles, as well as on studying the dilemmas and moral decisions to be made when different moral systems clash. Finally, when looking at motivation from the field of education, experts wonder how empathy, values, and beliefs, in the form of highly motivational constructs, can be used to improve the learning process. The expression "ethical motivation" as defined in the introduction of this dissertation, was coined by psychologist Darcia Narváez (Narváez and Lies 2009), who added the educational level to previous psychological approaches where the use of values and beliefs to improve motivation had not been specifically dealt with when trying to elicit moral development. The fact that moral motivation emanates from three different basic sources—empathy, principles, and affiliations—may indeed mean, as put by Schulman, that consciences are critical to our survival (Schulman 2002, 501). This author compares the existence of three sources of moral motivation to the fact that nature provides extra organs, such as a second kidney, just in case one is damaged, when these are crucial for the survival of the species.

It could be suggested, perhaps, if we look at the relationship of those three sources of motivation from a care ethics perspective, that all three are necessary after all, because each source may mould different types of moral characters which, like people of all kinds (men, women, non-binary, young, old, etc.), complement and influence each other. To this purpose Noddings advocates for a recipe where values are discussed in critical thinking, and the teacher adds a sprinkling of empathy:

> It is not surprising that educators have so often tried to avoid arousing emotions. Many have become afraid even to discuss values, and those who do engage in such discussion try hard to avoid indoctrination. There are good reasons why educators turned to the so-called cognitive approaches to moral education, and today there is increasing emphasis on critical thinking. But my claim here is that critical thinking needs a starting point in both character and feeling, and most episodes of critical thinking should be liberally sprinkled with turning points—points at which the thinker reaches toward the living other with feeling that responds to the other's condition. (Noddings 2002, 42)

In many professions such as teaching where the caring factor is essential, people use emotions, moral values, and beliefs to bring about change and motivate learning. The key to mapping ethical motivation and its potential educational uses may lie in the interaction between its many components, but also in the ethics of teaching and in the metaethics of the teaching context, from creating an atmosphere of trust and openness, to finding out how to encourage positive emotions and perceptions, boosting self-esteem, improving perceptions of interest and usefulness, or exploring the relationship to perceptions of difficulty, among other factors.

Thus, in motivation theory, positive motivation in learning—whether global, contextual or situational—appears after the three basic needs are satisfied: the feeling of mastery (also called competence, or self-efficacy), relatedness, as a feeling of support from the group, and autonomy, or sense of control in the task at hand (Stolk, Gross, and Zastavker 2021, 2). From a care ethic perspective, this last basic need could perhaps be called "empowerment." Stolk, Gross, and Zastavker (2021) explain that engagement in classroom activities may change over time, that gender differences exist—in perceptions of self-efficacy and of altruistic or egalitarian values, for example—and that there are multiple types of motivations, which are not mutually exclusive, but are of a dynamic nature:

> Positive forms of motivation, such as value- or interest-based drive, are linked to deeper learning approaches, better performance, and outcomes such as critical thinking, pro-social behavior, and self regulation (Deci and Ryan 2000; Gagné 2003; Pintrich 1999; Pintrich and De Groot 1990). By contrast,

> less positive motivations, such as reward-based drive, relate to surface-level learning, poorer performance and persistence, and negative emotions (Black and Deci 2000; Deci and Ryan 2000). (Stolk, Gross, and Zastavker 2021, 2)

In the field of motivational theory in education, a branch of educational psychology, the word value and the word belief acquire additional meaning and significance as part of that deeper, positive form of motivation teachers strive for, as we will see next.

2.3.1 Values in education: Defining perceived interest as a deductive construct

> Departing from that functionalist view, where values are seen as universal, my own take in the matter characterizes such values as contingent (Monzó Nebot, 2002, pp. 67, 69, 73), adopting a critical stance where the idealization of the group's identity can be channeled to advance its interests. Values may even be seen as manipulation in rituals, as verbal cues disguising the lack of an essential professional orientation of some occupations (Martín Moreno & de Miguel, 1982, p. 62). If we take an instrumental perspective on values, it may be wise to enact, as a group, the values that can gain cultural authority within specific social and cultural contexts. That would require (1) knowing what those values are, (2) exploring our contribution to those values, (3) ensuring the association of TI with those values, and (4) being alert as to changing conditions. (Monzó-Nebot 2019, 48)

Values are contingent in that they can be changed for others—or fostered, like ethical awareness in students, and discussed or improved when they take the form of prescriptive rules or norms—but necessarily present at the same time, whether in one form or another (as in the quip attributed to Groucho Marx (1983) 2006, "these are my principles; if you don't like them, I have others"). In fact, when values are artificially taken out of the equation, whether we are speaking of a profession, or in education, they remain tacit and have influence nevertheless (Setton 2003, 42). At times values can be shared and may overlap with those of other cultures, yet at other times values are at the opposite end of the spectrum even within one's own culture (for example, women from the same community may have different stances on the subject of abortion).

Elliot, Dweck, and Yeager (2017a), when speaking of mastery or competence, explain that achievement motivation "is ubiquitous in everyday life, it has important influence on emotion and well-being, it is operative and integral throughout the lifespan, and it is relevant to individuals across cultures" (3). For these authors, motivation elicited from feelings of competence is universal; it happens to all humans, but it is contingent in that it is only one of three basic needs to be satisfied, together with relatedness and autonomy, as explained in section 2.3.

In the same way, some people's ethical motivation emanates not from values, but mainly from empathy or affiliation to certain beliefs, but the three sources of moral encouragement are usually present in some measure or other (Schulman 2002, 501) and may show that different character traits or personalities extract ethical motivation from different sources. Applied to interpreting, a student's ethical motivation may come mainly or in part from feelings of empathy towards the speaker; from finding shared values in a speech; from identifying herself as belonging to the same cultural group as a speaker; from volunteering with her fellow interpreters; from the institutional context, or from several of these sources.

Arguably, in the information era, increased communication and exchange by globalisation should see a drift in values, although perhaps not towards the universalisation of a dominant culture's ethical thought (such as Protestant values), but quite the opposite, towards polarisation: on the one hand, postindustrial values would thrive, such as "human choice, individual freedom and autonomy, creativity, the questioning of authority, and increased action tendencies in operating a mass responsive democracy, one that serves all its members, not only the privileged, that caters to the needs of vulnerable" (Monzó-Nebot 2019, 49) and, on the other, renewed rejection of otherness, negative moral contagion and manipulation through the use of new technologies would increase (Inglehart 2018; Brady, Crockett, and Bavel 2019).

Ethical use of technologies is paramount in the times that come; and the precursors of the hacker ethic and the open learning model have reflected on such issues; the principles they defend include the postindustrial values quoted above by (Monzó-Nebot 2019, 49). Today, cyberethics is inseparable from cyberfeminism; Sollfrank (2020), for example, brings together, in technofeminism, both in theory and practice—as an academic, an artist and a female hacker—the different ethical and political movements born from, or in response to, ecofeminism (an early form of anti-technological feminism), cyberfeminism, the ethic of care, and the hacker ethic. Technofeminists react to prevailing androcentric ethical thought in a critical manner:

> what all of these new transgressive, intersectional, and integrative movements have in common is an attitude of care or concern. In many ways, they are caring, worrying, ready to take responsibility, anchored in the here and now, and on the lookout for new types of relations. While searching for answers to global and local problems, engaging in scientific research, and devising technological solutions, this attitude of care contributes to the establishment of a new form of knowledge, a knowledge that rejects objectivization and is interested not only in observations and representations but also in transformations. (Sollfrank 2020, 8)

When taking decisions about careers in science, technology, engineering, and mathematics (STEM), women have been found to subscribe more readily to communal goals than their male counterparts (Diekman and Steinberg 2013). Altruistic values and egalitarian interests are at the core of what girls are reported to be more interested in, and "belief in the altruistic value of science predicted interest in science" (Weisgram and Bigler 2006). If ethical values are at the heart of girls' and boys' interests, separating those values from the way they learn will bring about what experts in psychology call cognitive dissonance, ethical stress (Hubscher-Davidson 2021), or clash of values between the inner ethical world of the person and the outside world they work in, in this case, the school they attend. This is reminiscent of what Gilligan (1982) called dissociation:

> While our research provided evidence of girls' resistance to dissociation, it also documented the initiation of girls into the psychological divisions that are familiar to many women: the coming not to know what one knows, the difficulty in hearing or listening to one's voice, the disconnection between mind and body, thoughts and feelings, and the use of one's voice to cover rather than to convey one's inner world, so that relationships no longer provide channels for exploring the connections between one's inner life and the world of others. (11)

Technology, if not created for everyone in mind, or if used unethically, can bring about cognitive dissonance when it affects or clashes with the values of the students or lecturers, whether in school, in university, or in the professional workplace of translators and interpreters, where lack of understanding of well-being and ergonomics may prevail and therefore toxicity and negative emotions arise. Lehr (2020) distinguishes four groups of emotional sources for translators:

> the text that is translated, performance assessments, the translator's working conditions and the translator's personal well-being. Emotion-eliciting stimuli during the translation process can be not only actually occurring stimuli but also remembered or imagined stimuli, such as past experiences or worry about potential positive or negative outcomes of one's actions" (299).

In the previous chapter, we looked at a transcript of a speech by Gilligan where she describes the forced initiation undergone by girls by separating thought from emotion in the name of moral development, "an initiation which had some of the hallmarks of trauma" (Gilligan 2022, 1:14:30). Thus, the fact that girls were not learning "well," or not in the same way as boys, or not with as much interest in topics that had been created for and by men, was in fact "a healthy resistance to a loss that was both psychologically and politically costly" (1:14:30). In her 1982 book, Gilligan explains how just by doing her work of listening she could heard disconnection and dissociation, and not just in women's words but also in men's.

> I saw that by maintaining these ways of seeing and speaking about human lives, men were leaving out women, but women were leaving out themselves. In terms of psychological processes, what for men was a process of separation, for women was a process of dissociation that required the creation of an inner division or psychic split. (Gilligan 1982, 13)

Thus, there was not only a separation of cognition and emotion, but also between the values girls were being taught to have and the values they had in reality, when they were finally speaking out for themselves, when they were given the freedom to speak, and the freedom to care. It is precisely in that empowerment of choice where the link between values and interest is to be found. When we ask students about their perceived interests, we are receiving information about their values. The term value in early studies in motivation was used only when referring to the importance given to a certain need (not to be confused with moral values which, at the time, did not yet enter the equation). This would apply, for example, to basic objects such as food and, also, when basic needs had been covered, to other goals in the environment such as the need for social interaction with other students. Not until much later did researchers start to acknowledge that some animal or human behaviour is sometimes explained by neither biological needs, nor extrinsic motivation, such as rewards or punishments, and psychologists started to focus on intrinsic motivation (Sansone and Harackiewicz 2000b, 2).

Kurt Lewin (1935) had defined the term valence in motivation, meaning that people "will only be motivated when they are interested in or care about the activity or believe it is important to them or their goals" (Meece, Pintrich, and Schunk 2014, 290). Constructs such as motivation, as could be expected, change over the years. Gradually, the term value started to include in its definition an ethical component in the literature on motivation in psychology. In the last decade, the quest for universal values and for the most evolved model of the stages of moral development has given way to talk of shared values and minimal ethics, for example, by agreeing that the majority in a given community are against racism, homophobia, sexism or aporophobia (Cortina Orts 2007; Cortina 2022). The concept of value and its motivational counterpart, interest, in the field of cognition, have evolved to include emotional aspects.

What was traditionally called affect included emotions linked to positive or negative motivation; its components, which can be conscious or unconscious, include "evaluations of novelty, pleasantness, goal compatibility, coping potential, congruency with an individual's ideal self, and conformity to an individual's norms and values" (Lehr 2020, 298). In turn, those emotions can elicit interest, but emotions, as seen in section 2.3, are elicited by a variety of factors, and mapped in different ways from the perspective of different fields.

As we have seen, some authors in the field of ethics (Schulman 2002, 501) consider empathy to be at the heart of emotion, values at the core of principles, and beliefs as precursors of affiliation (belonging to a group where those beliefs are shared). This is not as clear-cut as it seems; the three components affect one another. For example, it has been suggested that "reason is not an alternative to empathy: it needs empathy as a motivator, and empathy needs reason for its motivational force to be properly directed and encompassing" (Persson and Savulescu 2017, 183), and that our moral beliefs may be limiting our capacity for empathy (Fowler, Law, and Gaesser 2021).

Taken a step further, ethical motivation, understood as emotions emanating from values and beliefs that motivate human beings into action, including learning, will serve as a conceptual framework to introduce the constructs of interest and usefulness in interpreter education. One such way to map the relationship between ethical values and beliefs, and motivational interest and usefulness, is to consider ethical values and beliefs as the conceptual equivalents of measurable constructs, calling them perceived interest and perceived usefulness, respectively, in the context of motivation in education. For the purposes of this study, I have chosen a definition of interest as a component of motivation that may increase intrinsically-motivated behaviour:

> interest is one of a set of motives that may result in intrinsically motivated behaviour. Similarly, when one is dealing with motivational orientations, individual interest can be viewed as a specific case of intrinsic motivation. [...] Interest in educational research is conceptualised as a domain-specific motivational variable that can inform us about why some students are motivated to learn specific subject matter over others. (Hidi 2000, 316)

This is still true twenty years later, although intrinsic motivation has developed as a theory, and now includes what psychologists call self-determination theory (Harackiewicz and Knogler 2017). Interest has now been defined also as an emotion, as affect, or as an emotion schema (Renninger, Nieswandt, and Hidi 2015, 81). It is this last construct of interest as an emotion schema that occupies us in this dissertation from the point of view of ethical motivation, because, when understood in this way,

> emotion and cognition are so intertwined and bundled together in the experience that it is difficult to tell where one ends and the other begins. For instance, cognitive appraisals of injustice, illegitimate restraint, and that "things are not what they should be" are so strongly both a cause and consequence of anger that it is difficult to tell the cognition apart from the emotion [...] the cognitive states that are so tightly intertwined with interest are mostly value and topical knowledge (Alexander, 2004; Hidi & Renninger, 2006). When interest is defined as an emotion schema, acquiring value (a sense of importance and personal meaning) in an object, event, idea, or subject matter is a developmental antecedent to high interest. Specifically, developing value and knowledge about the object, event, idea, or subject

> matter enables a shift from situational interest to individual interest (Hidi & Renninger, 2006). (Renninger, Nieswandt, and Hidi 2015, 82)

That is, when our values are important to us, external sources of motivation, or feelings of affiliation give way to intrinsic interest in what we are doing. Dina Verdín (2021) showed that minoritised women's interest in the subject matter of engineering was what motivated them to finish their studies (rather than a feeling of belonging to the group, which they did not have). The minoritised women in the study persisted both because they believed they were competent in the subject and because they were interested, but it was this second construct, seen as an emotional schema, that proved to be more important: "However, interest in engineering demonstrated a greater disposition toward encouraging persistence. The affective and cognitive state of being interested in a domain or discipline should not be neglected; efforts should be made to continue bolstering minoritized women's interest in engineering" (16). Thus, ethical motivation would include aspects present in ethical awareness (such as empathy and moral development of values and beliefs), on the part of the students, but also, metaethically, on the part of the teacher and the institutional context: the teacher could boost ethical motivation by finding ways to bolster the constructs of perceived interest and perceived usefulness, and by making the class aware of ethical and metaethical aspects such as gender bias, for example by making explicit the importance of self-efficacy, the perception of task difficulty in the classroom, or in the creation of an ethical curriculum at the institutional level.

2.3.2 Motivational beliefs and the perception of usefulness in education

> Believing can be a powerful strategy in learning, involving listening receptively, becoming absorbed, fascinated. Receptive listening (attention) is at the heart of caring for human others, but it is also central to hearing the messages from books, art, music and nature. (Noddings 2012, 775)

Here, Noddings explains the ethical relationship between beliefs and motivation in education: beliefs have the power to inspire and make students focus, or listen attentively by bringing about positive emotions. It could be argued that beliefs push us to make choices that may be moral in nature, or that may have ethical consequences we may not foresee as students and teachers. The relationship between beliefs and ethics may also be of special interest to interpreter education in that students of interpreting need to keep their focus to a high degree, while dealing with all the efforts taking place simultaneously when conveying a message into another language. In interpreting, because focusing has such an immediate essential component (Jiménez Ivars and Pinazo Calatayud 2013a)—in that the focusing cannot be done later—motivational beliefs acquire a strategic importance; inducing focus and motivation in a timely manner is of special interest to our field.

Theories of motivation have tried for long to explain what triggers motivation and whether motivation can be increased at will to achieve specific goals (Hidi and Harackiewicz 2000). There exist, as we will see, different types of motivational theories about beliefs, which attempt to explore how beliefs may empower students to care, to listen and, therefore, to focus, persevere and work harder, or, on the contrary, may allow for students to be left behind and not reach their potential, and if there are differences between men and women. As Hanna Eklöf (2021) explains, it is not easy to navigate the literature on motivational constructs, as different theories overlap first in the definitions, and then in the operationalisation of the variables to be studied under different cultural and educational frameworks, and a variety of theoretical approaches (1301). According to this author, the main motivational theories still used in motivational studies in education are: self-determination theory (Ryan 2023), expectancy-value theory (Wigfield and Eccles 1992; Eccles and Wigfield 2020), and self-efficacy/social-cognitive theory (Bandura 1997, 2016). These frameworks created to study human motivation do not exclude one another—in many instances they are complementary—and have been much developed since they first appeared; they have become more comprehensive and detailed, and the conceptualisation of their constructs often overlap or fill each other's voids.

Early theories about motivation were based on cognitive explanations of how intrinsic and extrinsic rewards trigger or undermine motivation, mostly aimed at improving performance (De Groot and Pintrich 1990), whereas the latest updated frameworks portraying human motivation do not focus so much on learning outcomes, but on situatedness in learning, and accept the fact that feelings also play a key role in motivation, as do cross-cultural issues (Bandura 2016; Tonks, Wigfield, and Eccles 2018). Still, the explanations as to how these emotions work in triggering motivation or, on the contrary, in hampering motivational efforts, vary in the different fields and theories. Judith Harackiewicz and Maximilian Knogler (2017), for instance, expand their earlier theories (Sansone and Harackiewicz 2000b) to specifically distinguish emotional aspects, which they call "positive affect" (Harackiewicz and Knogler 2017, 340), as part of what they call a "dual regulation system":

> which assumes both cognitive–rational and implicit–affective control mechanisms to operate and manifest in stable beliefs. Empirical studies confirmed that these two sets of beliefs tend to be highly correlated and that their interaction supports positive outcomes such as self-regulation and performance (O'Keefe & Linnenbrink-Garcia, 2014)" (339)

These authors acknowledge the emotions exist, and that they are important in the motivational equation, but that they are not easy to map.

Similarly, from the point of view of ethics, Timothy Schroeder, Adina L. Roskies, and Shaun Nichols (2010) underline the importance of feelings in moral motivation: "We have no strong claims to make about these feelings, and nothing hangs on this in what follows, but it seems helpful to acknowledge the potential range of feelings that go with motivation" (73). These authors present the various philosophical theories of moral motivation, which "typically presuppose commitments regarding the nature of psychological states such as beliefs, desires, choices, emotions, and so on, together with commitments regarding the functional and causal roles they play"(79), sometimes in a conflicting manner. They then compare such ethical perspectives to the points of view of neuroscience and psychology, by exploring the link between empathy and moral beliefs in "acquired sociopathy." Roskies (2003, 2022) found out that VM patients (patients who had damaged their ventromedial frontal cortex) had retained their moral beliefs but were unable to become motivated by them;

that is, when asked, they would know what was right and wrong according to what they had learnt before their accident, but were unable to take moral decisions as they had before. This only happened when the accident had taken place later in life; when it happened to children, the moral behaviour became much more extreme; the children seemed "to be unable to even learn the moral norms that are unproblematic to the late-damage subjects" (Roskies 2022, 503). Roskies' account of acquired sociopathy provides a relationship between empathy and beliefs: following rules that one learns are socially acceptable is different to acting ethically or to being capable of empathy. Feelings of empathy are also key in motivation, and empathy has a role in the creation of values and beliefs, although sometimes it may be difficult to distinguish between specific emotions such as empathy and certain types of beliefs (Persson and Savulescu 2017; Fowler, Law, and Gaesser 2021). In ethical education for translators and interpreters, the link between the acquisition of ethical skills and the ability to solve ethical dilemmas, or ethical efficacy, has been pointed out by authors such as Kelly Washbourne (2013):

> Tichy et al. (2010: 785) argue for moral reasoning, moral motivation, moral character, and the acquisition of ethical skills: perspective taking, rule orientation, and self-perception as a moral person, the latter of which are schemas psychologists term the moral self-concept and ethicists of care call the ethical ideal (Noddings 2003: 178). Ethical efficacy (Bandura 1991; Mitchell/Palmer 2010) has been theorized as an individual's domain-specific self-perception of his or her ability to resolve, regardless of consequences and through self-regulation of behaviour and motivation, a given ethical issue. (43)

In motivation in education, beliefs are conceptualised as perceptions on the part of the student which influence their learning. Task-specific beliefs include:

> perceptions of competence, perceptions of the difficulty of different tasks, and individuals' goals and self-schema. These social cognitive variables, in turn, are influenced by individuals' perceptions of other peoples' attitudes and expectations for them, by their affective memories, and by their own interpretations of their previous achievement outcomes. (Eccles and Wigfield 2002, 118)

Similar overlapping can be observed in the conceptualisation of self-efficacy, as self-efficacy is also a belief (Jiménez Ivars, Catalayud, and Ruiz i Forés 2014). According to Eklöf (2021), the concepts of self-efficacy and self-concept can sometimes used interchangeably and they both appear in the literature as belonging inside the larger concept of self-beliefs: "Whether they are possible to distinguish empirically is often a question of operationalization and with what level of specificity they are assessed" (1303).

Ethical beliefs and motivational beliefs have a lot in common in the field of education, although in motivation science different authors define and classify beliefs differently. For example, in the broader classification first offered by De Groot and Pintrich (1990, 33), who divided beliefs into three main types: the expectancy component (including self-beliefs), the value component (goals and beliefs about the importance of the task), and the affective component, or emotional reactions to the task at hand. Indeed, in the early literature on motivation, values and beliefs are classified together under the wide umbrella of expectancy-values theories. In self-determination theory there is a distinction between intrinsic motivation, measured as "intrinsic value" (i.e. enjoyment or interest), and extrinsic motivation which was generally called "utility value" (Eccles and Wigfield 2002), including beliefs such as "perception of usefulness" of a given task (Eklöf 2021), as we will see in the next chapter. Still, the boundaries between these constructs are not easily mapped:

> We conceptualize utility value or usefulness in terms of how well a particular task fits into an individual's present or future plans, for instance, taking a math class to fulfill a requirement for a science degree or making one's parents proud. In certain respects, utility value is related to the idea of extrinsic motivation, because when the STV [subjective task value] of a task is primarily linked to its utility value, the activity is a means to an end rather than an end in itself (see Ryan & Deci, 2016). However, the activity also can reflect important goals that the person has come to hold very deeply, such as attaining a certain occupation. In this sense, utility value also connects to personal goals and sense of self, and so has some ties to attainment value. (Eccles and Wigfield 2020, 5)

Eccles and Wigfield (2020) broadly adapt their theory to situatedness and sociocultural views of social beliefs (more present in Bandura 2016; and Tonks, Wigfield, and Eccles 2018, who also include intercultural aspects) in order to develop the concept of cost in the motivational equation as a negative motivational construct. Indeed, the cost of a motivated choice can arguably be higher for women and racialised, or LGTBQ persons: for example in performing badly when being subjected to stereotypes (Lindemann 2019, 46), in losing a job when making an ethical decision, or even in being executed for coming out in certain parts of the world. Gender perspectives in achievement motivation have also been treated by Meece and Agger (2018) and Diekman and Steinberg (2013), who distinguish:

> three ways in which social roles intersect with goal pursuit processes, with particular attention to how communal goals influence STEM pursuits. First, social roles influence goal selection or what goals are prioritized generally and at a particular time. Second, beliefs about social roles can influence the kinds of roles that people shy away from or seek out. Third, occupying a particular social role can actually facilitate or impede goal progress. With regard to STEM pursuits, we demonstrate that communal goals are valued both generally by people and especially by women. (Diekman and Steinberg 2013, 487)

In a world where translation and interpreting is increasingly dependent on technology, and where most of the students are women, creeds such as technofeminism, imbued with communal goals may help dispel, from a critical pedagogical approach, beliefs about women's capacities in the use of technology, and about technology as the panacea. As Lévy (2001) put it:

> technology is responsible for neither our salvation nor our destruction. Always ambivalent, technologies project our emotions, intentions and projects into the material world. The instruments we have built do provide us with power, but since we are collectively responsible, the decision on how to use them is in our hands. (15)

Working on student's self-efficacy, as well as including concepts such as ergonomy and ethical stress in the classroom may arguably prepare translators and interpreters for the real-life work market where helpful, and not so helpful, technologies are being used. Interpreter education involves many actors, and understanding motivation in the metaethical institutional context where lecturers and researchers work is also key to the study of learning processes in their students.

Indeed, teachers also have beliefs about their own competence, among other types of perceptions, which affect their own decisions and the students' perceptions of interest in the subject (Hagen et al. 2022). Taking this stance a step further, Murayama (2018) proposes a metamotivational aspect, by looking at the way we perceive how motivation works in our lives. Metamotivational thought is essential to education and, in turn, affects its ethical counterpart, metaethics: if both students and lecturers become more aware of inaccuracies in the way they perceive motivation they can make ethical choices in the classroom.

2.3.3 Perception of difficulty in education: Towards emancipatory values and beliefs

> Much research shows that students' perceptions of their capabilities relate positively to motivation. Students who feel self-confident about learning and performing well in school seek challenges, expend effort to learn new material, and persist at difficult tasks (Schunk, 1991b). Although interesting, these findings are unrelated to other knowledge about motivation and do not inform teachers about ways to raise student motivation. If we link these findings to any of the several motivation theories that stress the role of perceived capabilities in motivation, then we see how such perceptions fit into a broad motivational framework and have a better idea about what affects perceptions and how they, in turn, influence motivation. (Meece, Pintrich, and Schunk 2014, 7)

Emotions play a key role in the way students and teachers perceive motivational aspects in the classroom; these aspects include beliefs such as self-efficacy, which can be the result of a mix of previous positive and negative experiences and emotions and, in turn, produce a wide range of positive or negative subsequent perceptions, which can induce hope, joy and pride; boredom, stress and anxiety (Boekaerts and Pekrun 2015). Not all emotions can be measured easily, however, especially when performing complex tasks such as simultaneous interpreting.

In what follows, we will focus on studies related to perceptions of difficulty in more general educational tasks which are directly applicable to our field of study, such as work by Benjamin England et al. (2019) on biology courses of first-year university:

> If students anticipate performing poorly on a task, their goal may be to avoid the need to achieve altogether, a phenomenon known as performance avoidance (Elliot and Harackiewicz, 1996). Performance avoidance has been linked to reduced motivation and achievement (Elliot and Church, 1997; Richardson et al., 2012). It may also be worth investigating what classroom emotions were associated with higher perceived difficulty ratings, with the presumption that, instead of anxiety, students may feel a nonactivating emotion such as hopelessness (Pekrun and Stephens, 2010). (9)

In their study, England et al. (2019) found that female students' perception of difficulty was higher than their male counterparts, as was the anxiety they felt in class; they were also more likely to have lower grades, and more likely to leave their studies than their male peers (8). The study concluded that various types of anxiety and perception of difficulty were linked to persistence in the tasks at hand, and also to performance and measures of success, shown by higher levels of anxiety at given times during the academic year. This was particularly true for female students (11).

> Environmental factors that can influence the type of attributions that individuals make are specific information, social norms, and other situational features. Specific information can consist of a teacher's direct attribution to students for their performance. Norms about the difficulty of the task provide information about how others performed. Situational features include the amount of consensus, consistency, and distinctiveness of the cues presented to students that they can use to form attributions for their performances on a task. The personal factors that can influence attributions are causal schemata, attributional biases, prior knowledge, and individual differences. All of these factors concern individuals' cognitions and beliefs about themselves or the task and can influence the attributions made. (Meece, Pintrich, and Schunk 2014, 132)

Attribution theory, as put forward by Weiner (1985, 2010), describes attributions as "perceived causes of outcomes" (Meece, Pintrich, and Schunk 2014, 131), including beliefs about the difficulty of a given task when social norms describe the task as difficult, allowing for biased perceptions about that task. Boekaerts and Pekrun (2015) explain, in their chapter on emotion regulation in academic settings, all the processes that take place around emotions in learning, and the main theories on how emotions affect learning, such as attribution theory and control-value theory—emotions that help achievement flourish when the students feel the task is important and they are in control of the outcome (Pekrun 2018). There are various factors possibly affecting the processes involved in motivation in learning, “including genetic dispositions, gender, early socialization, cognitive appraisals, achievement goals, personality traits (e.g., temperament, achievement motives), and the learning environment (Pekrun and Linnenbrink-Garcia, 2014).” (Boekaerts and Pekrun 2015).

In their chapter, Boekaerts and Pekrun (2015) are generous in the provision of specific solutions to the management of negative emotions in the classroom, as well as of the consequences of frequent assessments and feedback in order to help students self-regulate, for example by means of situation selection, cognitive change, emotional scaffolding, or a variety of coping strategies. As they explain, “the effects of domain-specific beliefs on learning intention, emotions, and actual task performance are mediated by prospective anticipatory appraisals (subjective competence, success expectation, perception of difficulty, personal relevance, and task attraction)” (86); whether these emotions are mostly positive or contrariwise, mostly negative, students and teachers need to be made aware of them in order to work on them when necessary.

In future research, it may also be worth exploring ideas coming, for example, from other fields in the health sector; the latest studies on perceived difficulty when attempting physical tasks such as a hand grip points to the fact that the predictability of task difficulty affects achievement motive:

> If the difficulty of a task was known and fixed, achievement motive strength did not predict effort. However, if the difficulty standard was unknown and unpredictable to participants, achievement motive strength predicted effort. Task characteristics—in particular, the predictability of task difficulty—are thus important factors to consider when using achievement motive strength to predict engagement in various achievement-related tasks. (Richter, Mazeres, and Brinkmann 2021, 15)

Perception of difficulty is thus an influential variable that needs to be explored further in educational tasks in general, and in the teaching of interpreting in particular. Awareness of how the perception of task difficulty affects both male and female students of retour interpreting, and, as a consequence, their users or clients, especially those needing provision in minorised languages, may help develop the future of retour interpreting as an emancipatory practice.

Empowering the students through research, and the communities benefitting from their future insertion in the workplace and in society as responsible citizens, is one of the many objectives of educational action research, understood both as a methodological framework and as a paradigm. In the next chapter, the first of the empirical part, we will focus on the methodological framework and design of the empirical study within the larger framework of action research.

Chapter 3

Methodological framework and design

> By day I volunteered at the local battered women's shelter. At night, I was deep into feminist theory and Habermas. I've written elsewhere about how that juxtaposition brought me to a feminist critique of the early male-stream of participatory action research. The 1970's feminist critiques of traditional social science were largely ignored by the male inner circle of participatory action researchers. Despite an acclaimed commitment to liberation and transformational intentions, PAR [Participatory Action Research] was in danger of becoming one more male monopoly. When you claim to use research to change the world but exclude or marginalize women, and our varied theories, well, what kind of world are you trying to create? We already had that world.
>
> But who was I, "just-a-graduate-student", to see this or say anything? I admired and respected the social justice work of these men. But you see what you see. (Maguire 2021, 3)

As many academics during the COVID pandemic, retired professor Patricia Maguire took on the arduous task of cleaning her home office (1). Maguire, one of the mothers of feminist participatory action research and educational action research (see, for example, Maguire 1987), had moved across the country after her retirement in 2011, away from her work life. She joked "it was like being in witness protection" (Maguire 2021, 5): she had completely repurposed her life, leaving books unfinished, tired from the "administrivia," and burned out from academic life. Aware that her daughters would one day have to throw away all the paper materials they inherited, as they would her old furniture, she started digitising "files, books, presentations notes, Omega 100 Zip discs, and ephemera from thirty plus years of my participatory action research life" (Maguire 2021, 2). Her main concern was that her daughters—one of them "a doctor on the front line of COVID care" (1)—did not think she had ever given up on her life's research.

The result of Maguire's uncluttering endeavours during the pandemic is a website named after her office, *Room 7*, where she shares her life's work in open format (Maguire 2021). *Room 7* contains not only her publications on feminist participatory action research and educational or teacher action research, but most importantly, the backstories of the projects she conducted, where she explains that, regardless of the type of action research used, and in spite of the fact that the main philosophical purpose of any type of action research is emancipation and empowerment, the values of the action research paradigm have seemed, historically, to have not been applied easily to women. In 1997, she attended a congress under the theme of *Convergence*—between different types of action research—but, as she recalls, it should have been called "lack of Congruence" (3); most of the panels and moderators were men, among many other shows of patriarchal attitudes in power structures, a fact which the few women attending were quick to notice:

> The proverbial shit hit the fan. Norma Romm, Susan Weill, Yoland Wadsworth, and many other women spoke up in outrage from the congress floor. Yoland said that the rapid succession of women jumping to their feet and speaking out felt like a relay race, one woman handing off the baton to another. The Congress women would not be quieted. Yoland asked, "Why had our men, of all people, for whom it is their work to assist others to give up colluding with power – so easily themselves colluded?" [. . .] We participatory action researchers were on notice however. If this could happen to us, by us, on the inside, what could we expect out there? It wasn't enough for us to consider how feminisms could inform PAR, we had to confront how male privilege was being reproduced or unsettled in participatory action research. (3)

Scholars such as Maguire (2001), Brydon-Miller, Maguire, and McIntyre (2004), and Reid and Frisby (2008) have relentlessly tried to bridge the existing gaps between action research and feminist research (Jaggar 2015), and have continued to demonstrate, in action, that one thing is to share, on paper, the values of participatory research, and another to actively defend those values, and fight for them as an ethical choice in their research, and in practice.

As an emancipatory paradigm within the social sciences, action research, from its earliest forms (Lewin 1948) in defence of emancipation for the poor, in education as well (Freire [1970] 1996), has slowly incorporated feminist ethical thought (Maguire and Berge 2009), progressing from a mindset where ethical decisions were considered as such only for the allegedly better good, or for the wellbeing of what the patriarchy considered to be the "vast majority of people," towards a feminist worldview where girls, women (Heiskanen et al. 2015; Schneider 2022), and LGBTIQ+, non-binary (Fine and Torre 2019), racial, disabled, and language minorities (Harding 2020) would not be left behind:

> Feminist research makes power relations visible—both in society and in research relationships (Heiskanen et al., 2018)—and highlights the multiple ways gender affects women's and girl's lives. A feminist lens "makes explicit the gendered (therefore embodied) and male dominant nature of all [w]estern institutions and discourses" (Oyěwùmí, 1997, p. 6), including how such norms were "injected" into other sociocultural contexts through imperialism and colonization. [...] A feminist research ethic aims to disrupt social and political structures that create disadvantage and inequalities to promote gender justice (Ackerly and True, 2020). It can challenge what are seen as culturally masculine traits or ways of thinking by instead prioritising values such as interdependence, inclusion, relationships, and reciprocity (O'Reilly, 2020). (Lenette 2022, 102)

In this chapter, I first explore the methodological frameworks, and research methods undertaken in the second part of this dissertation, starting with the paradigmatic and ethical components of action research in its various versions (Ladson-Billings and Tate 2006; Cochran-Smith and Lytle 2009), as a covenant for social change for women and men (Frisby, Maguire, and Reid 2009). Feminist action research gives us a standing point from which to explore common ground with feminist research (Brinton-Lykes and Coquillon 2007) and empirically-informed ethics for the study of ethical motivation (Christen et al. 2014; Narváez and Bock 2014). Understanding the use of action research in education (Mertler 2019) provides the foundations and "conceptual, philosophical and procedural similarities" (Ivankova and Wingo 2018, 1) with which to integrate the mixed methods approach used in the empirical research, described in the second part of the dissertation.

The design of a mixed methods approach chosen in order to study ethical motivation in interpreting, featuring both qualitative and quantitative data gathering, constitutes the main focus of this chapter. The design of the research undertaken is outlined, including its participants and the procedure followed.

In order to gather empirical data on ethical motivation, constructs were operationalised into variables, and specific instruments were chosen in order to measure those constructs for the participants involved (Tomal 2010). First, a questionnaire was selected in order to study representative specific issues, as we will see. Then, open questions were included with the aim of eliciting additional, subjective information on specific issues that the questionnaires could not measure. Finally, focus groups were planned for the purpose of finding intersubjective common ground, thus rounding the planning, action, monitoring, and reflection of the action research spiral designed (Efron and Ravid 2013).

Ethical decisions are present in all the above aspects of the research design: from the choice of object of study and theoretical frameworks, hypotheses and objectives described in previous chapters, to the design of the action plan in the present chapter. Even the choice of methods of data gathering and analysis, and the way we conduct and convey the research itself entails making ethical choices leading to the next fork of paths to be explored.

From the perspective of feminist research, being able to make these choices about our research also implies having been empowered to do so; acquiring the freedom to choose which knowledge we wish to develop as researchers, what we want to understand better, but also what we want our students and the world to learn more about, and which realities we cannot live with, or those we wish to change above all others.

In the next section we will explore feminist action research methodologies as a paradigm for the study of ethics, motivation, and education, which have in common many aspects, not the least of which is the emancipatory nature of occasioning knowledge for social change.

3.1 Feminist action research methodologies as a paradigm for ethical change

> Feminist research, then, is inherently linked to action (O'Neill 2007). Method is understood as performative, not only describing the world, but influencing, producing and interfering with it (see Law and Urry 2004). As researchers then, we are, in Haraway's terms, 'non-innocent' (1997): if method is performative, not only describing the world, but influencing, producing and interfering with it, then it is necessary to consider what type of reality we wish to create or in which ways we wish to create change. How we go about gathering data affects not only the outcome but also, especially in the social sciences, the participants in the research, and society itself. We cannot know how large or small or far-reaching those consequences may be. This view thus shifts the emphasis of method from the outcome to the process, or at least gives equal emphasis to the latter. (O'Reilly 2020, 101)

The method chosen thus informs the research itself, as does the choice of the object of study. In the 1960s, feminist research was considered to focus on the study of women and cultural or symbolical portrayals of the feminine, such as discrimination or violence against women; "some feminist research challenged accepted theories that portrayed women as deficient or inferior to men; some offered new accounts of women's hitherto-unrecognised or -devalued capacities or achievements; some research did all of these at once" (Jaggar 2015, 7).

Feminist research, then, evolved into new ways of interpreting general research while pointing out male bias, as well as rethinking the prevailing systems of knowledge. As Alison Jaggar (2015) underlines, "the subject matter of feminist scholarship has no limits; anything, from anthropology to zoology, may be studied from a feminist perspective" (7). Thus, feminist research does not have a particular object of study; it not always identifies with particular methodologies, nor the theoretical framework of the ethics or care, but it may share similar values and political stances (7):

> [...] feminist research is a tradition of inquiry that seeks knowledge for emancipation. That feminist research has social commitments does not make it unique; most research traditions are motivated by larger social purposes, and their products are rarely if ever value-free. However, feminist research inquiry is unusual in being explicit about its ethical and political stance. (Jaggar 2015, 8)

Wilfred Carr and Stephen Kemmis (1986) identified the main objectives of action research from a philosophical approach: to improve practice, the understanding of practice, and the situation in which the practice takes place. Trying to define action research within "the variety of geographic, cultural, professional, community-based, social, and political contexts in which action research, in all its many forms, is conceived and conducted" (Rowell, Riel, and Polush 2016, 85) is a complex endeavour:

> [...] the "complex history" of action research is due to the broad range of academic fields and social contexts from which action research has emerged, including philosophy (e.g., John Dewey), labor organizing traditions, liberation theology, social psychology (Kurt Lewin), anthropology (Sol Tax), sociology (Orlando Fals Borda), group dynamics (Tavistock Institute), civil rights and social justice struggles (Highlander Center), and organizational change and development, to name the key fields and contexts (p. 11). (86)

From its inception, the plurality of settings, contexts, methodologies, epistemologies and worldview it includes has contributed to enriching the action research paradigm, but has also made it increasingly difficult to define in a static manner (Rowell, Riel, and Polush 2016). Rather, "the forms, purposes, methods and results of action research around the world differ widely" (Hollingsworth 1997, 312), which indicates that the explanations regarding action research are still undergoing evolutionary change.

As a result of its plurality, action research can be understood pragmatically, within each of the domains it explores (i.e., nursing, medicine, social service, education, etc.), but it can also be considered critically, and philosophically:

> In their thinking about action research, the pragmatic orientation has "a focus on praxis and practical knowledge development, cooperation between all concerned parties, and the need for finding and constructing a common ground between them as a platform for action" (p. 100). [...] The critical

> orientation, on the other hand, is more in line with the thinking of Paulo Freire and Foucault; its purpose is emancipatory and calls for the recognition of tensions and conflicting interests. It has a feel of disruption more than one of harmonious collaboration. "To acknowledge such tensions and conflicts through reflective and self-reflective efforts is crucial, as well as giving a voice to unrecognized groups and interests" (p. 105). (Rowell, Riel, and Polush 2016, 86)

Although sometimes presented as separate branches of action research, both pragmatic and critical approaches can be seen as compatible. As a practical way to explore professional and social practices with the aim of understanding and improving them, action research can be thought of as "a 'self-consciously' collaborative, participative, and democratic process and a "multidimensional strategy for social change" (Greenwood & Levin, 2007, p. 1)" (86).

There exist several common characteristics in the literature on action research, one of them being that action research cuts across the theory-practice divide: action research encourages collaborative knowledge-creation, as opposed to the transmission of static knowledge. Applied to education, "the process enhances teachers' professional development through the fostering of their capability as professional knowledge-makers, rather than simply as professional knowledge-users" (Waters-Adams 2006, 3). The researcher chooses action research as a methodology when looking for practical solutions in the individual situation and specific context within which she works (1).

Applying feminist ethics, with its political values, to participatory action research (also referred to as feminist-informed action research) started to be attempted only recently (Maguire 2001; Brabeck and Brabeck 2014), and is no easy task. Firstly, because there is no unifying definition for action research. Secondly, despite the fact that action research and feminist critical research share ethical and political foundations—such as emancipation, empowerment, knowledge democracy, social justice, equality, transformative involvement, the challenging of imbalances, freedom of education—attention to gendered viewpoints in action research was at first neglected (Maguire 1987), and then slowly adapted into what is now called feminist participatory action research (FPAR) (Lenette 2022, 104; Reid and Gillberg 2014).

Researchers who "work at the interface of feminisms, participation, and action embrace a continuous and iterative process or approach to life, an attitude towards being and doing 'in the world' rather than a single research method" (Brinton-Lykes and Coquillon 2007, 298). Thus, the appropriate form of action research will be selected by researchers according to their specific setting, which will share common characteristics with others, and will have its own nuances within the wider paradigm of action research, depending not just on the context but also on the actors and participants involved (298).

Even if the approaches and nomenclatures vary across the action research landscape—systemic action research (Burns 2007), informal action research, education action research (Mertler 2019), critical action research, emancipatory action research (Ledwith 2016), or feminist participatory action research (FPAR), to name a few—the form chosen will depend on the practical and philosophical objectives of each setting. Some of these forms of participatory action research are not incompatible with each other.

> The fundamental concepts and practices that define FPAR include (a) feminisms, (b) participation, (c) action and (d) research. Although FPAR itself cannot lay claim to any one of these concepts, FPAR brings them together into a coherent conceptual framework that is value driven. FPAR is not a rigid model for application but rather a dynamic and evolving framework that is continually shaped by those who are engaged in the work. (Reid and Gillberg 2014, 345)

In educational action research and, importantly, in feminist participatory action research (FPAR), the participants play a key role not just as part of the object of study (Brinton-Lykes and Coquillon 2007, 310), but also as actors "involved in all stages of knowledge production" (Reid and Gillberg 2014, 345). Educational action research is performed by the actors of the professional or social practice under study, in the context in which it takes place. The action is meant to be improved from within; the researcher is not an outsider to the process and the change that is taking place, whether in the classroom, in an NGO, or in other settings. The transformation or social change depends, accordingly, on those actors: on their emotions, their perspectives, and expectations, including values and beliefs as factors conducive to empowerment and emancipation in their motivation for change. As Margaret Ledwith puts it,

> Emancipatory action research (EAR) is about participation: all people involved come together as co-participants in a process of education for critical consciousness that informs action for social change. Co-participants are equals, and this fits well with Freire's notion of co-learners and co-teachers, a spirit of mutuality in which everyone is prepared to teach, listen, and learn. Creating critical spaces for dialogue is important, involving all co-participants in co-creating knowledge for our times. These are counter-hegemonic critical spaces where power relationships are investigated and deconstructed in order to act to reconstruct democratic relations with new possibilities for a world that is fair and just. (Ledwith 2016, 56)

The emancipatory nature of action research is common across its different families and branches (Brinton-Lykes and Coquillon 2007, 298). Waters-Adams suggests that "If reflection on practice involves engaging with intentions, values and beliefs, then strong elements of these will be intensely personal. However, some writers about action research claim that the 'best' (by which they mean the most 'emancipatory') action research is collaborative in nature" (Waters-Adams 2006, 1).

Paradoxically, the emancipatory values and goals, which are a defining characteristic of the earliest approaches pointing towards feminist action research, started to be present relatively late (Brydon-Miller, Maguire, and McIntyre 2004). Second-wave feminist action research sometimes overlooked, in turn, racial and class issues, suggesting that perhaps "despite the best intentions, researchers nonetheless sometimes recapitulate systems of hierarchical power and inequality in their interventions" (Brinton-Lykes and Coquillon 2007, 299).

The late inclusion of feminist issues, together with racial, and class approaches do not constitute the only criticism to action research from a feminist perspective. Toby Epstein-Jayaratne and Abigail Stewart (2015, 44) provide a feminist perspective on methodology by treating epistemological issues, false polarisation, and other specific criticisms to research, such as gender-biased research designs or person-blame explanations (2015, 45). These authors propose "strategies for practical implementation of a feminist perspective in social science research" (57), urging researchers to ask themselves about the impact of the research topic they choose, proposing methods that permit persuasive answers to the target audience, using bias-free procedures, attempting political analysis, and the dissemination of results (2015, 44). Among such strategies, they recommend an inclusive take on the use of research designs combining qualitative and quantitative methods as feminist research tools:

> This approach, termed a "mixed method," has been advocated by numerous authors as a way to offset the disadvantages of one method with the strengths of the other (Denzin, 1978; Healy and Stewart, in press; Kick, 1979). This strategy suggests the value of acquiring knowledge of both methods. Although this combination of methods is not always possible or even practical, it should result in a more powerful research product, that is, one which not only effectively tests theory but is also convincing. (Epstein-Jayaratne and Stewart 2015, 58)

If feminist researchers wish to include such gender-aware mixed methods as a valuable contribution to their wider research community it would be desirable to first enjoy a "paradigm peace" (Bryman 2006; Monzó-Nebot and Wallace 2020a, 21) through the use of mixed methods. Translation and interpreting research would arguably need to move beyond the "methodolatry" (Noddings 1992; Monzó-Nebot and Wallace 2020a, 22) resulting from some of the dire realities of the academic context, as well as traditions in pursuing either empirical or qualitative methods. The fact that, in the past, "practisearchers" had been trained in translation and interpreting but very seldom conducted research (Gile 2015, 2), and that there was a widespread neglect of other viewpoints, may have resulted in reinforcing the "ignorance inherited" (Monzó-Nebot and Wallace 2020a, 19). As Toby Epstein-Jayaratne and Abigail Stewart put it,

> The emphasis here is on using methods which can best answer particular research questions, but always using them in *ways* which are consistent with broad feminist goals and ideology. [...] Procedures commonly used in quantitative research which are inconsistent with feminist values can be altered without abandoning the quantitative strategies which can be beneficial to feminists. Moreover, combining methods, sometimes called "triangulation" (see Denzin, 1978; Sick, 1979), permits researchers to "capture a more complete, holistic, and contextual portrayal" (Sick, p. 603). As Sick points out, "the effectiveness of triangulation rests on the premise that the weakness in each single method will be compensated by the counterbalancing strengths of another" (p. 604). (Epstein-Jayaratne and Stewart 2015, 49)

Mixed methods approaches have been successfully paired with feminist action research (Brinton-Lykes and Coquillon 2007), just as they have been with action research in general (Teddlie and Tashakkori 2009; Efron and Ravid 2013). In the next section we will present the design of a mixed-methods approach in the form of an action research spiral, guided by the values shared by feminist, emancipatory, educational, and participatory approaches to action research, understood as a paradigm.

As O'Reilly (2020) explains in the introductory quote to this section, our plan will not be innocent. It will start with an empirical approach, but it will be interfering with the world at every stage of the participants' learning process, triggering their motivation, while Kiraly's vortices twirl faster, and the action research spiral unfolds. Our research design will try to be the roadmap towards the new changed reality we have chosen to create in the classroom.

3.2 Design of a mixed methods approach for the study of ethical motivation in interpreter education within an action research spiral

> Acknowledging the value of flexibility and diversity in scholarly inquiry is a bold step towards responding, mitigating the forms of ignorance caused by paradigm wars, and embracing the possibilities of qualitative, quantitative, and mixed methods. Reaching a paradigm peace means situating the object (or subject) of inquiry at the center, focusing discussions on the issues that can make us move forward, and situating PSIT on the right track towards achieving the coveted critical mass. (Monzó-Nebot and Wallace 2020a, 8)

In the spirit of what Monzó-Nebot and Wallace (2020a, 8) call "paradigm peace," the design for this study includes a mixed methods approach, within an action research spiral which envelops and concludes the design. This will allow the action plan "to cross boundaries between worldviews and blend (or combine) qualitative and quantitative research methods and techniques into a single study" (Efron and Ravid 2013, 67). In addition, when a teacher takes the ethical, and political, decision to use action research methodologies as a paradigm, they are embracing not just an approach to improve their practice as individual educators, but also a collective educational process which can uncover wider links to be identified and can therefore become messy, requiring fine-tuning after every loop of the spiral (Mertler 2019). As Wilfred Carr and Stephen Kemmis put it,

> the 'objects' of action research – the things that action researchers research and that they aim to improve – are their own educational practices, their understanding of these practices, and the situations in which they practice. Unlike positivist educational researchers, action researchers do not treat these 'objects' as 'phenomena' by analogy with the objects of physical science, as if practices, understandings or social situations were independent of the researcher-practitioner, and determined by universal physical laws. (Carr and Kemmis 1986, 180)

The action research spiral has been designed specifically around the object, hypothesis, and objectives of this study outlined in the introduction. The action research spiral lasted nine years, and took place in a variety of settings (interpreting classes at two universities, and crash courses at Social Forums). Every loop in the spiral contains the basic steps of action research: reflect, plan, act, observe, and then reflect again, before a new loop starts with a revised plan (Lewin 1948; Rector-Aranda 2019). These stages do not take place at the same time; reflection and action may be simultaneous and the process is usually complex to sketch (Schön 1987). Each of the loops begins with a quantitative approach featuring a Likert-scale questionnaire, followed by qualitative open-ended explanations and a focus group, as we will see in the design in the next sections.

This spiral was designed to allow the researcher to understand practice and to subsequently improve it by analysing the situation, solving problems arising from practice, and implementing new ideas (Carr and Kemmis 1986, 180). Stephen Waters-Adams (2006) describes the process as involving "careful monitoring of planned change in practice" where there is a dialogue between the action of the researcher and the intentions behind it, as well as between the elements of the teaching practice, and the values behind the practice (5). Developing teaching practices involves first identifying, and then analysing what can be changed in a given situation, and why, through the use of data gathering rather than intuitive judgements:

> [...] because the act of finding your solution makes you understand your practice better — not only what you are doing, but also the factors that affect what you do. Action research therefore has two aspects. The starting point is to sort out a problem or issue in practice; to this extent an action researcher seeks a solution. But the process can also be used as a deliberate attempt to understand practice better — a traditional research attitude. What is most important in both approaches is that you are open, honest and rigorous. (1)

Thus, the action plan for the spiral (reflection, planning, acting, observing) includes the mixed-methods procedure: the quantitative and the qualitative approaches, and ends with the focus groups in each of the settings involved. In the following sections we will explain the procedure of the mixed-methods study undertaken, which constitutes the main block of our study: choice of participants, forms of data collection, instrumentation, and triangulation. The procedure was the same for the different contexts in which it was undertaken, academic or otherwise, but the settings, participants, and physical facilities were different.

Here, we will describe the general design for all the settings, and we will treat each group of participants separately, when needed, in presenting the results and analysis. Finally, the action research spiral will be unfolded in the form of a description of the procedure for the focus groups. The design of the focus groups varies slightly for each of the different set of participants in the academic and volunteering contexts they took place in, so each of the settings will be treated separately as well, when presenting and analysing results in the next chapter.

3.2.1 Feminist research ethics and the researcher's positionality

For this study we complied with the ethical requirements present at the time in the various different countries and settings, namely on the subject of informed consent, anonymity, and confidentiality (Mellinger and Hanson 2017, 24). Before 2004, in the UK there existed different research ethics committees, and the researchers were given recommendations rather than a list of requirements (Kerrison 2005), which was the environment in which the first two years of this study took place. Despite the fact that this study was designed in 2003, its didactic nature still adheres to the broad ethical requirements of this day and age; informed consent appeared in written format, in the form of a very succinct explanation of the research project at the beginning of each questionnaire, as well as orally before filling in the first questionnaire, and during the videotaped action-research sessions, as did anonymity and confidentiality (see Appendix 1: Questionnaire 1) .

From 2006, the research took place at the University of Salamanca where, at the time, the researcher was expected to take sole responsibility of basic ethical tacit expectations, although specific codes of ethics existed for medical studies or the use of biological material. European laws gave way to other Spanish norms and the creation of ethics committees in Spanish universities such as the University of Salamanca, where there now exists a technical manual specifying general values, steps for experiments with humans, and ethical data management (USAL 2022). The values present in this document—informed consent, anonymity, confidentiality—though more oriented to the hard sciences, are also those put in practice when dealing with volunteer interpreters for this study, that is, preserving the rights, dignity, security and well being of the participants above other considerations such as the obtention of results (24).

This is true especially in the careful treatment of positionality in this study, in the lines of what (Mellinger 2020) explains when conducting participatory research. Whereas in some settings, such as volunteer work, researchers can consider themselves as equal partners in the study with respect to participants, in the educational context of universities, although the students are of age, the intricate hierarchical power structures existing call for extra care when eliciting answers on the part of students in front of the lecturer. The difference in age and, when applicable, gender, between the researcher and the participants should also be taken into account. Thus, the help of graduate students was enlisted for many focus groups, as we will see. There are also other, more tacit, yet essential positionality considerations that should be brought forward, such as gender, among many other common forms of bias in participatory research (Mellinger 2020).

Concerning the ethical treatment of gender, at the time this study was first designed the use of gender as a variable in research was starting to undergo long-needed changes in some parts of the world, while in others it has not yet started. The choice we took at the time was to distinguish between female, male and other. By the time gender issues in research became more widespread in Spain, it was no longer possible to ask previous participants about their gender in an anonymous manner, as the paper questionnaires had been filled in person by the students during classes. For future research, we have left this variable open so that each student can use their preferred gender identification, instead of limiting it to traditional binary options.

Thus, although in this study we use the lens of feminist research in a broad manner, it was not designed from the start as the kind of gender-oriented research where the object of study is related to proving or disproving differences among the sexes. This said, the fact that gender is a variable in the database created will nevertheless allow us to look at general differences more closely in future research.

This study can be considered feminist and emancipatory in a wider philosophical or paradigmatic manner, if we bear in mind different ways to use the feminist lens to look at our object of study as research on gender, but also as research changing the realities of our profession by bearing gender in mind; from the emotional aspects of interpreting, to the treatment of ethical motivation and perception of difficulty, or to a more participatory and feminist way to tackle research topics in general, and motivation in particular, by empowering students in the research process. The feminist prism cuts across research of all sorts, regardless of the object of research, whether researchers are looking for gender-oriented answers or not, whether the participants are women, men, or non-binary (Lenette 2022, 101); feminist research can be a mindset allowing us to look at emotions, motivation, values and beliefs in educational research in ways that have much evolved in the last twenty years.

3.2.2 Participants

For our study we chose a purposeful sample of students of simultaneous interpreting from and into English and Spanish at Heriot-Watt University (HW) during the academic years 2004-05 (students 1 to 11, that is, S1–S11) and 2005–06 (S12–S25). These students were in their fourth year of translation and interpreting studies (S1–6, and S15–25), or were completing an MSc in translation and interpreting (S7–14), at an equivalent interpreting level.

At the University of Salamanca (USAL), from the academic year 2006–07 to the academic year 2013–14 (S26–S110) the students chosen were also fourth-years enrolled in the translation and interpreting degree. The sample is purposeful in that the students were chosen not just because they were being taught by the researcher—which would constitute simply a convenience sample which would be used for statistical purposes (Mellinger and Hanson 2017, 21)—but because they were the target group in the action research spiral, and because they all had the language combination needed to perform interpreting from and into English and Spanish, and were of a similar age and level overall.

In addition, the curriculum of both universities—HW and USAL—included interpreting into their B-language, making both populations ideal for the use of the same training video materials in the study of retour interpreting. Because the groups of students in interpreting classes were small, the study was repeated for nine academic years, in order to be able to have more than one hundred participants, and therefore more meaningful results.

The sample is also purposeful in that the objectives pursued were for those groups of students, and the changes desired in the object of study could only be achieved for each specific context. The data from 2014–15 onwards will be used for further research, as from that academic year many of the videos were updated due to a change of programme.

The introduction of the specific subject of retour interpreting in the academic year 2011–12 in the University of Salamanca allowed for the completion of even more exercises in retour interpreting from Spanish into English on the part of the students, but it also reduced the number of new students participating in the study, as retour interpreting is now an optional subject that usually only students specialising in interpreting take. The results obtained from the years 2006–07 to 2010–11 include more participants because the groups were larger before the new system was put in place. This change need not upset the results, as the retour exercises featured in this study always took place at the same point in time into their retour training in their fourth year, and in the last semester of their studies, that is, at an equivalent level.

The third purposeful sample (E3) consisted of groups of ad-hoc volunteers in crash-courses for Social Forum-related events who also had similar language combinations, and because retour interpreting is a normal practice in this type of event. Again, the sample is purposeful because of their language combination, the objectives pursued, and the fact that the research could only be undertaken in such a context.

3.2.3 Operationalisation and selection of an instrument for the measurement of perceived usefulness, interest, and difficulty in interpreter education

> [...] the integration of constructs requires cooperation across studies. Research in PSIT has increasingly become a cooperative effort, aimed at establishing common ground. And yet, incursions into other disciplines continue to improve our understanding. If we want to grow together, differences among perspectives and their networked implications will need to be identified and managed in the very first steps of study design (for an attempt at designing

> spaces of cooperation at construct level, see, for example, Buzelin, 2005; Abdallah, 2014). (Monzó-Nebot and Wallace 2020a, 7)

As we have seen in the first three chapters, the way we look at emotional and motivational aspects, such as values and beliefs, from the point of view of ethics, on the one hand, and from an educational psychology perspective in studies in motivation, on the other, may be so different that the definitions and the constructs involved vary when researchers are referring to aspects of the human mind. When we try to study the complex ecosystem of an interpreter lab while teaching interpreting, both ethics and didactics are inextricably linked to psychological constructs. Thus, ethical motivation in interpreter education can be measured through different variables, and operationalised by a variety of constructs, some of which overlap at times, while others cover separate characteristics, or complementary aspects within the same definition. Using mixed methods allows for researchers to cover in a qualitative manner, through triangulation, those places where quantitative data does not reach.

According to Hanna Eklöf (2021) using different theories and constructs is the norm within the field of motivation in education, perhaps due to the fact that it is a relatively young field of study, and researchers are still mapping definitions and constructs. Another possible explanation may lie in the fact that the classroom ecosystem is alive; motivation indicators change in an instant, as do emotional, psychological, ethical and educational variables:

> Some aspects such as beliefs about one's abilities and interest in and reasons for doing a task recur in several theories, even if they differ in complexity and have different explanatory frameworks. [. . .] Thus, it is not uncommon to see the same construct being interpreted using different theoretical frameworks [. . .] as motivation is not directly observable, this latent construct has to be transformed into and inferred from observable indicators: It has to be operationalized in order to be measured. (1301)

Thus, researchers measuring intrinsic and extrinsic motivational variables have to refine the operationalisation of the constructs they wish to explore in such a way that their studies still remain comparable to other research on the same subject (1302). Old theories continue to be valid frameworks until proven wrong; new ones may not be compared with previous findings. Additionally, each researcher in the area of motivation in education will select the definitions, constructs, and variables which will help study the ecosystem and population in question, as well as aiming for the changes, hopefully positive, produced by the researcher's intervention. As Mellinger and Hanson (2017) put it,

> As the research process continues, investigators must further refine constructs into measurable and observable variables. To do so, constructs must be operationalized so that a research design or protocol can be developed to investigate the variables of interest. Operationalization entails a strict definition of the constructs so that they can be measured and tested. Researchers often draw on previous definitions of concepts or constructs to guide operationalization, and this linkage to previous research can help contextualize study findings in relation to other studies. (15)

In previous chapters, we have treated the definitions of the constructs involved in order to further refine the measurable variables involved. Choosing to measure basic perceptions of interest, usefulness, and difficulty as ready-made operationalised constructs is the norm in the study of didactics. The same occurs in the field of motivation in general when the researcher wishes to be able to explain, in order to facilitate replication of findings, in a manner comprehensible to the wider communities of education and psychology. The correct operationalisation of constructs also allows for comparisons and larger-scale studies when using the same, similar, or adapted, instruments (Eklöf 2021, 1302) whether from the field of interpreting, or from other specialisations. In the field of interpreting, as classes are usually small and the number of participants in studies equally reduced, it becomes especially useful to choose free, open, widely-available instruments that can be used internationally for replication.

The questionnaire chosen (see Appendix 1: Questionnaire 1) is a free, open, Likert-scale instrument for the measurement of perceived usefulness, perceived interest, and perceived difficulty after an interpreting exercise. It was created, validated, and tested by researchers at the research group GRETI in the Department of Translation and Interpreting at the University of Granada, and it has been used in doctoral theses to create and evaluate teaching materials for interpreting classes from French into Spanish (De Manuel Jerez 2006), designed "as a participatory action-research project in which students are treated as stakeholders and research partners rather than mere suppliers of empirical data" (Pöchhacker 2010, 8), and other research projects for the creation and evaluation of teaching materials in interpreter education (see, for example, Brander de la Iglesia and Opdenhoff 2014).

The videos selected to be interpreted by participants in this study had also been edited by the lecturers of the same research group, and put in order of difficulty (see the transcripts in Appendix 5: Transcripts of videos 1–21). This order of difficulty, which was used during this study, together with the fact that the study takes place for nine academic years, mitigates possible differences in objective difficulty among the videos. It is necessary to say explicitly at this point that the concept of objective difficulty of the speeches does not apply in this instance, for various reasons.

Firstly, in didactics, and from a research ethics point of view, my first obligation is towards the participants, that is, my job is to provide the best speech for those specific participants at a given time so that their teaching and learning experience works in the best way possible. Thus, I cannot, in good faith, give them a speech that is too difficult for them or that may cause them loss of motivation or self-esteem in order to compare or pursue research objectives of any sort, nor a speech that is too easy, and may bore them, or make them loose interest in their learning experience. Difficulty is an inherently subjective phenomenon, a measure of the match between the problem and the problem-solver. In each classroom, an optimal difficulty for that group of students must be selected by the teacher, based on close knowledge of the students, which matches their learning needs at that time. The didactic and ethical priority to cater to the participants' needs had to remain constant over the nine years, and research work done from the data obtained, was carried out always within this educational framework.

The concept of objective difficulty does not exist in a classroom: it is I, as a teacher and interpreter, who decides what the optimal difficulty level of a given speech is for each class, having interpreted the speech myself, having looked at the transcript provided in order to identify possible problems, bearing in mind the perceptions of students of previous years, and, most importantly, knowing the current students well, in order to predict as best as I can how they may react to a given speech. Thus, the difficulty of the speech chosen for each occasion has to be exactly what I believe as an expert that they need at that point and, therefore, over the years, optimal difficulty of the speech remains constant— I always choose what I consider to be the right level of difficulty for a given group on a given day.

Secondly, in the questionnaires, it is the participants who provide the measure for perceived difficulty in this study, not the researcher. It is their perception of difficulty that we have set out to measure, among other variables. Thirdly, the fact that a speech may be more dense lexically, or be pronounced faster by the speaker, or contain more specialised terminology, does not affect the study. It is precisely what we have asked the students, and which will allow us, among many other things, to fine-tune the selection of speeches: the questionnaire includes three parameters within perceived difficulty (content, presentation, expression) where the students can answer what their perception of those variables has been in a given exercise. This last set of information will be refined and used in further research focusing on the factors that affect perceived difficulty on the part of the students, as the number of variables in the present study is large.

Initially, 30 videos of speeches were chosen, in English, Spanish, and French. The videos chosen featured two specific settings: institutional settings, such as the European Parliament, and videos of Social Forums, such as the Paris Social Forum.

The three main empirical variables of the questionnaire are perceived usefulness, perceived interest, and perceived difficulty after each interpreting exercise. In the questionnaire, the latter is subdivided into three further variables: perceived difficulty in the content of the speech, perceived difficulty in the speaker's presentation, and perceived difficulty in the speaker's expression, as we will see.

3.2.4 Procedure and data gathering for the quantitative method

After the selection of the questionnaire and participants, due to the large number of variables and the complexity of the study, an SPSS matrix (for technical details, see below, p. 141) was designed with the help of an external expert statistician, an essential step in the design of this study which required investing in a paid one-hour tutorial. The external expert—a statistics teacher from a private school in Salamanca—ascertained that the way the variables appeared in the SPSS matrix was correct for the later input of raw data and the better management of results statistics later in the study, thus assuring the best possible treatment of the data when later creating graphics for the analysis.

In parallel, I attended courses on R and SPSS in order to be able to understand the basics of statistical analysis, and to learn to maintain the data in order to avoid unnecessary trimming of incomplete data in the future. The programme R was chosen in a first instance as a free, open option to deal with the data; however, the unusual complexity of the matrix created, required the use of a proprietary programme (SPSS) in order to facilitate the treatment of data and make the best use of available resources.

It was decided the preliminary matrix would feature participants by lines, and the following variables in each column: language A, language B, mark, gender, and context (HW, USAL or Forum). Following these basic variables, the rest of the columns (a total of 132) featured the answers to the questionnaires for each of the interpreting exercises or video speeches: perceived usefulness video 1, perceived interest video 1, perceived difficulty video 1, perceived difficulty in content video 1, perceived difficulty in presentation video 1, perceived difficulty in expression video 1, and the same variables for the rest of the videos (1–21). Initially, it was decided that the videos would be fed into the preliminary matrix by order of use in the classroom, regardless of whether the video was in English or Spanish, and regardless of the setting of the video (institutional or Forum-related), and that we would be dealing with the treatment of these two essential aspects once all the raw data was in place.

For each of the sessions where data was gathered the same procedure was put in practice: the researcher explained the basics of the study to the participants, as well as the principles of anonymity and informed consent. During the first session, the participants were asked to write a number of their choice on the questionnaire (they usually chose their student number or their ID number, which the researcher asked them to note on a separate paper just in case they needed to be contacted in the future), and, for good measure, were assured that the researcher would not be looking at the results before the end of the academic year.

The participants then usually warmed up interpreting either with each other's speeches, or with other videos chosen for that purpose—as is usually done in order to warm up in interpreting classes and exams—and then proceeded to interpret the video in question, followed by the filling-in of the questionnaire which took place while they were still inside the booths and therefore unable to speak to each other. The questionnaire chosen has thus traditionally been used to evaluate teaching materials from different sources immediately after their first use by the student when interpreting into their mother tongue. When a participant was missing, the researcher noted it down in order to ask them to attend a separate tutorial session where they could catch up. Before handing in the questionnaire with the Likert-scale answers ranging from 1 to 5, the participants were encouraged several times to write, if they so wished, an additional explanation of their choice as an open answer on the same paper, as we will see in the explanation for the procedure followed in the qualitative method.

In the case of university students, the sessions took place in the interpreting lab. In the case of the volunteer interpreters at Social-Forum related events a computer lab was used for the occasion, complete with headsets and microphones. The equipment was not meant for interpreting, and it did not allow trainees and professional volunteers to interpret in pairs, but it was sufficiently adequate for self-practice and recording purposes. The instructor set camp during the event in the makeshift interpreting lab, downloaded the necessary open-source recording software onto each computer, made copies of the speech videos, and received the volunteers. At any given time, there would be a minimum of three volunteers either interpreting or working on their skills, and a maximum of fifteen during the duration of the Forum. When applicable, depending on their skills and language combination, the same explanations and procedure would be put in place as with the students.

This procedure was repeated for nine years in two universities, and in the context of a Social Forum in the hope of increasing the numbers and therefore the validity of the questionnaire used. The questionnaire remained the same whether the participants performed in retour or into their mother tongue, but it was translated in order to use it in settings such as the Malmö Social Forum where Spanish was not always a mother tongue (see Appendix 1: Questionnaire 1). The videos used were in Spanish, English, and French.

3.2.4.1 Analysis methodology for the quantitative data

Once all the raw data was input into the preliminary matrix, we took decisions concerning incomplete entries from a few participants who had not completed enough videos, and who had to be taken out of the second matrix created. We also had to eliminate from the matrix other incomplete results that were not comparable to each other; although initially we had also gathered data for videos in French, we decided we would be using them in further research, and therefore did not add them to the second SPSS matrix. We also decided to keep 21 videos for this study, 11 in English and 10 in Spanish, and left the rest for future research.

In addition, it was decided we will not be using data from the academic year 2014–15 onwards in this dissertation, although such data has been gathered, for various reasons, namely that many of the videos were updated on that year. It makes sense to stop at that point as well because of the fact that after the academic year 2014–15 the data gathered suffers four gaps, or upsets in time: two maternity leaves, one sick leave, one pandemic. Thus, there remains much empirical data in French, and in the English–Spanish combination, but from separate years, which was present in the preliminary matrix, and could be used for further research in smaller-scale articles.

After the trimming of the preliminary matrix, the resulting second matrix counted 125 participants and 312 full columns of variables, that is, a round number of 39 000 entries which will be used in this dissertation. With the help of a statistician, I added two more variables to the second matrix: whether the interpreting was done into A or into B, and whether the video had been taken from an institutional setting (9 videos) or from a Forum-related event (12 videos). From the start, it was deemed more practical to proceed this way, instead go having to type in manually for every student and exercise whether interpreting had been done in to A or in retour.

Also with the help of the statistician, I took the decision of using the value of general perceived difficulty as the mean of the three subvalues: perceived difficulty in content, perceived difficulty in presentation, and perceived difficulty in expression. The amount of data produced was large enough that individual results on those three subvariables could be left for further research. The hourly-paid statistician was also hired for several tutorials, in order to better understand the decisions to be taken, and the results. He then helped create the graphics of the resulting data, as explained in the next chapter.

In order to present the results and analysis of the data in the next chapter, it will be necessary to briefly explain a few methodological concepts in statistics, namely the concepts of p-value, absolute frequency, Spearman's Rho, and Kendall's Tau coefficient.

P-value can be understood as the probability the phenomenon being studied is just a coincidence. In the overwhelming number of basic statistical analyses, the null hypothesis is that the phenomenon being studied has no relation to the outcomes that are being statistically analysed; that any appearance of connection is really just a coincidence. The p-value is the probability that the null hypothesis could be true, given one's data.

When a p-value drops to certain low numbers, people have traditionally made decisions and investments based on the assumption that the null hypothesis is false, that there is a connection between the variables. A p-value of 0.2 gives a decider an 80% chance of having decided correctly should they assume the variables are related; a p-value of 0.01, a 99% chance. When a p-value is low enough to give us confidence to make a decision, we say the result has statistical significance, where the p-value is our metric of significance, and the sufficient number is a value judgement depending on the importance of the matter decided (this number will depend on whether lives are at stake, for instance, in which case the p-value should be extremely low).

Absolute frequency means the actual, simple count of events or items. For example, if the total number of students that answered 3 to perceived difficulty is the absolute frequency; but if one provides a ratio, for example 27%, one speaks of relative frequency.

Spearman's Rho is a correlation coefficient. It is a non-parametric measure of dependency used for studying the correlation between two variables, that is, a non-parametric bivaried correlation (Myers and Sirois 2004; Martínez Ortega et al. 2009). If atypical observations (or outliers) have a lot of influence, that is, if they create a bias or are too arbitrary for the sample distribution, there could be too much difference between them, and so we would have to use the value of

Spearman instead of Pearson's test because it takes such bias into account (de Winter, Gosling, and Potter 2016). In both cases the focus is on lineal correlation.

Rho Spearman, as does Pearson's correlation coefficient, oscillates between -1 and 1. The nearer it is to negative or to positive 1, that is, to either extreme, the stronger the correlation will be. In the case of a positive correlation, it will refer to a positive correlation between both variables, that is, as one increases the other also increases. In the case of a negative correlation, when one increases the other decreases.

We add statistical significance value to this coefficient. When p-value is below 0.05 we will say the correlation is significant and if it is inferior to 0.01 it will be highly significant. In absolute value: if Rho > 0.900 the correlation is excellent; if Rho > 0.800 the correlation is good; if Rho > 0.500 the correlation is regular; if Rho is between 0.000 and 0.500 the correlation is scarce or weak. If Rho equals 1 the correlation would be said to be perfect, and if it is near 0 we would say there is no correlation (de Winter, Gosling, and Potter 2016).

Kendall's Tau coefficient is used to measure ordinal association between two variables; it is used as a non-parametric equivalent to Pearson (Kendall 1938). It is a measure of rank correlation; it will be high when it equals 1 and lower when it gets closer to 0. Its interpretation is similar to Pearson's correlation; in this case, it is used with ordinal variables, and belongs to the framework of non-parametric statistical techniques (Kruskal 1958). In the case of this study, the variables are not ordered, so Spearman's Rho is preferable, as it is more adequate for our object of study (Berry et al. 2009).

3.2.4.2 Analysis methodology for the exploration of ethical motivation

The following methodology was used in order to explore ethical motivation (MO1) with the variables studied: motivation is operationalised as the sum of the values obtained for perceived usefulness and perceived interest. The answers for perceived usefulness and for perceived interest were both numericalized with the mapping of "Minimal" as 1, "Minimal–Medium" as 2, and so forth, up to "Maximal" as 5, and the two mapped numbers summed to a metric for "motivation".

In order to explore ethical motivation, that is, the aspects permitting us to study participants' motivation as ethically-triggered, we then look at motivation bearing in mind the setting of the speeches, as well as the fact that certain participants volunteered at Social Forums, as we will see in the next chapter.

3.2.5 Procedure for the qualitative method: Rounding off the action research spiral

In parallel to the quantitative procedure, qualitative results were also gathered, and several focus groups were put in practice after the empirical sessions had taken place for each group of participants, as we will see in the following subsection.

After each interpreting session with videos 1–21, and having filled in the Likert-scale questionnaire (see Appendix 1: Questionnaire 1) , the participants were reminded that they could explain their answers further in the form of open-ended replies if they so wished, on the same questionnaire under the empirical answers. These open-ended explanations were not compulsory to fill in, and the participants were told so from the start.

The data produced by the open-ended questions was fed into an Excel file featuring the student number and the general topic of the reply in each column (i.e., accent video 1) in the form of positive (1) or negative (2) aspects. The questionnaires containing open-ended replies were physically placed in a different file in order to be able to consult them when writing up the results of the qualitative data. This procedure was repeated in the same manner for all the participants and contexts involved. The qualitative results were subsequently analysed, as we will see in the next chapter.

3.2.5.1 Analysis methodology for the qualitative data

The open explanations of the participants were fed into an Excel database with the following categorisation of the text in order to better perform the qualitative analysis: 1 = positive comment (i.e., the exercise was very useful; 2 = negative comment, i.e., the video was too difficult). Thus, with respect to usefulness and interest positive comments are categorised as 1, and negative comments are categorised as 2. For the variables describing difficulty, positive comments (not difficult) is categorised as 1, and negative comments (comments about an exercise being very difficult) is categorised as 2. The columns in the database included the variables used in the questionnaires (interest, usefulness, general difficulty, difficulty in content, difficulty in presentation, difficulty in expression). Additionally some extra variables were added when participants commented upon aspects they had not been prompted about (e.g., emotional aspects), but this happened in very few, exceptional cases.

The varied nature of these open ended replies and their miscellaneous content called for the use of a methodology in their analysis that used a quantitative logic. For instance, there were many short replies that repeated the exact wording of the Likert-scale questionnaire, without any added information; those answers were not added to the first database. Only open-ended replies with added information, different to what had already been responded quantitatively were fed into the qualitative database.

When looking at the open-ended replies fed into the database, positive and negative comments were easily distinguishable: participants expressed themselves clearly, and were in all instances coherent in this respect, in the sense that their quantitative choices in the Likert-scale questionnaires corresponded to what they were explaining qualitatively in their writing, which appeared directly below.

There were no completely neutral open-ended answers. Therefore, mitigation of possible bias on the part of the researcher was not necessary in this instance. If anything, the fact that the qualitative results were translated into ones and twos simplified the researcher's task, as there were no instances whatsoever where there was any doubt on whether an answer was positive or negative.

When using quantitative and qualitative methodologies for the analysis of the results, there is a distinction between quantitative contents (for example the frequency of positive and negative answers) and qualitative results such as presence or absence of comments, novelty, interest, value or the variety of topics). For organisational purposes, the following contrast hypotheses were used for the rest of the qualitative analysis of the participants' open-ended replies:

i) H1: Students make more open-ended comments after having interpreted a video into A than when doing retour

ii) H1.1. The number of open-ended replies for each of the different variables is larger when videos are interpreted into A than in retour

iii) H2: There are more positive comments for videos to be interpreted into A than for videos to be interpreted in retour

iv) H2.1: There exist more positive comments in some of the variables when interpreting a video into A and in retour

v) H3: the videos of Social Forums have more comments than those of institutional content

vi) H3.1: There exists a larger number of comments for each of the variables when interpreting a video of a social context as compared to interpreting a video of institutional content

vii) H4: The videos of Social Forum subject matters have more positive comments than those of institutional background

viii) H4.1: The videos from Social Forum contexts have more positive comments in each of the variables than those of an institutional subject matter

These contrast hypothesis are used as purely practical instruments, and serve the only methodological purpose of organising the results in a logical manner.

The purpose of the first contrast hypothesis is to see whether the number of open-ended comments is larger or smaller after having interpreted a video into the participants' language A or in retour; apart from the purely organisational purpose of this question, this could eventually help us understand whether their need for clarifying and expressing their views varies with directionality. Within this first contrast hypothesis, we can also ask ourselves whether there are further differences between the variables with respect to directionality.

The second contrast hypothesis also studies differences in the results from the point of view of directionality, that is, whether there are more positive comments when interpreting in retour than into A. Within this hypothesis, we can look at how the other variables behave as well when comparing interpreting into A and retour.

The third contrast hypothesis organised the results according to the setting of the speeches interpreted by the participants, in order to see if there are more comments for either settings, as well as the differences in all the other variables in this contextual sense.

The fourth contrast hypothesis focuses, more specifically, on the positive nature of the comments when comparing the two possible setting for the speeches, including as well each of the other variables.

3.2.6 Procedure and analysis methodology for the focus groups

After each academic year, in the case of student participants, and after the crash course had finished in the case of the volunteer interpreters, the participants were asked to attend a focus group. Each focus group was prepared in advance.

First, a suitable moderator was selected; in the first two focus groups at Heriot-Watt University the researcher, who taught the students but was not responsible for marking their work and was nearer in age (four years older), took on the role of the moderator. For the rest of the focus groups at the University of Salamanca and at Social Forum contexts, a postgraduate student in interpreting with a suitable background in both interpreting and research was asked to act as moderator in the focus group. The moderators were as near as possible to the age group of the participants (a few years older than the participants) and were asked to make the participants feel at home, so that they would speak freely during the focus group, as if speaking among peers.

The moderators were prepped in advance about anonymity and other ethical issues which were tackled at the beginning of each focus group, as we will see in the next chapter. The moderators were provided as support with a loose core structure containing the most important aspects in the form of general questions, but were asked to let the conversation flow, and to improvise when needed in order to create an appropriate open atmosphere, and to encourage all participants to express themselves freely. Each action research session will be dealt with separately in the next chapter.

Inevitably, although the core structure and the subject matter was the same for each focus group, there were differences between the focus groups taking place in different settings, which we will discuss in the following chapter. As with any action research spiral, the original design, though created initially equal for every context, was then fine-tuned over time as the action research spiral unfolded, searching to improve educational practice through research.

As for the analysis methodology of the focus groups transcripts, the first step after each loop, when a new focus group was recorded, was for the researcher to watch and transcribe the video of the focus group, in order to identify possible problems, successful practices, and constructive improvements suggested by the participants for further loops, which were then subsequently implemented.

In order to analyse the results of the focus groups, the transcripts were carefully re-read during the writing-up of this dissertation (see Appendix 4: Transcripts of the focus groups). The results were presented chronologically in an objective description of what had been discussed by the participants and moderators, following the facilitation guide provided by the researcher (see Appendix 2: Questionnaire 2). We took the decision in this instance not to focus on numbers or quantifications in this instance—as we already have information provided by the questionnaires—but to instead use the information provided as a situational examples of what was happening in that setting, in order to improve practice in the next loop (Vicsek 2010). We selected quotations only when these provided information not covered by the quantitative results. Then, the results were scanned for the most essential topics present in the facilitation guide, and discussed according to those relevant subject blocks, as we will see in the next chapter.

Chapter 4

Results and analysis of the empirical study

In this chapter, the results obtained in the empirical study will be presented. First, the adjustments made to the database (see section 3.2.4.1, Analysis methodology for the quantitative data) will be presented in order to make the necessary re-categorisations, and to correct specific errors (see section 3.2.4.1). The tests and statistical techniques (see section 3.2.4.1) applied to the results will be explained and interpreted.

The data obtained in the quantitative results from the questionnaires (see section 3.2.4.1) will be put forward and analysed, followed by a description of the statistical results obtained from the analysis with the aid of specific tables according to the objectives of the study. We will also look at correlations according to the objectives set. Then we will proceed to the qualitative description, and analysis, of the open-ended replies on the part of the participants (see section 3.2.5.1 Analysis methodology for the qualitative data). Finally, the results from the focus groups (see section 3.2.6 Procedure and analysis methodology for the focus groups) will be presented, and the study as a whole will be discussed within the action research spiral created.

The statistical analysis has been done by means of the following computer programme: IBM-SPSS Statistics version 26 (reference: IBM Corp. Released 2019. IBM SPSS Statistics for Windows, Version 26.0. Armonk, NY: IBM Corp).

4.1 Quantitative results and analysis

First, several preliminary modifications were made in the database to adapt, correct, and clean the first data matrix (see 3.2.4).

One of these necessary modifications before analysing the data, for instance, was the categorisation for directionality in interpreting, table 4.1 depicts the language of the videos, the language the student is interpreting into, and the directionality. This was necessary in order to add the directionality variables to the database. Table 4.2 brings together the different videos ordered by title, and the directionality again; table 4.3 presents the videos ordered by language and context. This was also necessary to add retour as a variable to the study—directionality was present from the start in the form of "language A" and "language B" of each of the participants, but instead of having to manually add, for each exercise, whether a participant was doing retour or not, it was deemed more practical to calculate it according to the language of the video and the language pair of the participant once the matrix was complete.

TABLE 4.1: Summary and categorization of values

Language A	Video Language	Target language	Directionality	Directionality_Language
2. Spanish	1. English	2. Spanish	1. Interp. into A	1. Interp. into A Spanish
1. English	2. Spanish	1. English	1. Interp. into A	2. Interp. into A English
1. English	1. English	2. Spanish	2. Retour	3. Retour into Spanish
2. Spanish	2. Spanish	1. English	2. Retour	4. Retour into English

4.1.1 General results

In accordance to the general objectives specified in the introduction, this section will describe, and analyse the general frequentist descriptive results obtained for the variables studied (see table 4.4).

TABLE 4.2: Summary: Videos ordered by Title, Language, and Context

Video title	Language	Video context
V01_Israel	1. English	1. Institutional
V02_George	1. English	2. Social Forum
V03_Galeano	2. Spanish	2. Social Forum
V04_Ramonet	2. Spanish	2. Social Forum
V05_Yvonne_Deutche	1. English	2. Social Forum
V06_Raya	2. Spanish	1. Institutional
V07_Nielsen	1. English	1. Institutional
V08_Cortes	2. Spanish	1. Institutional
V09_Chomsky	1. English	2. Social Forum
V10_Arundhati	1. English	2. Social Forum
V11_Fair_Trade	1. English	2. Social Forum
V12_Quiroa	2. Spanish	2. Social Forum
V13_Niza	2. Spanish	1. Institutional
V14_Villalobos	2. Spanish	1. Institutional
V15_Islam_y_ciencia	2. Spanish	1. Institutional
V16_CEAR	2. Spanish	1. Institutional
V17_Avendaño	2. Spanish	2. Social Forum
V18_Barzanian	1. English	2. Social Forum
V19_Rima Awad	1. English	2. Social Forum
V20_Susana	1. English	2. Social Forum
V21_Byrne	1. English	1. Institutional

TABLE 4.3: Summary: Videos ordered by Language, Context, and Title

Language	Video context: Institutional	Video context: Social Forum
1. English	V01_Israel V07_Nielsen V21_Byrne	V02_George V05_Yvonne_Deutche V09_Chomsky V10_Arundhati V11_Fair_Trade V18_Barzanian V19_Rima Awad V20_Susana
2. Spanish	V06_Raya V08_Cortes V13_Niza V14_Villalobos V15_Islam_y_ciencia V16_CEAR	V03_Galeano V04_Ramonet V12_Quiroa V17_Avendaño

TABLE 4.4: Frequency table. Variables: Usefulness, Interest, and Difficulty

Variables and gradation	Absolute Freq.	Cumulative Abs. Freq.	Relative Freq.	Cumul. Rel. Freq.
Usefulness				
1. Minimal	56	56	2.1%	2.1%
2. Minimal–medium	217	273	8.3%	10.4%
3. Medium	548	821	20.9%	31.3%
4. Medium–maximum	974	1795	37.1%	68.4%
5. Maximum	830	2625	31.6%	100.0%
Interest				
1. Minimal	119	119	4.5%	4.5%
2. Minimal–medium	258	377	9.8%	14.4%
3. Medium	470	847	17.9%	32.3%
4. Medium–maximum	889	1736	33.9%	66.1%
5. Maximum	889	2625	33.9%	100.0%
Difficulty				
1. Minimal	55	55	2.1%	2.1%
2. Minimal–medium	501	556	19.1%	21.2%
3. Medium difficulty	1146	1702	43.7%	64.9%
4. Medium–maximum	760	2462	29%	93.9%
5. Maximum	161	2623	6.1%	100.0%

With respect to the general results for the variable usefulness in all the videos, it is of note that only 10.4% of participants perceive the videos as eliciting minimal usefulness, or minimal to medium usefulness. 20.9% perceive the videos as medium in elicited usefulness. In addition, 68.7% of the replies registered show that the general usefulness of the videos used is medium to maximal, or maximal, the median of the replies being in the category of medium to maximal usefulness.

With respect to the interest elicited by the videos, only 4.5% of participants reply that their interest in the videos was minimal, and 9.8% show an interest that is between minimal and medium. Medium interest is reported by 17.9%. It is noteworthy that 67.8% of participants concentrate on higher levels of interest; 33.9% describe their interest as medium to maximal, and another 33.9% show maximal interest. Thus, more than two thirds of participants value interest highly.

Lastly, for the variable difficulty, only 2.1% of participants experiment minimal difficulty when interpreting the videos. 19.1% perceive difficulty described as between minimal and medium, whereas the majority, 43.7%, indicates the difficulty perceived is medium. Additionally, 29% reports difficulty between medium and maximal, and only 6.1% consider that the difficulty is maximal. These results suggest that the difficulty perceived by the majority of the participants tends to be medium.

Thus, the majority of participants perceive high usefulness and interest in the videos, whereas the predominant difficulty is medium; usefulness and interest responses leaned to the high end, but difficulty responses peaked at "medium".

4.1.1.1 General perceived difficulty and perceived interest

It will now be determined whether the difficulty perceived by the students decreases proportionally while the interest perceived increases (MO1.1).

In order to determine if the difficulty perceived by the students decreases proportionally while the interest perceived increases, table 4.5 presents the non-parametric correlations between the variables perceived interest and perceived difficulty. Both coefficients, Rho Spearman and Kendall's Tau show negative correlations, with values -0.228 and -0.195 respectively, and both are highly significant with a p-value of .000. From a statistical perspective, this suggests that as interest increases, perceived difficulty decreases, or vice versa. The strength of these correlations is moderate, but given the high significance it can be concluded that the result is robust.

TABLE 4.5: Summary of nonparametric correlations. Variables: Interest vs Difficulty

Variables *(Stat. and p-value)*	**Bivariate**	**contrast value**	**Significance**
Interest vs Difficulty	**Spearman's Rho**	$\mathbf{-.228 **(.000)}$	**Highly Significant**
	Kendall's Tau	$\mathbf{-.195 **(.000)}$	**Highly Significant**

NS *Non significant,* † *Approaching significance (p<.10), * Significant (p<.05) and ** Highly significant (p<.01).*

The following table (table 4.6) depicts the correlations for two variables: interest and difficulty. The item in the top line refers to the object of study, in this case, interest. The second row features the segmenting proposed for the Likert-scale study of interest as a variable. The first column refers to the segmenting proposed for the Likert-scale study of difficulty as a variable. The second column includes the number of cases in parenthesis, and the percentage is calculated with respect to the total number of individuals/observations found in that segment for the variables interest and difficulty. The last item on the second column features the number of individuals (observations) who have responded with that option, whereas the percentage refers to the total sample (in this case 4.5% of the sample have replied 1. minimal interest). The last column refers to the percentages corresponding to the general sample, and the distribution of general replies in every case, that is, the distribution of the sample according to the replies for the variable difficulty in interpreting.

On the lower part of the table, the value on the second line at the centre (163.59) refers to the value of the Chi-Square test, and the value on the left refers to p-value (0.00). Findings for which the p-value was less than 0.05 were declared significant and the statistical data put into boldface, with an asterisk beside it. Findings for which the p-value was less than 0.01 were labelled highly significant, and a second asterisk added beside the statistical difference found.

TABLE 4.6: Contingency table and contrast test. Variables: Interest vs Difficulty

Difficulty	**Interest**					
	1. Minimal	**2. Min.–medium**	**3. Medium**	**4. Medium–max.**	**5. Maximum**	
1. Minimal	-	.4% (1)	1.5% (7)	1.9% (17)	3.4% (30)	2.1% (55)
2. Min.–medium	7.6% (9)	6.6% (17)	13.4% (63)	19.7% (175)	26.7% (237)	19.1% (501)
3. Medium	37.0% (44)	40.3% (104)	40.9% (192)	46.5% (413)	44.2% (393)	43.7% (1146)
4. Medium–max.	42.9% (51)	46.1% (119)	36.0% (169)	27.1% (241)	20.2% (180)	29.0% (760)
5. Maximum	12.6% (15)	6.6% (17)	8.1% (38)	4.7% (42)	5.5% (49)	6.1% (161)
	4.5% (119)	9.8% (258)	17.9% (469)	33.9% (888)	33.9% (889)	(2623)

	p-value	**value**	**Result**
χ^2	**.000**	**163.59****	**Highly Significant**
	value	**Significance**	
V	**.125**	**Small**	

[NS] *Non significant,* † *Approaching significance (p<.10), * Significant (p<.05) and ** Highly significant (p<.01).*

Statistical test/contrast: χ^2 – Chi squared. Size or magnitude of effect: V – Cramér's V.

If p-value is between 0.10 and 0.05 (the limit for statistical significance), it is called almost significant and a superindex is added in the form of a cross (†). If there is no significance and p-value is lower than 0.10, the values are presented with the superindex NS (not significant). Under the label interpretation, where it says small, is Cramér value V, sometimes called W, which can be small, medium or large, describing the size of the effect. Under the label value we find the result of the size of the effect (.125). This value gives us information of the magnitude of the effect or observed difference, that is, apart from finding highly significant differences, in our case, they are considered as large; from 0 to 0.10 there is no effect, or the effect is of insignificant degree, from 0.10 to 0.30 the effect is small, from 0.30 to 0.50 the effect is medium or moderate, and more than 0.50 would mean the effect is large (Plackett 1983; Castro 2014).

Thus, table 4.6 depicts a contingency table relating the variables of perceived interest and perceived difficulty. A Chi Square (χ^2) test was performed in order to evaluate the independence of these variables. The statistical result of χ^2 is 163.59, with a p-value of .000, which means it is highly significant. This indicates there is a correlation between the two variables and that they are not independent from each other. Nevertheless, the magnitude of the effect, measured by Cramér's V, is .125, interpreted as a small effect. This suggests that, although there is a significant relation between interest and difficulty, the strength of this reaction is moderate.

To conclude, correlations between interest and difficulty are negative and significant, which indicates that when the interest increases, perceived difficulty decreases, and vice versa. Although the Chi Square test confirms a significant relation between the two variables, the magnitude of the effect is small.

4.1.1.2 General perceived difficulty and perceived usefulness

In order to determine if perceived difficulty varies with perceived usefulness by the participants when interpreting (Introduction), in table 4.7 the relation between difficulty and usefulness is analysed. A negative correlation is observed: Spearman's Rho is -0.196 and Kendall's Tau is -0.168, both with high statistical significance (p=.000). These values indicate an inverse tendency in the variables: when one increases, the other tends to decrease. Even though the the relation is statistically significant, the magnitude of the relation is moderate, suggesting that, although there is a notable relation between perception of difficulty and perception of usefulness, this relation is not extremely pronounced.

TABLE 4.7: Summary of nonparametric correlations. Variables: Difficulty vs Usefulness

Variables *(Stat. and p-value)*	**Bivariate**	**Value**	**Significance**
Difficulty vs Usefulness	**Spearman's Rho**	$-.196**(.000)$	**Highly Significant**
	Kendall's Tau	$-.168**(.000)$	**Highly Significant**

NS *Non significant,* † *Approaching significance (p<.10), * Significant (p<.05) and ** Highly significant (p<.01).*

Table 4.8 shows a contingency table relating the variables difficulty and usefulness. The Chi Square test (χ^2) produced a value of 121.17 with a p-value of .000, evidencing a significant statistical dependence between both variables. We must bear in mind that the magnitude of the relation (or size of the effect), quantified by the coefficient Cramér's V, is .107, which indicates a small size effect in the association between perception of difficulty and usefulness. Although the significance is robust, the strength of the relation is modest in practical terms.

To conclude, there exists a negative correlation between the variables usefulness and difficulty: while one increases the other decreases. We must bear in mind that the strength of the correlation is low, although highly significant.

4.1.1.3 Perceived usefulness and perceived interest

Table 4.9 examines the relation between interest and usefulness, in order to determine whether perceived usefulness varies with perceived interest using nonparametric correlations. With a Spearman's Rho coefficient of .502 a Kendall's Tau coefficient of .440, we can observe moderate to strong positive correlations between the variables. These statistical values, with a p-value of .000, reject the null hypothesis of independence, indicating statistical significance. The magnitude of these coefficients suggests that, while the variable interest increases, perceived usefulness tends to increase accordingly. Given its significance, it is highly improbable that

TABLE 4.8: Contingency table and contrast test. Variables: Usefulness vs Difficulty

Difficulty	**Usefulness**					
	1. Minimal	**2. Min.–Medium**	**3. Medium**	**4. Medium–max.**	**5. Maximum**	
1. Minimal	-	.9% (2)	1.5% (8)	2.5% (24)	2.5% (21)	2.1% (55)
2. Min.–medium	9.1% (5)	8.3% (18)	14.8% (81)	18.9% (184)	25.7% (213)	19.1% (501)
3. Medium	25.5% (14)	39.2% (85)	42.0% (230)	45.0%(438)	45.7% (379)	43.7% (1146)
4. Medium–max.	45.5% (25)	40.1% (87)	34.4% (188)	28.4% (277)	22.0% (183)	29.0% (760)
5. Maximum	20.0% (11)	11.5% (25)	7.3% (40)	5.2% (51)	4.1% (34)	6.1% (161)
	2.1% (55)	8.3% (217)	20.9% (547)	37.1% (974)	31.6% (830)	

	p-value	**Value**	**Result**
χ^2	**.000**	**121.17****	**Highly Significant**
	Value	**Significance**	
V	**.107**	**Small**	

NS *Non significant,* † *Approaching significance (p<.10), * Significant (p<.05) and ** Highly significant (p<.01).*

Statistical test/contrast: χ^2 *– Chi squared. Size or magnitude of effect: V – Cramér's V.*

the correlation here observed can be attributed to chance, which highlights the relevance and consistency of the relation between these variables in the population studied.

TABLE 4.9: Summary of nonparametric correlations. Variables: Interest vs Usefulness

Variables *(Stat. and p-value)*	**Bivariate**	**contrast value**	**Significance**
Interest vs Usefulness	**Spearman's Rho**	**.502** (.000)**	**Highly Significant**
	Kendall's Tau	**.440** (.000)**	**Highly Significant**

[NS] *Non significant,* [†] *Approaching significance (p<.10), * Significant (p<.05) and ** Highly significant (p<.01).*

Table 4.10 analyzes the relation between perceived interest and perceived usefulness by means of a χ^2 test, obtaining a statistical result of 931.76 with p-value .000. This demonstrates a significant association among variables. Cramér's V coefficient is .298, indicating a moderate effect magnitude, and suggesting that perceived interest and perceived usefulness are related in a moderately strong manner in the sample analysed.

To conclude, the correlations reveal a strong direct relation between perceived interest and perceived usefulness. Additionally, the contrast test indicates moderate magnitude in the association, making it possible to conclude that perceived interest and perceived usefulness are significantly interrelated in the sample.

4.1.1.4 Video context and general perceived difficulty

Table 4.11 is a contrast test table between two types of videos: institutional (1) and Social Forum (2), created in order to identify how the context of the video affects perceived difficulty by the students. The difficulty score for the institutional videos is an average of 3.46 ± 0.78, whereas the Social Forum videos have a mean of 2.97 ± 0.89.

In order to know if these differences observed in the mean are significant, a mean contrast test was performed (Student's t for independent samples), where the

TABLE 4.10: Contingency table and contrast test. Variables: Interest vs Usefulness

Interest	**Usefulness**					
	1. Minimal	**2. Min.–medium**	**3. Medium**	**4. Medium–max.**	**5. Maximum**	
1. Minimal	33.9% (19)	13.8% (30)	8.2% (45)	2.0% (19)	0.7% (6)	4.5% (119)
2. Min.–medium	25.0% (14)	37.8% (82)	14.6% (80)	6.4% (62)	2.4% (20)	9.8% (258)
3. Medium	21.4% (12)	25.8% (56)	32.7% (179)	16.1% (157)	8% (66)	17.9% (470)
4. Medium–max.	16.1% (9)	13.4% (29)	29.7% (163)	45.2% (440)	29.9% (248)	33.9% (889)
5. Maximum	3.6% (2)	9.2% (20)	14.8% (81)	30.4% (296)	59% (490)	33.9% (889)
	2.1% (56)	8.3% (217)	20.9% (548)	37.1% (974)	31.6% (830)	(2625)

	p-value	**Value**	**Result**
χ^2	**.000**	**931.76****	**Highly Significant**
	Value	**Significance**	
Cramér's V	**.298**	**Medium**	

[NS] *Non significant,* [†] *Approaching significance (p<.10), * Significant (p<.05) and ** Highly significant (p<.01).*

Statistical test/contrast: χ^2 *– Chi squared. Size or magnitude of effect: V – Cramér's V.*

TABLE 4.11: Contrast test scoring Difficulty according to Video context

Video context	Mean (SD)	t (stat.)	p-value	Result	Cohen's d
1. Institutional (1124)	3.46 ± .78			**Highly**	**.576**
2. Social Forum (1499)	2.97 ± .89	**14.61****	<.001	**Significant**	**Medium**
Mean Difference	.489 (.423 – .555)				

NS *Non significant,* † *Approaching significance (p<.10),* * *Significant (p<.05) and* ** *Highly significant (p<.01).*

null hypothesis is that both measures are the same. If p-value is <0.05 we can say that, with a probability of 95%, that statement is untrue, accepting the alternative, which says that there are differences between the means when comparing different groups. In our case, the result is highly significant with a p-value <.001, and an effect size measured from Cohen's d of .576. The size of the effect (the statistical measure to be used here) will depend on the statistical test we employ; in this case Cohen's d is the statistical test that best adjusts to a mean contrast; Cramér's V is used generally for categorical variables.

If we contrast the values obtained for perceived difficulty according to the context of the video (see table 4.12), we can observe how in both cases, be it with the original values, or after grouping the values, the result is highly significant, featuring an average effect size. In this case, we can clearly observe how the highest values correspond to institutional videos.

If we perform a comparative test, 48.2% consider institutional videos have a difficulty of 4 or 5, out of 5, which, compared to 25.3% corresponding to the same values for videos of Social Forums, represents a difference of 22.9 index points (fig. 4.2). We can conclude that in proportion the perception of difficulty is almost double when it comes to institutional videos, as compared to videos of Social Forums, which can have wider implications for our study.

TABLE 4.12: Contingency table and contrast test. Variables: Perceived Difficulty and Video context

Perceived difficulty	**Video context**		
	1. Institutional	2. Social Forum	
1. Minimal	0.7% (8)	3.1% (47)	2.1% (55)
2. Min.–medium	8.5% (96)	27.0% (405)	19.1% (501)
3. Medium	42.5% (478)	44.6% (668)	43.7% (1146)
4. Medium–max.	40.6% (456)	20.3% (304)	29.0% (760)
5. Maximum	7.7% (86)	5.0% (75)	6.1% (161)
	42.9% (1124)	57.1% (1499)	(2623)

	p-value	**contrast value**	**Result**
χ^2	**.000**	**232.02****	**Highly Significant**
	contrast value	**Significance**	
V	**.301**	**Medium**	

Perceived difficulty	**Video context**		
	1. Institutional	2. Social Forum	
1. Minimal – min.–medium	9.3% (104)	30.2% (452)	21.2% (556)
2. Medium	42.5% (478)	44.6% (668)	43.7% (1146)
3. Medium–max. – maximum	48.2% (542)	25.3% (379)	35.1% (921)
	42.9% (1124)	57.1% (1499)	(2623)

	p-value	**contrast value**	**Result**
χ^2	**.000**	**229.24****	**Highly Significant**
	contrast value	**Significance**	
V	**.302**	**Medium**	

NS *Non significant,* † *Approaching significance (p<.10), * Significant (p<.05) and ** Highly significant (p<.01)*

Statistical test/contrast: χ^2 *– Chi squared.*
Size or magnitude of effect: V – Cramér's V.

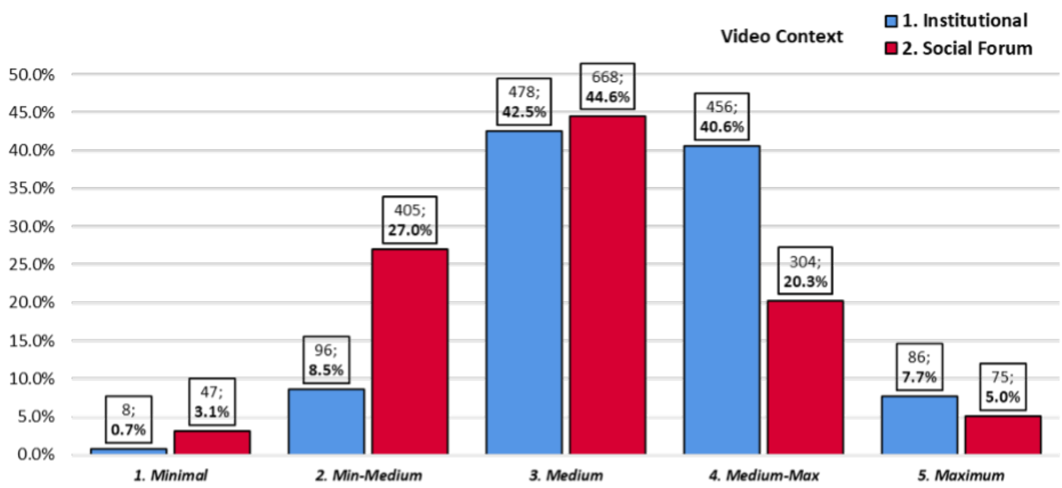

Figure 4.1: Perceived Difficulty (5 answer categories) and Video context

4.1.2 Analysis of specific objectives

4.1.2.1 Perceived difficulty and perceived interest in retour

We will now try to determine whether perceived difficulty on the part of the students varies with respect to perceived interest when performing retour interpreting (SO2.1), that is, we will compare how the groups in the study correlate with the variables object of interest. On the one hand, we will look at correlations with single segmentation between direct and retour interpreting and, on the other, adding the language directionality.

In table 4.13 the correlations between the variables studied are compared according to the segmentation in interpreting directionality (into language A or in retour). We can observe that, in all cases, there exists a significant correlation according to directionality, specifically in the case of retour; as the values increase for one, they decrease for the other. With respect to the objective at hand, in this case we can conclude that there exists evidence which allows us to state that perceived difficulty varies when compared to perceived interest in the case of retour interpreting and that, additionally, this correlation is stronger than when the participants perform interpreting into A.

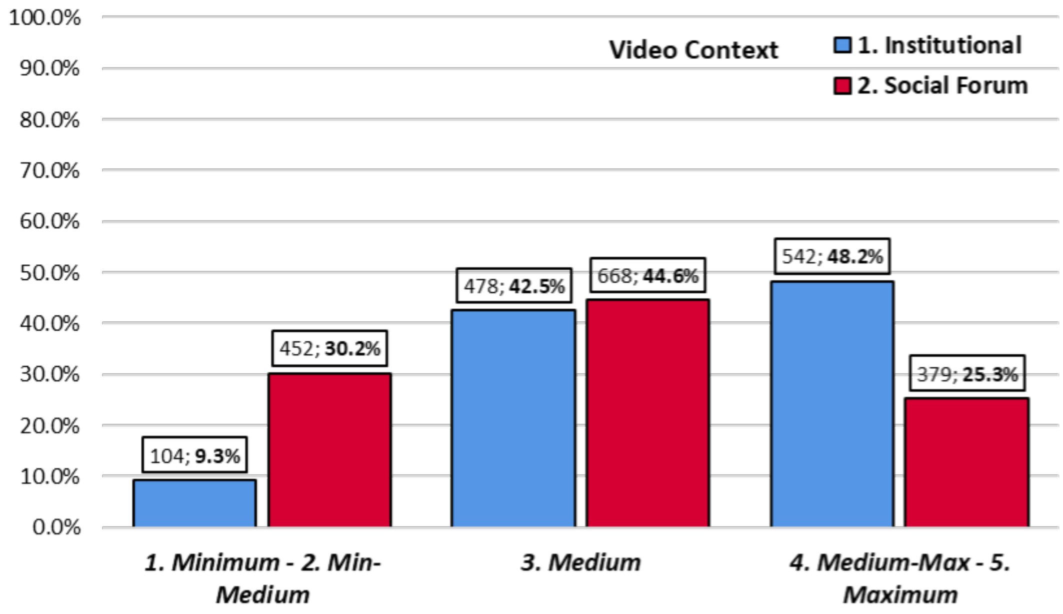

Figure 4.2: Perceived Difficulty (3 answer categories) and Video context

Segmentation of the groups of study, not just according to directionality in interpreting but also according to the language used (see table 4.14) allows us to assert, on the one hand, that in all cases we have sufficient evidence to state that perceived interest is inversely related to perceived difficulty. On the other hand, these correlations are stronger in the cases of retour interpreting into English, followed by interpreting into language A English.

4.1.2.2 Perceived difficulty and perceived usefulness in retour

Observing table 4.15 we can conclude that there exists statistical significance indicating that there is an inverse relation between perceived difficulty and perceived usefulness in retour (SO2.2), although the strength of the correlation is weak. We can conclude that the correlation is larger in the case of retour interpreting as opposed to interpreting into A.

With respect to the level of analysis, where we segment not only according to the directionality but also to the target language, we can observe in table 4.16 how,

TABLE 4.13: Summary of nonparametric correlations. Variables: Interest vs Difficulty according to Directionality (Interpreting into A vs Retour)

Variables	*Directionality*	Bivariate	contrast value	Significance
Interest vs Difficulty	Interpreting into A	Spearman's Rho	$-.155**(.000)$	Highly Significant
		Kendall's Tau	$-.181**(.000)$	Highly Significant
	Retour Interpreting	Spearman's Rho	$-.235**(.000)$	Highly Significant
		Kendall's Tau	$-.274**(.000)$	Highly Significant

NS *Non significant,* † *Approaching significance (p<.10), * Significant (p<.05) and ** Highly significant (p<.01).*

TABLE 4.14: Summary of nonparametric correlations. Variables: Interest vs Difficulty according to Directionality (Interpreting into A vs Retour) and Target language (into Spanish vs into English)

Variables	*Directionality*	Bivariate	Value	Significance
Interest vs Difficulty	1. Interp. into A Spanish	Spearman's Rho	$-.122**(.000)$	Highly Significant
		Kendall's Tau	$-.143**(.000)$	Highly Significant
	2. Interp. into A English	Spearman's Rho	$-.215**(.000)$	Highly Significant
		Kendall's Tau	$-.251**(.000)$	Highly Significant
	2. Retour into Spanish	Spearman's Rho	$-.141**(.000)$	Highly Significant
		Kendall's Tau	$-.164**(.000)$	Highly Significant
	2. Retour into English	Spearman's Rho	$-.266**(.000)$	Highly Significant
		Kendall's Tau	$-.309**(.000)$	Highly Significant

NS *Non significant,* † *Approaching significance (p<.10), * Significant (p<.05) and ** Highly significant (p<.01).*

TABLE 4.15: Summary of nonparametric correlations. Variables: Difficulty vs Usefulness according to Directionality (Interpreting into A vs Retour)

Variables	*Directionality*	Bivariate	Value	Significance
Difficulty vs Usefulness	Interpreting into A	Spearman's Rho	$-.138**(.000)$	Highly Significant
		Kendall's Tau	$-.161**(.000)$	Highly Significant
	Retour Interpreting	Spearman's Rho	$-.197**(.000)$	Highly Significant
		Kendall's Tau	$-.228**(.000)$	Highly Significant

NS *Non significant,* † *Approaching significance (p<.10), * Significant (p<.05) and ** Highly significant (p<.01).*

in effect, there exists an inverse relation between perceived difficulty and perceived usefulness. The strongest correlations are those observed in the case of interpreting into English as an A language, followed by retour interpreting into English. To conclude, it should be pointed out that there exists evidence allowing us to state that perceived difficulty varies with perceived usefulness in retour interpreting although the strength of the correlation is weak.

TABLE 4.16: Summary of nonparametric correlations. Variables: Difficulty vs Usefulness according to Directionality (Interpreting into A vs Retour) and Target language (into Spanish vs into English)

Variables	*Directionality*	Bivariate	Value	Significance
Difficulty vs Usefulness	1. Interp. into A Spanish	Spearman's Rho	$-.098**(.000)$	Highly Significant
		Kendall's Tau	$-.115**(.000)$	Highly Significant
	2. Interp. into A English	Spearman's Rho	$-.219**(.000)$	Highly Significant
		Kendall's Tau	$-.252**(.000)$	Highly Significant
	2. Retour into Spanish	Spearman's Rho	$-.165**(.000)$	Highly Significant
		Kendall's Tau	$-.193**(.000)$	Highly Significant
	2. Retour into English	Spearman's Rho	$-.195**(.000)$	Highly Significant
		Kendall's Tau	$-.226**(.000)$	Highly Significant

[NS] *Non significant,* [†] *Approaching significance (p<.10), * Significant (p<.05) and ** Highly significant (p<.01).*

4.1.2.3 Perceived usefulness and perceived interest in retour

In order to determine whether perceived usefulness varies as compared to perceived interest when interpreting in retour, in table 4.17 the correlation is depicted taking directionality into account. In this case, we observe that both for interpreting into A and for retour interpreting there exists an average but direct correlation between the two variables. We can conclude that, in effect, we have verified that there exists a relation between perceived usefulness and perceived interest in the participants' answers when they perform retour interpreting and that, additionally, the strength of the relation is superior to that of interpreting into A.

With respect to table 4.18, where we segment not only by directionality but also with respect to the target language, we observe how in all the cases the relation

TABLE 4.17: Summary of nonparametric correlations. Variables: Interest vs Usefulness according to Directionality (Interpreting into A vs Retour)

Variables	*Directionality*	Bivariate	Value	Significance
Interest vs Usefulness	Interpreting into A	Spearman's Rho	$-.426**(.000)$	Highly Significant
		Kendall's Tau	$-.481**(.000)$	Highly Significant
	Retour Interpreting	Spearman's Rho	$-.451**(.000)$	Highly Significant
		Kendall's Tau	$-.521**(.000)$	Highly Significant

NS *Non significant,* † *Approaching significance (p<.10), * Significant (p<.05) and ** Highly significant (p<.01).*

is direct, although stronger in the case of interpreting into English A, followed by retour interpreting into English. We can conclude that there exists a direct relation between perceived interest and perceived usefulness in every case. If we focus on retour interpreting, the values are similar in retour interpreting into English, and into Spanish.

TABLE 4.18: Summary of nonparametric correlations. Variables: Interest vs Usefulness according to Directionality (Interpreting into A vs Retour) and Target language (into Spanish vs into English)

Variables	*Directionality*	Bivariate	Value	Significance
Interest vs Usefulness	1. Interp. into A Spanish	Spearman's Rho	$-.350**(.000)$	Highly Significant
		Kendall's Tau	$-.394**(.000)$	Highly Significant
	2. Interp. into A English	Spearman's Rho	$-.581**(.000)$	Highly Significant
		Kendall's Tau	$-.658**(.000)$	Highly Significant
	2. Retour into Spanish	Spearman's Rho	$-.439**(.000)$	Highly Significant
		Kendall's Tau	$-.495**(.000)$	Highly Significant
	2. Retour into English	Spearman's Rho	$-.443**(.000)$	Highly Significant
		Kendall's Tau	$-.516**(.000)$	Highly Significant

NS *Non significant,* † *Approaching significance (p<.10), * Significant (p<.05) and ** Highly significant (p<.01).*

4.1.2.4 Video context and perceived difficulty in retour

In this section, we will attempt to identify how the context of the video affects perceived difficulty by participants performing retour interpreting in order to understand how video contexts can be used to improve the learning process when they interpret in retour.

For the hypothesis contrast, performed in order to contrast how the video context affects perceived difficulty, we have applied a statistical test allowing us to compare differences between the groups. When there are three or more groups in the study, and there is normality in the observational distribution, we employ the ANOVA test. In this case the statistical value is known as F. The ANOVA test starts with the following hypothesis: Null hypothesis (H0): the means of the different groups are the same, that is, there are no significant differences between the means of each group. When we obtain a p-value inferior to 0.05 we reject said hypothesis and accept the alternative. The alternative hypothesis (HA/H1): the mean of at least one group is different to the others. Thus, in table 4.19 we present a contrast which, because it is significant, indicates that at least one of the means of the groups or segments proposed differs enough from the rest for that difference to be considered significant from a statistical perspective.

TABLE 4.19: Contrast test: score of Perceived Difficulty according to ethical motivation (Directionality and Video context)

Directionality	Video context	Mean (SD)	F (stat.)	p-value	Result
1. Interp. into A	**1. Institutional**	$3.47 \pm .88$	**77.20****	**<.001**	**Highly Significant**
1. Interp. into A	**2. Social Forum**	$3.03 \pm .87$			
2. Retour	**1. Institutional**	$3.45 \pm .70$			
2. Retour	**2. Social Forum**	$2.89 \pm .92$			

NS *Non significant,* † *Approaching significance (p<.10), * Significant (p<.05) and ** Highly significant (p<.01).*

Once we have contrasted the fact that at least one of the groups is different, we proceed to the post-hoc study. In table 4.20 each of the segments or groups of study is compared to the rest of groups. This is also known as a pairwise contrast. In this case, we study the difference in the mean. We obtain the statistical value (t

TABLE 4.20: Post-hoc contrast for Perceived Difficulty according to Directionality and Video context

Group comparison		Post-hoc contrast test Parametric			
Group A	**Group B**	**Mean Diff.**	**T (stat.)**	**p-value**	**Result**
1 – 1. Interp. into A – 1. Institutional	2 – 1. Interp. into A – 2. Social Forum	**.437**	**9.07****	**.000**	**Highly significant**
	3 – 2. Retour – 1. Institutional	.014	.28 ^{NS}	.992	Non significant
	4 – 2. Retour – 2. Social Forum	**.576**	**11.36****	**.000**	**Highly significant**
2 – 1. Interp. into A – 2. Social Forum	3 – 2. Retour – 1. Institutional	**−.422**	**9.50****	**.000**	**Highly significant**
	4 – 2. Retour – 2. Social Forum	**.140**	**3.17****	**.009**	**Highly significant**
3 – 2. Retour – 1. Institutional	4 – 2. Retour – 2. Social Forum	**.562**	**11.90****	**.000**	**Highly significant**

^{NS} *Non significant,* † *Approaching significance (p<.10), * Significant (p<.05) and ** Highly significant (p<.01)*

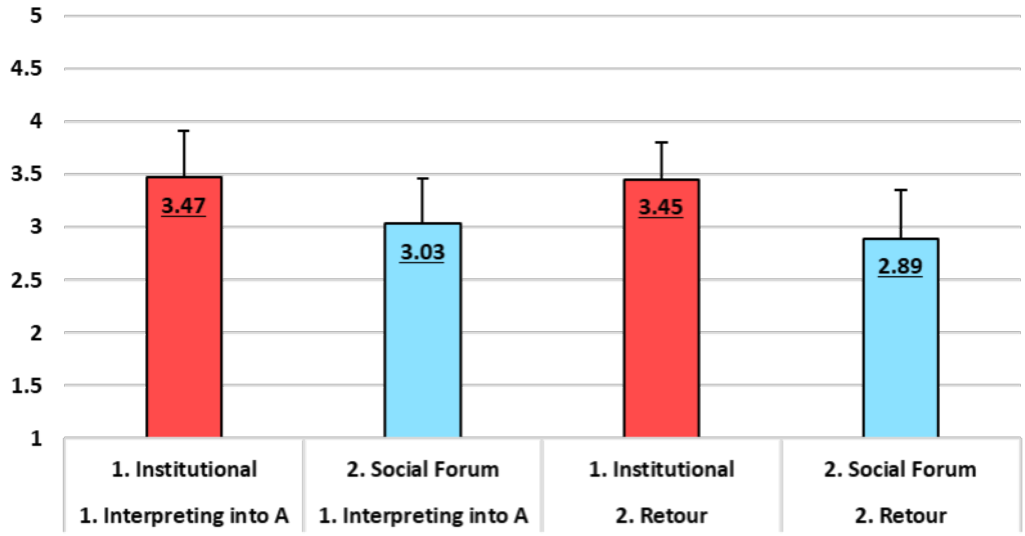

Figure 4.3: Confidence interval for Perceived Difficulty according to Video context and Interpreting into A/B

when it refers to the comparison between two groups; t comes from Student's t) and the corresponding p-value.

As shown, it can be that in some cases there is statistical significance (or high statistical significance) and that, in other cases, the significance does not exist. In this study we observe high statistical significance in every case, except the comparison between interpreting into A and in retour in an institutional context. In the rest of the cases there are differences.

For example, in interpreting into A, there is a difference between institutional and social videos; the means of perceived difficulty differ by .44, that is, the participants consider in average that it is more complicated to interpret institutional videos by more than .44 points, compared to Social Forum videos.

4.1.3 Analysis of specific objectives in relation to differences between ad-hoc volunteer interpreters and students

4.1.3.1 General perceived difficulty in students and volunteers

In order to determine if the perceived difficulty on the part of students and volunteers varies (SO3.1), the results presented in table 4.21 indicate that there is statistical significance, that is, at least one group differs from the rest when looking at perceived difficulty according to the groups studied.

TABLE 4.21: Contrast test scoring perceived difficulty according to context (group comparison)

Perceived difficulty	Mean (SD)	F (stat.)	p-value	Result
1. Heriot-Watt (525)	3.32 ± .89			**Highly**
2. USAL (1785)	3.14 ± .87	**8.50****	**<.001**	
3. ESF Malmö (315)	3.16 ± .94			**Significant**

NS *Non significant,* † *Approaching significance (p<.10),* * *Significant (p<.05) and* ** *Highly significant (p<.01).*

On the one hand, if we dig deeper into the pairwise comparison according to difficulty (see table 4.22), we can observe there exists high statistical significance in the comparison of means between the groups of Heriot-Watt and USAL, with a difference in the means of 0.18 points, were the Heriot-Watt segment is higher. On the other hand, we also observe differences between the groups of Heriot-Watt and Malmö, although minor. The differences are catalogued as significant, and the difference in the means is found, in this case, to be .16.

TABLE 4.22: Post-hoc contrast for the variable Difficulty according to context

Group comparison		**Post-hoc contrast test**			
Group A	**Group B**	**Mean Dif.**	**T (stat.)**	**p-value**	**Result**
1. Heriot-Watt	2. USAL	**.18**	**4.14****	**.000**	**Highly significant**
	3. ESF Malmö	**.16**	**2.59***	**.026**	**Significant**
2. USAL	3. ESF Malmö	−.02	$.33^{NS}$	.940	Non significant

^{NS} *Non significant,* † *Approaching significance (p<.10), * Significant (p<.05) and ** Highly significant (p<.01).*

TABLE 4.23: Contrast test scoring Perceived Difficulty according to Context (group comparison), segment with Directionality: Interpreting into A

Perceived difficulty	**Mean (SD)**	**F (stat.)**	**p-value**	**Result**
1. Heriot-Watt (255)	3.43 ± .84			**Highly**
2. USAL (929)	3.13 ± .91	**11.62****	**<.001**	**Significant**
3. ESF Malmö (152)	3.14 ± .93			

^{NS} *Non significant,* † *Approaching significance (p<.10), * Significant (p<.05) and ** Highly significant (p<.01).*

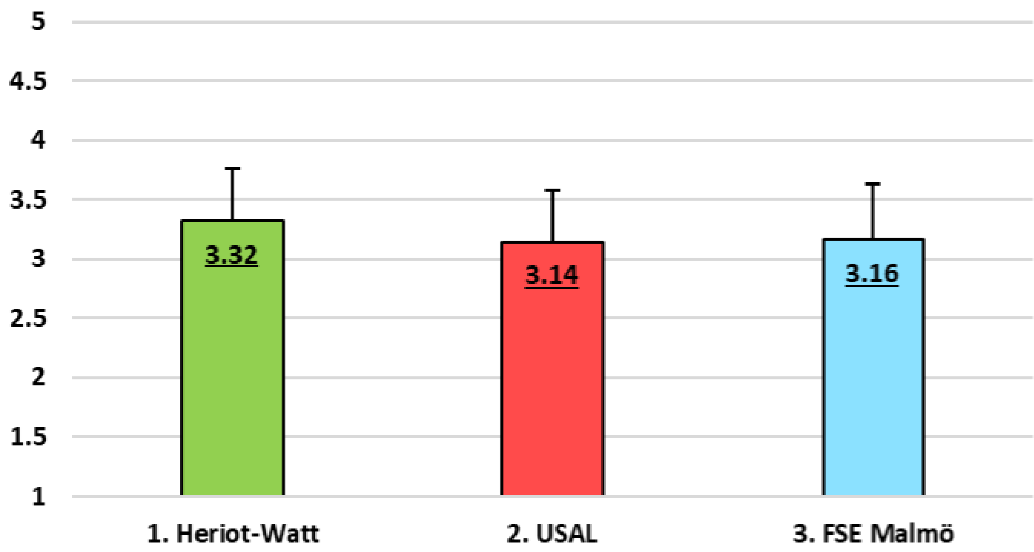

Figure 4.4: Confidence interval for Perceived Difficulty according to Context

4.1.3.2 Perceived difficulty in students and volunteers interpreting into A, and in retour

The results determining whether perceived difficulty by students and volunteers varies when interpreting in retour are highly significant for the comparison between the groups or segments of study (see table 4.23).

If we look into the pairwise study in depth (see table 4.24) we can observe the differences are highly significant in both cases. The Heriot-Watt group, with respect to the USAL group, presents an average superior in .30 points. With respect to the Malmö group, it is superior in .29 points. Between the USAL and the Malmö groups we have not obtained significant differences in the comparison between the values of perceived difficulty in interpreting into A. On the contrary, in the case of retour interpreting, from the ANOVA test used, as presented in table 4.25, there are no indications whatsoever pointing to differences in the means of each of the groups object of this study (SO3.2).

TABLE 4.24: Post-hoc contrast for the variable Perceived Difficulty according to segment with Directionality: Interpreting into A

Comparison Groupes		**Post-hoc contrast test**			
Group A	**Group B**	**Means Diff.**	**T (stat.)**	**p-value**	**Result**
1. Heriot-Watt	2. USAL	**.30**	**4.77****	**.000**	**Highly significant**
	3. ESF Malmö	**.29**	**3.15****	**.005**	**Significant**
2. USAL	3. ESF Malmö	−.01	.17 ^{NS}	.984	Non significant

^{NS} *Non significant,* † *Approaching significance (p<.10), * Significant (p<.05) and ** Highly significant (p<.01).*

TABLE 4.25: Contrast test scoring Perceived Difficulty according to Context (group comparison), segment with Directionality: Retour

Perceived difficulty	**Mean (SD)**	**F (stat.)**	**p-value**	**Result**
1. Heriot-Watt (270)	3.22 ± .93			
2. USAL (855)	3.15 ± .81	.60 ^{NS}	.547	Non significant
3. ESF Malmö (162)	3.17 ± 1.03			

^{NS} *Non significant,* † *Approaching significance (p<.10), * Significant (p<.05) and ** Highly significant (p<.01).*

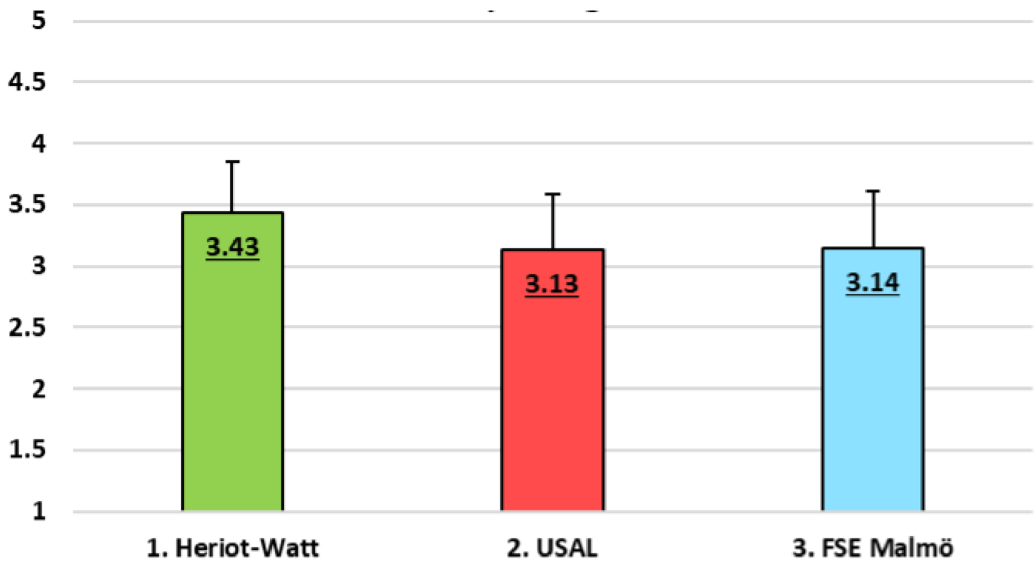

Figure 4.5: Confidence interval for Perceived Difficulty by group Context, and Interpreting into A

Although, as previously stated, we observe no differences between the groups from a statistical perspective, we have considered appropriate to follow the same methodology, presenting the post-hoc contrasts. In table 4.26 it can be observed how, in effect, there are no significant differences in the pairwise comparisons.

TABLE 4.26: Post-hoc contrast test table featuring Perceived difficulty according to Context (group comparison), segment with Directionality: Retour

Group comparison		**Post-hoc contrast test**			
Group A	**Group B**	**Mean diff.**	**T (stat.)**	**p-value**	**Result**
1. Heriot-Watt	2. USAL	.07	1.10 NS	.516	Non significant
	3. ESF Malmö	.05	.53 NS	.857	Non significant
2. USAL	3. ESF Malmö	.07	.28 NS	.958	Non significant

NS *Non significant*, † *Approaching significance* ($p<.10$), * *Significant* ($p<.05$) *and* ** *Highly significant* ($p<.01$).

To conclude, whereas for interpreting into A we observe significant differences between the groups, specifically when it comes to the difficulty perceived in the Heriot-Watt group, in that it is higher than that of the USAL group, and the Malmö group, this result does not replicate when we focus in the segmentation in the case of retour interpreting, where the mean values registered do not present significant differences according to the group or segment of population study.

4.1.3.3 General perceived interest in students and volunteers

It will now be determined whether the interest perceived by the students and volunteers varies when comparing among groups (SO3.3). The contrast test indicates the existence of highly significant differences when comparing the means between the groups of students and the group of volunteers (see table 4.27). A pairwise contrast, as depicted in table 4.28, will show how the largest difference is found between the USAL students group and the Malmö volunteers, with a difference in the means of −.32, where the mean for Malmö is higher. In addition, we also observe differences between the Heriot-Watt group and the Malmö group, where the latter has a higher mean by .22 points with respect to the former.

TABLE 4.27: Contrast test scoring Interest according to Context (group comparison)

Interest	Mean (SD)	F (stat.)	p-value	Result
1. Heriot-Watt (525)	3.86 ± 1.01			**Highly**
2. USAL (1785)	3.77 ± 1.13	**8.78****	**.006**	
3. ESF Malmö (315)	4.09 ± 1.32			**Significant**

[NS] *Non significant,* [†] *Approaching significance (p<.10), * Significant (p<.05) and ** Highly significant (p<.01).*

TABLE 4.28: Post-hoc contrast test table featuring Interest according to Context (group comparison), segment with Directionality: Retour

Group comparison		**Post-hoc contrast test**			
Group A	**Group B**	**Mean Diff.**	**T (stat.)**	**p-value**	**Result**
1. Heriot-Watt	2. USAL	.10	1.69 [NS]	.209	Non significant
	3. ESF Malmö	**−.22**	**2.78***	**.015**	**Significant**
2. USAL	3. ESF Malmö	**−.32**	**4.62****	**.000**	**Highly Significant**

[NS] *Non significant,* [†] *Approaching significance (p<.10), * Significant (p<.05) and ** Highly significant (p<.01).*

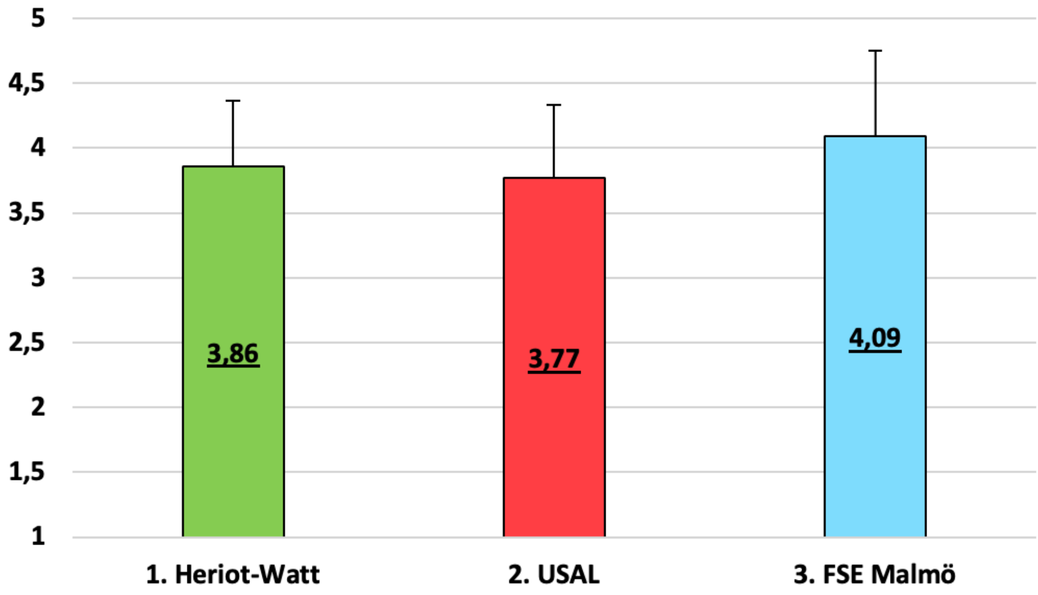

Figure 4.6: Confidence interval for Perceived Interest according to Group context

To conclude, the Malmö group presents significant and highly significant differences with respect to the Heriot-Watt and the USAL groups respectively. The mean values for the Malmö group are higher by .32 with respect to USAL and by .22 with respect to the Heriot-Watt group (see fig. 4.6).

4.1.3.4 General perceived usefulness in students and volunteers

As shown in table 4.29, with respect to the analysis of the variable perceived usefulness (SO3.4), the ANOVA contrast test comparing means among the groups indicate that there exists high statistical significance, that is, at least one of the segments of the study differs from at least another segment.

TABLE 4.29: Contrast test table scoring Usefulness according to Context (group comparison)

Usefulness	Mean (SD)	F (stat.)	p-value	Result
1. Heriot-Watt (525)	$3.90 \pm .99$			
2. USAL (1785)	$3.84 \pm .97$	**5.17****	**.006**	**Highly Significant**
3. ESF Malmö (315)	4.07 ± 1.27			

NS *Non significant,* † *Approaching significance (p<.10), * Significant (p<.05) and ** Highly significant (p<.01).*

To complete the analysis, table 4.30 presents the post-hoc comparison, where we compare each of the groups or population segments of the study with the rest. In this case, for the variable usefulness we only observe highly significant differences between the USAL group and the Malmö group, with a difference in the mean value of $-.23$, where perceived usefulness is higher in the Malmö group.

TABLE 4.30: Post-hoc contrast test table featuring variable Usefulness according to Context

Group comparison		Post-hoc contrast test			
Group A	**Group B**	**Mean diff.**	**T (stat.)**	**p-value**	**Result**
1. Heriot-Watt	2. USAL	.06	1.26 NS	.418	Non significant
	3. ESF Malmö	$-.17$	2.34 NS	.051	Non significant
2. USAL	3. ESF Malmö	**$-.23$**	**3.75***	**.000**	**Highly Significant**

NS *Non significant,* † *Approaching significance (p<.10), * Significant (p<.05) and ** Highly significant (p<.01).*

To conclude, significant differences can only be observed between the USAL and the Malmö groups, with a difference in the means of .23, where the higher value is that of the Malmö group.

4.1.4 Analysis of results on ethical motivation

In order to explore ethical motivation, as we explained in the previous chapter, we operationalised motivation as the sum of perceived interest and perceived usefulness (see section 3.2.3). Then, we looked at the aspects allowing us to study this motivation as ethically-triggered, that is, we look at motivation with respect to the context of the videos, together with the fact that some of the participants were volunteers at Social Forums (see fig. 4.7).

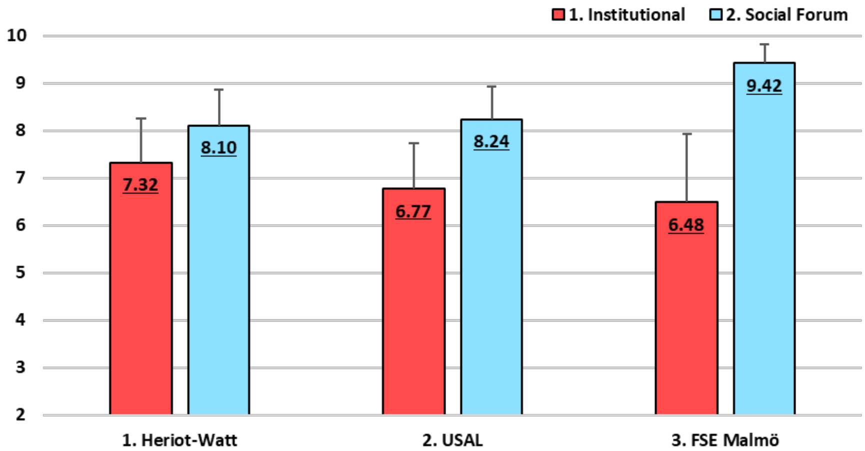

Figure 4.7: Ethical motivation according to Context

Therefore, for the hypothesis contrast, a two-factor ANOVA is performed. The first of those factors corresponds to the context of the videos, that is, to an ethically-imbued context such as a Social Forum, or a traditional institutional context. The second factor corresponds to the three groups 1. Heriot-Watt, 2. USAL, and 3. Malmö Social Forum.

As can be observed in table 4.31, we identify an evident pattern where the videos of Social Forums are better valued than the institutional videos, with the following means: 8.10, 8.24, and 9.42 for Heriot-Watt, USAL and ESF Malmö respectively, whereas the institutional videos present means of 7.32, 6.77, and 6.48.

With respect to the values of the two-factor ANOVA (context and type of video) we observe highly significant results in all the sources of variation evaluated: global, context, type of video and interaction, with all the p-values reported as .000, thus indicating a strong statistical significance. Differences can be observed in the size of the effect, measured with $\eta_{\mathrm{p}}2$ (eta partial square). Although the context shows a highly significant result, the size of the effect is insignificant ($\eta_{\mathrm{p}}2$=.008). The type of video is also highly significant, with an average size effect ($\eta_{\mathrm{p}}2$=.135). Lastly, the interaction between variables is also highly significant, but with a small effect size ($\eta_{\mathrm{p}}2$=.030).

TABLE 4.31: Contrast hypothesis according to average score and 2-factor ANOVA contrast test

Variables	**Video context**			**F**	**p-value**	**Result**	$\eta_p 2$	**Result**
	1. Institutional	**2. Social Forum**	**Global**	**12.7****	**.000**	**Highly Significant**	**.008**	Insignificant
1. Heriot-Watt	7.32 $\pm$ 1.87 (225)	8.10 $\pm$ 1.50 (300)	**Group context**	**10.6****	**.000**	**Highly Significant**		
2. USAL	6.77 $\pm$ 1.94 (765)	8.24 $\pm$ 1.37 (1020)	**Video context**	**407.5****	**.000**	**Highly Significant**	**.135**	**Medium**
3. ESF Malmö	6.48 $\pm$ 2.90 (135)	9.42 $\pm$ .78 (180)	**Interaction**	**39.9****	**.000**	**Highly Significant**	**.030**	**Small**

NS *Non significant,* † *Approaching significance (p<.10), * Significant (p<.05) and ** Highly significant (p<.01).*

In the pairwise comparison, as shown in table 4.32, the results can be summarised as follows:

For Heriot-Watt University a significant average difference of -0.77 is detected between institutional and Social Forum videos, with an average and negative size effect (Cohen's d $= -0.457$). If we compare this to the USAL and ESF Malmö groups, significant differences are observed, both for institutional and Social Forum videos, with size effects varying from small/medium to large.

For USAL, the comparisons between Social Forum videos showed almost twice as high a difference in motivation as the Heriot-Watt surveys, an average difference of -1.47, a large and negative size effect (Cohen's d $= -0.868$).

The comparison between ESF Malmö and USAL has no statistical significance when interpreting is performed with videos from institutional contexts but, with videos from the Social Forum context, the two groups of students differ in motivation by 2.65 lower for USAL, with very high statistical significance.

The ESF Malmö participants had their motivation most affected by the difference between interpreting videos from institutional and Social Forum settings. The volunteers gained the largest size-effect in the study: 2.94 points of motivation (Cohen's d $= -1.738$). This explains why, when interpreting videos of Social Forum contexts, they also differ from the two Universities that did not have such a large shift in motivation between interpreting institutional and Social Forum videos.

TABLE 4.32: Post-hoc contrast according to segments for the variable Interest + Context

Group comparison				Post-hoc contrast test					
Context	**Video context**	**Group context**	**Video context**	**Diff. Mean**	**T (stat.)**	**p-value**	**Result**	**Cohen's d**	**Analysis**
1. Heriot-Watt University	1. Institutional	1. Heriot-Watt U.	2. Social Forum	**−0.77**	**−5.19 ∗ ∗**	<.001	**Highly Significant**	**−0.457**	**Medium (negative)**
		2. USAL	1. Institutional	**0.56**	**4.33****	<.001	**Highly Significant**	**0.328**	**Small/Medium (positive)**
		2. USAL	2. Social Forum	**−0.91**	**−7.32 ∗ ∗**	<.001	**Highly Significant**	**−0.539**	**Medium (negative)**
		3. ESF Malmö	1. Institutional	**0.84**	**4.59****	<.001	**Highly Significant**	**0.499**	**Medium (positive)**
		3. ESF Malmö	2. Social Forum	**−2.09**	**−12.39 ∗ ∗**	<.001	**Highly Significant**	**−1.239**	**Large (negative)**
	2. Social Forum	2. USAL	1. Institutional	**1.33**	**11.53****	<.001	**Highly Significant**	**−0.786**	**Large (negative)**
		2. USAL	2. Social Forum	−0.14	-1.25^{NS}	.812	Non significant	−0.082	Very Small (negative)
		3. ESF Malmö	1. Institutional	**1.62**	**9.23****	<.001	**Highly Significant**	**−0.957**	**Large (negative)**
		3. ESF Malmö	2. Social Forum	**−1.32**	**−8.29 ∗ ∗**	<.001	**Highly Significant**	**−0.782**	**Large (negative)**
2. USAL	1. Institutional	2. USAL	2. Social Forum	**−1.47**	**−18.14 ∗ ∗**	<.001	**Highly Significant**	**−0.868**	**Large (negative)**
		3. ESF Malmö	1. Institutional	0.29	1.83^{NS}	.447	Non significant	0.171	Very Small (positive)
		3. ESF Malmö	2. Social Forum	**−2.65**	**−18.92 ∗ ∗**	<.001	**Highly Significant**	**−1.567**	**Very large (negative)**
	2. Social Forum	3. ESF Malmö	1. Institutional	**1.75**	**11.34****	<.001	**Highly Significant**	**−1.039**	**Large (negative)**
		3. ESF Malmö	2. Social Forum	**−1.18**	**−8.65 ∗ ∗**	<.001	**Highly Significant**	**−0.700**	**Medium/Large (negative)**
3. ESF Malmö	1. Institutional	3. ESF Malmö	2. Social Forum	**−2.94**	**−15.27 ∗ ∗**	<.001	**Highly Significant**	**−1.738**	**Very large (negative)**

^{NS} *Non significant,* † *Approaching significance (p<.10), * Significant (p<.05) and ** Highly significant (p<.01).*

4.1.4.1 Ethical motivation vs difficulty

If we analyse the results expressed in figure 4.8, when there is low level motivation, institutional videos receive an average score of 3.61 points in general difficulty, with a standard deviation of 0.83 based on 187 replies. On the other hand, Social Forum videos receive an average score of 3.43 with a standard deviation of 0.76 in 14 replies. With respect to medium motivation, although institutional videos maintain a higher average score ($3.52 \pm .78$, that is 461 replies) in comparison with Social Forums ($3.18 \pm .88$, 340 replies), the margin decreases.

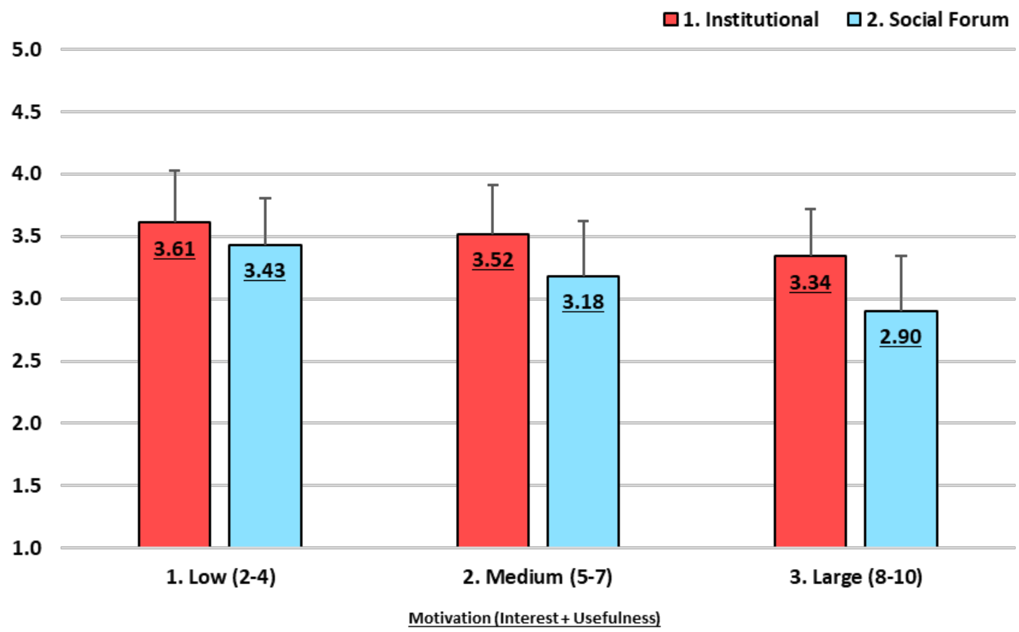

Figure 4.8: Motivation vs Perceived Difficulty: Average scores in Difficulty for motivation (Usefulness + Interest) according to Video context

Finally, for the higher level of motivation, the institutional videos have an average score of 3.34 with a standard deviation of 0.76 based on 476 replies, and Social Forums present a more pronounced decrease in the average score, with 2.90 $\pm$ .89, based on 1145 replies. This suggests that, regardless of the level of motivation, the participants tend to think institutional videos are more difficult than Social Forum videos, although the difference between the two video contexts seems to widen in higher levels of motivation.

The ANOVA of the two factors (see table 4.33) shows highly significant differences in motivation and video context with regard to perceived difficulty, with p-values of .000 and small size effects ($\eta_{\mathrm{p}}2$ of .016 and .006, respectively). Nevertheless, the interaction among both factors is not significant (p=.323), suggesting that the impact of one does not depend on the level of the other, where the effect of the interaction is also small ($\eta_{\mathrm{p}}2$=.001).

Table 4.34 shows the post-hoc pairwise analysis of groups where we compare all the possible combinations of groups in order to observe the differences among them.

TABLE 4.33: Contrast hypothesis according to average score and 2-factor ANOVA contrast test (Motivation and Video context)

Motivation	**Video context**			**F**	**p-value**	**Result**	**$\eta_p 2$**	**Result**
	1. Institutional	**2. Social Forum**	**Global**	**53.52****	**.000**	**Highly Significant**		
1. Low (2–4)	3.61 ± .83 (187)	3.43 ± .76 (14)	**Motivation**	**21.89****	**.000**	**Highly Significant**	**.016**	**Small**
2. Medium (5–7)	3.52 ± .78 (461)	3.18 ± .88 (340)	**Video context**	**15.43****	**.000**	**Highly Significant**	**.006**	**Small**
3. High (8–10)	3.34 ± .76 (476)	2.90 ± .89 (1145)	**Interaction**	1.13^{NS}	.323	Non Significant	.001	**Small**

^{NS} *Non significant,* † *Approaching significance (p<.10), * Significant (p<.05) and ** Highly significant (p<.01).*

TABLE 4.34: Post-hoc contrast according to segments for the variable motivation (Interest + Context) according to Video context. Variable: Perceived Difficulty

Group comparison				Post-hoc contrast test					
Motivation	**Video context**	**Motivation**	**Video context**	**Diff. Mean**	**T (stat.)**	**p-value**	**Result**	**Cohen's d**	**Analysis**
1. Low (2–4)	1. Institutional	1. Low	2. Social Forum	0.18	0.78^{NS}	.971	Non significant	0.215	**Small**
		2. Medium	1. Institutional	0.09	1.19^{NS}	.841	Non significant	0.103	Insignificant
		2. Medium	2. Social Forum	**0.43**	**5.66****	**<.001**	**Highly significant**	0.515	**Medium**
		3. High	1. Institutional	**0.27**	**3.74****	**.003**	**Highly significant**	0.323	**Small/Medium**
		3. High	2. Social Forum	**0.71**	**10.65****	**<.001**	**Highly significant**	0.840	**Large**
	2. Social Forum	2. Medium	1. Institutional	-0.09	-0.41^{NS}	.998	Non significant	0.112	Insignificant
		2. Medium	2. Social Forum	0.25	1.10^{NS}	.882	Non significant	0.300	**Small/Medium**
		3. High	1. Institutional	0.09	0.40^{NS}	.999	Non significant	-0.107	Insignificant
		3. High	2. Social Forum	0.53	2.32^{NS}	.185	Non significant	0.625	**Medium/Large**
2. Medium (5–7)	1. Institutional	2. Medium	2. Social Forum	**0.35**	**5.76****	**<.001**	**Highly significant**	0.412	**Medium**
		3. High	1. Institutional	**0.18**	**3.36***	**.010**	Significant	0.219	**Small**
		3. High	2. Social Forum	**0.62**	**13.36****	**<.001**	**Highly significant**	0.737	**Large**
	2. Social Forum	3. High	1. Institutional	**−0.16**	**$-2.71^{\dagger}$**	**.074**	**Approaching significance**	0.192	**Small**
		3. High	2. Social Forum	**0.27**	**5.26****	**<.001**	**Highly significant**	0.325	**Medium**
3. High (8–10)	1. Institutional	3. High	2. Social Forum	**0.44**	**9.49****	**<.001**	**Highly significant**	0.517	**Large**

^{NS} *Non significant,* † *Approaching significance (p<.10), * Significant (p<.05) and ** Highly significant (p<.01).*

4.2 Qualitative results and analysis

Table 4.35 depicts a summary of the existing variables, categorised from the qualitative analysis. As can be observed, there is a total of 5 videos which do not present any open answers for the variables studied, and one video (V16_CEAR) presenting only information for two variables (open answers about the sound and the speed of the video).

4.2.1 General descriptive and frequentist results

For the qualitative study undertaken, a total of 21 videos were selected, 5 of which have not received any open-ended explanations on the part of the participants to be categorised. Thus, for a total of 16 videos, that is 76.19% of the videos, at least one qualitative or open answer has been computed and categorised. With respect to the categorisation by variables for this study, the variables which have obtained the largest number of answers are: usefulness, interest, difficulty in content (for example, the complexity of the speech), difficulty in presentation, and difficulty in expression (for example, the speed of the speech). Each of these variables has received at least one categorisation in 15 out of 16 videos, that is, there are registered values in at least one observation for 93.75% of the total number of videos with registered answers.

278 replies have been registered in this second database (see table 4.36) and categorised into positive comments, and negative comments. If we focus on the total number of replies we can see that the variable complexity (difficulty in contents), with an absolute frequency of 72, represents 25.9% of total comments by participants, followed by the variable speed (difficulty in expression), with 20.1% (56). In third and fourth place are the variables interest (51 comments) and usefulness (44 comments). Finally, we only register 4 and 2 comments for the variables retour and general difficulty respectively. The absolute frequency is noteworthy in that these are small numbers of data points for doing confident statistical conclusions; significance can only be found for strong signals. This issue is highlighted in 4.37, where there were only four replies about retour.

TABLE 4.35: Summary of variables ordered by Video titles, Language, and Video context

Video title	Language	Context	Usefulness	Interest	Diff. Content	Diff. Presentation	Diff. Expression	Accent	Stress	Retour	Difficulty
V01_Israel	1. English	1. Institutional	Yes	Yes	Yes	Yes	Yes	Yes	-	-	-
V02_George	1. English	2. Social Forum	Yes	Yes	Yes	Yes	Yes	Yes	-	-	-
V03_Galeano	2. Spanish	2. Social Forum	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-
V04_Ramonet	2. Spanish	2. Social Forum	Yes	Yes	Yes	Yes	Yes	Yes	-	-	-
V05_Yvonne_Deutche	1. English	2. Social Forum	Yes	Yes	Yes	Yes	Yes	Yes	-	-	-
V06_Raya	2. Spanish	1. Institutional	-	-	-	-	-	-	-	-	-
V07_Nielsen	1. English	1. Institutional	Yes	Yes	Yes	Yes	Yes	Yes	-	-	-
V08_Cortes	2. Spanish	1. Institutional	Yes	Yes	Yes	Yes	Yes	Yes	-	-	-
V09_Chomsky	1. English	2. Social Forum	-	-	-	-	-	-	-	-	-
V10_Arundhati	1. English	2. Social Forum	Yes	Yes	Yes	Yes	Yes	Yes	-	-	-
V11_Fair_Trade	1. English	2. Social Forum	Yes	Yes	Yes	Yes	Yes	Yes	-	-	-
V12_Quiroa	2. Spanish	2. Social Forum	Yes	Yes	Yes	-	-	-	-	-	-
V13_Niza	2. Spanish	2. Social Forum	-	-	-	-	-	-	-	-	-
V14_Villalobos	2. Spanish	1. Institutional	Yes	Yes	Yes	Yes	Yes	Yes	-	-	Yes
V15_Islam_y_ciencia	2. Spanish	1. Institutional	-	-	-	-	-	-	-	-	-
V16_CEAR	2. Spanish	1. Institutional	-	-	-	Yes	Yes	-	-	-	-
V17_Avendaño	2. Spanish	1. Institutional	-	-	-	-	-	-	-	-	-
V18_Barzanian	2. Spanish	2. Social Forum	Yes	Yes	Yes	Yes	Yes	Yes	-	-	-
V19_Rima Awad	1. English	2. Social Forum	Yes	Yes	Yes	Yes	Yes	Yes	-	-	-
V20_Susana	1. English	2. Social Forum	Yes	Yes	Yes	Yes	Yes	Yes	-	-	-
V21_Byrne	1. English	2. Social Forum	Yes	Yes	Yes	Yes	Yes	Yes	-	-	-

TABLE 4.36: Frequency table. Variables: Usefulness, Interest, Difficulty in Content, Difficulty in Presentation, Difficulty in Expression, Accent, Stress, Retour and Difficulty.

Variables	Abs. Freq.	Cumul. Abs. Freq.	Rel. Freq.	Cumul. Rel. Freq.
Total data				
Recorded data	278	278	100.0%	100.0%
Recorded data by variable				
Usefulness	44	44	15.8%	15.8%
Interest	51	95	18.3%	34.2%
Diff. Content	72	167	25.9%	60.1%
Diff. Presentation	20	187	7.2%	67.3%
Diff. Expression	56	243	20.1%	87.4%
Accent	29	272	10.4%	97.8%
Stress	-	272	-	97.8%
Retour	4	276	1.4%	99.3%
Difficulty	2	278	0.7%	100%

In table 4.37, we compare variables according to positive and negative comments. From an analytic perspective, 22.9% of positive comments feature usefulness, which contrasts with 3.0% of the negative comments. Interest is described in 25.7% of positive comments and 5.1% of negative comments. Negative comments treat the subject of complexity (difficulty in content) in a fairly high percentage (36.4%), as compared to 20.1% of comments on speech complexity that are positive in nature.

Speed and accent are mentioned for both categories, predominantly in negative comments (28.3%) rather than in positive comments (9.1%). Retour interpreting and difficulty are less frequently mentioned in the negative comments, by 3.0% and 2.0% respectively. In total, 64.4% of comments are positive and 35.6% are negative, out of 278 comments analysed.

TABLE 4.37: Contingency table and contrast test. Variables: Perceived Usefulness, Interest, Difficulty in Content, Difficulty in Presentation, Difficulty in Expression, Accent, Stress, Retour and Difficulty according to type of Comment

Variables	**Comment type**		
	1. Positive	**2. Negative**	
Usefulness	22.9% (41)	3.0% (3)	15.8% (44)
Interest	25.7% (46)	5.1% (5)	18.3% (51)
Diff. Content	20.1% (36)	36.4% (36)	25.9% (72)
Diff. Presentation	3.9% (7)	13.1% (13)	7.2% (20)
Diff. Expression	15.6% (28)	28.3% (28)	20.1% (56)
Accent	11.2% (20)	9.1% (9)	10.4% (29)
Retour	0.6% (1)	3.0% (3)	1.4% (4)
Difficulty	-	2.0% (2)	0.7% (2)
	64.4% (179)	35.6% (99)	(278)

We will now proceed to present the qualitative results according to the practical hypothesis presented in the methodology, which will be used as a logical instrument for the purpose of organising the results.

4.2.1.1 H1: Open-ended comments into A or in retour

For comments appearing after having interpreted a video into language A we have computed 168 answers, whereas there are 110 answers after having done an exercise in retour interpreting. If we standardise, that is, if we relativise the number of replies on the quantity of existing videos and the cases of into-A and retour interpreting in both cases, we would obtain the following results:

After interpreting into A, we have registered 168 replies, that is 1.40% of cases, over a total of 12030, that is, there is a total of 11865 empty observations.

After having interpreted in retour, we have obtained 110 replies over a total of 11592, that is, 11482 observations or cells are empty, which means 0.95% of the cases include a reply for a variable.

To conclude, if we observe table 4.38 we can ascertain that the contrast test shows that the differences, while having clear statistical significance, are very small, with little effect. In order to reply to our contrast hypothesis, there exist more open-ended answers after participants interpreted into A than after having performed retour interpreting, but there are too few answers for this result to be of any use.

TABLE 4.38: Contingency table and contrast test. Variables: Answer or Empty field according to Directionality

Variables	Directionality		
	1. Interp. into A	2. Retour	
Answer	1.4% (168)	0.9% (110)	1.2% (278)
Empty field	98.6% (11685)	99.1% (11482)	98.8% (23167)
	50.6% (11853)	49.4% (11592)	(23445)
	p-value	**contrast value**	**Result**
χ^2	**.000**	**10.97****	**Highly Significant**
	contrast value	**Significance**	
V	**.022**	Insignificant	

[NS] *Non significant,* [†] *Approaching significance (p<.10), * Significant (p<.05) and ** Highly significant (p<.01)*

Statistical test/contrast: χ^2 *– Chi squared. Size or magnitude of effect: V – Cramér's V.*

4.2.1.2 H1.1: There are more open-ended replies for each of the different variables when videos are interpreted into A than in retour

With respect to hypothesis H1.1 (for the list of hypotheses, see section 3.2.5.1), stating that there are more open-ended results treating different variables when videos are interpreted into A than after having performed in retour, table 4.39 shows the results according to directionality. Even though the statistical significance test does not show these questions can be used for a firm magnitude of the effect, there is some degree of effect between reply categories.

There were some effects seen on variables such as usefulness being higher for A, but in that example, with 30 responses for A versus 14 for retour, the amount of data was insufficient for statistical significance. There were no effects large enough seen on any variable to overcome the small number of responses to show that the difference has statistical significance.

For example, for the variable retour there are only 4 observations registered in the category of retour interpreting. In interpreting into A no observations are registered. Thus, it would be of no use to comment upon this further.

TABLE 4.39: Contingency table and contrast test. Variables: Usefulness, Interest, Difficulty in Content, Difficulty in Presentation, Difficulty in Expression, Accent, Stress, Retour and Difficulty according to Directionality

Variables	**Directionality**		
	1. Interp. into A	2. Retour	
Usefulness	17.9% (30)	12.7% (14)	15.8% (44)
Interest	18.5% (31)	18.2% (20)	18.3% (51)
Diff. Content	25.0% (42)	27.3% (30)	25.9% (72)
Diff. Presentation	7.1% (12)	7.3% (8)	7.2% (20)
Diff. Expression	20.8% (35)	19.1% (21)	20.1% (56)
Accent	10.1% (17)	10.9% (12)	10.4% (29)
Retour	0% (0)	3.6% (4)	1.4% (4)
Difficulty	0.6% (1)	0.9% (1)	0.7% (2)
	60.4% (168)	39.6% (110)	(278)

	p-value	**contrast value**	**Result**
χ^2	.371	7.58^{NS}	Non significant
	contrast value	**Significance**	
V	**.165**	Small	

^{NS} *Non significant,* † *Approaching significance (p<.10), * Significant (p<.05) and ** Highly significant (p<.01)*

Statistical test/contrast: χ^2 *– Chi squared. Size or magnitude of effect: V – Cramér's V.*

4.2.1.3 H2: Positive comments into A and in retour

For the second general hypothesis, we present results in table 4.40. In this case, we can observe that 60.7% of the comments after having interpreted into A are positive, in comparison to 70.0% after the participants have performed retour interpreting, and 39.3% of comments offered after interpreting into A are negative, compared to 30.0% for comments after having performed retour interpreting. A Chi Square test was performed, which resulted in a p-value of .114. Because p-value is higher than the significance level .05, we conclude that there does not exist a significant difference between the answers when it comes to interpreting directionality.

To conclude, we can discard the hypothesis that the most positive comments correspond to participants who have just been interpreting into A.

TABLE 4.40: Contingency table and contrast test. Variables: Positive or Negative Comment according to Directionality

Variables	**Directionality**		
	1. Interp. into A	2. Retour	
Positive	60.7% (102)	70.0% (77)	64.4% (179)
Negative	39.3% (66)	30.0% (33)	35.6% (99)
	60.4% (168)	39.6% (110)	(278)
	p-value	**contrast value**	**Result**
χ^2	.114	2.50^{NS}	Non significant
	contrast value	**Significance**	
V	.095	Insignificant	

NS *Non significant,* † *Approaching significance (p<.10),* * *Significant (p<.05) and ** Highly significant (p<.01)*

Statistical test/contrast: χ^2 – Chi squared. Size or magnitude of effect: V – Cramér's V.

4.2.1.4 H2.1: Positive comments in some of the variables into A and in retour

In table 4.41 we can observe highly significant figures with a medium size effect in the contrast test according to directionality and comment category.

In the modality of interpreting into A, on the one hand, it is evident that the variables usefulness, interest, and difficulty in content stand out because they have more positive comments, representing 27.5%, 27.5%, and 19.6% respectively. This suggests that participants find interpreting into A particularly useful, interesting and in a smaller measure, not complex in their content (for perceived difficulty,

TABLE 4.41: Contingency table and contrast test. Variables: Perceived Usefulness, Interest, Difficulty in Content, Difficulty in Presentation, Difficulty in Expression, Accent, Stress, Retour and Difficulty according to Directionality, and to whether a Comment is Positive, or Negative

Variables	**Directionality**				
	1. Interp. into A		**2. Retour**		
	1. Positive	**2. Negative**	**1. Positive**	**2. Negative**	
Usefulness	27.5% (28)	3.0% (2)	16.9% (13)	3.0% (1)	15.9% (44)
Interest	27.5% (28)	4.5% (3)	23.4% (18)	6.1% (2)	8.5% (51)
Diff. Content	19.6% (20)	33.3% (22)	20.8% (16)	42.4% (14)	26.1% (72)
Diff. Presentation	2.9% (3)	13.6% (9)	5.2% (4)	12.1% (4)	7.2% (20)
Diff. Expression	12.7% (13)	33.3% (22)	19.5% (15)	18.2% (6)	20.3% (56)
Accent	9.8% (10)	10.6% (7)	13% (10)	6.1% (2)	10.5% (29)
Retour	-	-	1.3% (1)	9.1% (3)	1.4% (4)
Difficulty	27.5% (28)	3.0% (2)	16.9% (13)	3.0% (1)	15.9% (44)
	37.0% (102)	23.9% (66)	27.9% (77)	12% (33)	(276)

	p-value	**contrast value**	**Result**
χ^2	**.000**	**94.36****	**Highly Significant**
	contrast value	**Significance**	
V	**.338**	**Medium**	

NS *Non significant,* † *Approaching significance (p<.10),* * *Significant (p<.05) and* ** *Highly significant (p<.01)*

Statistical test/contrast: χ^2 *– Chi squared. Size or magnitude of effect: V – Cramér's V.*

comments were considered negative when the difficulty was high, and positive when it was low). Nevertheless, the numbers contrast with the observations made for the modality of retour interpreting, where the percentages are 16.9% for usefulness, 23.4% for interest and 20.8% for non-complexity. This contrast suggests that interpreting into A is generally better received in terms of usefulness and interest.

On the other hand, it is of specific importance to note that the variables complexity (difficulty in content), speed, and sound are prominent in negative comments for both directionalities. In interpreting into A, complexity and speed have similar percentages, both with 33.3%, and sound obtains 13.6%. This implies that the participants find problems with speed, sound, and complexity in interpreting into A.

In comparison, for retour interpreting, the variable complexity (difficulty in content) has the highest percentage of negative comments (42.4%), followed by speed in delivery (18.2%) and sound, with 12.1%. This indicates that, although complexity is a major worry in retour, speed and sound are less problematic when compared to interpreting into A. In conclusion, these results suggest that, even though interpreting into A is perceived as more useful and interesting, it also presents significant challenges in terms of complexity, speed and quality of sound.

To conclude, the hypothesis is true. Depending on the variable of study and directionality, we observe highly significant differences, with a medium size of the effect depending on the variable measured.

4.2.1.5 H3: Comments for Social Forum videos and institutional content videos

As presented in table 4.42, the proportion of answers or comments do not vary with respect to the context of the video interpreted. In this case, the differences are not significant, with an effect size considered insignificant. In both cases, the mean of the answers obtained is around 1.2%. To conclude, we discard the hypothesis that the videos from a Social Forum context have more comments than those of institutional subject matters. It has to be admitted that, in this instance, it would be pointless to comment further on this result.

TABLE 4.42: Contingency table and contrast test. Variables: Answer or Empty field according to Video context

Variables	**Video context**		
	Institutional	2. Social Forum	
Answer	1.1% (109)	1.3% (169)	1.2% (278)
Empty field	98.9% (10015)	98.7% (13331)	98.8% (23346)
	42.9% (10124)	57.1% (13500)	(23624)
	p-value	**contrast value**	**Result**
χ^2	.217	1.53^{NS}	Non significant
	contrast value	**Significance**	
V	.008	Insignificant	

^{NS} *Non significant,* † *Approaching significance (p<.10), * Significant (p<.05) and ** Highly significant (p<.01)*

Statistical test/contrast: χ^2 *– Chi squared. Size or magnitude of effect: V – Cramér's V.*

4.2.1.6 H3.1 Number of comments when interpreting Social Forum videos and institutional videos

With respect to table 4.43, if we segment the quantity of replies according to variables or categorisations by variable, we have not obtained the necessary statistical evidence. Nevertheless, we can observe some effect, which indicates it is probable that for certain categories (for example, the "speed" variable) there are more replies obtained for Social Forum videos. This result does not deserve further comment.

To conclude, the null hypothesis cannot be rejected; it cannot be proven whether the quantity of comments depends on the context of the video, although in some cases we observe a small size effect.

TABLE 4.43: Contingency table and contrast test. Variables: Usefulness, Interest, Difficulty in Content, Difficulty in Presentation, Difficulty in Expression, Accent, Stress, Retour and Difficulty according to Directionality and whether a Comment is Positive or Negative

Variables	**Video context**		
	1. Institutional	**2. Social Forum**	
Usefulness	18.3% (20)	14.2% (24)	15.8% (44)
Interest	18.3% (20)	18.3% (31)	18.3% (51)
Diff. Content	21.1% (23)	29.0% (49)	25.9% (72)
Diff. Presentation	8.3% (9)	6.5% (11)	7.2% (20)
Diff. Expression	23.9% (26)	17.8% (30)	20.1% (56)
Accent	8.3% (9)	11.8% (20)	10.4% (29)
Retour	-	2.4% (4)	1.4% (4)
Difficulty	1.8% (2)	-	0.7% (2)
	39.2% (109)	60.8% (169)	(278)

	p-value	**contrast value**	**Result**
$\boldsymbol{\chi^2}$	.172	10.31^{NS}	Non significant
	contrast value	**Significance**	
V	**.193**	**Small**	

^{NS} *Non significant,* † *Approaching significance (p<.10), * Significant (p<.05) and ** Highly significant (p<.01)*

Statistical test/contrast: χ^2 *– Chi squared. Size or magnitude of effect: V – Cramér's V.*

4.2.1.7 H4: Social Forum videos have more positive comments than those of institutional background

As presented in table 4.44, 54.1% of comments on institutional videos are positive, compared to 71.0% of those of Social Forums. In addition, 45.9% of the comments about institutional videos are negative, compared to 29.0% in Social Forum videos. The results are highly significant with a small effect size.

TABLE 4.44: Contingency table and contrast test. Variables: Answer or Empty field according to Video context

Variables	**Video context**		
	1. Institutional	2. Social Forum	
Positive	54.1% (59)	71.0% (120)	64.4% (179)
Negative	45.9% (50)	29.0% (49)	35.6% (99)
	39.2% (109)	60.8% (169)	(278)
	p-value	**contrast value**	**Result**
χ^2	**.004**	**8.23****	**Highly Significant**
	contrast value	**Significance**	
V	**.172**	**Small**	

NS *Non significant,* † *Approaching significance (p<.10),* * *Significant (p<.05) and* ** *Highly significant (p<.01)*

Statistical test/contrast: χ^2 *– Chi squared. Size or magnitude of effect: V – Cramér's V.*

To conclude, we accept the hypothesis that the comments differ depending on the context of the video. In this case with a highly significant result and a small size effect. To the lay eye, this means this result is statistically significant, but not important enough to us to deserve further comment.

4.2.1.8 H4.1: Social Forum videos have more positive comments in each of the variables than institutional videos

With respect to table 4.45, we observe how the results obtained for the different variables differ greatly. It is noteworthy that each of the participants reflect different characteristics with respect to the positive and negative comments they made. The results are highly significant with a medium size effect. At last, these are results with both statistical significance, and actual importance to us, as we will see in the discussion.

TABLE 4.45: Contingency table and contrast test. Variables: Usefulness, Interest, Difficulty in Content, Difficulty in Presentation, Difficulty in Expression, Accent, Stress, Retour and Difficulty according to Video context and whether Comment is Positive or Negative

Variables	**Directionality**				
	1. Institutional		**2. Social Forum**		
	1. Positive	**2. Negative**	**1. Positive**	**2. Negative**	
Usefulness	28.8% (17)	6.0% (3)	20.0% (24)	-	15.9% (44)
Interest	27.1% (16)	8.0% (4)	25.0% (30)	2.0% (1)	18.5% (51)
Diff. Content	20.3% (12)	22.0% (11)	20.0% (24)	51.0% (25)	26.1% (72)
Diff. Presentation	3.4% (2)	14.0% (7)	4.2% (5)	12.2% (6)	7.2% (20)
Diff. Expression	11.9% (7)	38.0% (19)	17.5% (21)	18.4% (9)	20.3% (56)
Accent	8.5% (5)	8.0% (4)	12.5% (15)	10.2% (5)	10.5% (29)
Retour	-	-	0.8% (1)	6.1% (3)	1.4% (4)
Difficulty	-	4.0% (2)	-	-	.7% (2)
	21.4% (59)	18.1% (50)	43.5% (120)	17.8% (49)	(276)

	p-value	**contrast value**	**Result**
χ^2	**.000**	**85.90****	**Highly Significant**
	contrast value	**Significance**	
V	**.322**	**Medium**	

NS *Non significant,* † *Approaching significance (p<.10),* * *Significant (p<.05) and* ** *Highly significant (p<.01)*

Statistical test/contrast: χ^2 *– Chi squared. Size or magnitude of effect: V – Cramér's V.*

To conclude, we accept the hypothesis that there are differences in the amount of positive and negative comments according to video context. The differences are stark, with the positive/negative ratio being a slight 59/50 for institutional videos, versus a more than 2:1 ratio of 120/49 for videos from Social Forum settings. This, of course, rates as highly significant, with a p-value of .000.

4.3 The focus groups

The quantitative and qualitative results of this study will now be triangulated by means of focus groups, where the participants were prompted to speak freely about different aspects of their experience in interpreting the videos in question. The full transcripts of the focus groups can be found in Appendix 4: Transcripts of the focus groups (pp. 326ff.).

The end of each loop in the action research spiral included a focus group session, or guided discussion, with the participants of that loop. Generally speaking, the focus groups were successful in that they provided the researcher with additional useful information about the materials and methodology used in order to improve her practice.

The first few focus groups were moderated by the researcher herself, which allowed for direct communication with the students, and the creation of an open atmosphere in the classroom. For the remaining focus groups, when available, different graduate student moderators who were closer to the students' ages group were enrolled, with the advantage that the similarity in age could foster trust between the participants and the neutral moderator.

4.3.1 Results of the focus groups with interpreting students at Heriot-Watt University: Academic years 04/05 and 05/06

The first two focus groups took place in Edinburgh at Heriot-Watt University. All the students in Heriot-Watt responded actively when prompted and expressed their opinion politely. It is to be noted that the researcher and moderator was a teaching assistant, and therefore not responsible for their final grade, which meant that there was no pressure on them—other than the usual possibility of bias always present in participative research, mentioned in the previous chapter—to answer what was in their minds.

At the beginning of the first focus group, some of the students commented upon the use of a camera for the interpreting exams (which they had with a different teacher), and the advantages and disadvantages of the use of new technologies in the interpreting lab. They then mentioned sound problems in one of the videos, and suggested that interpreting real-life videos is more interesting and enjoyable than other exercises, although the difficulty may vary—some students thought it is more difficult, while others expressed the opposite opinion. The students then spoke about the factors that make a video more difficult to interpret, as well as the advantages of using real-life materials in video format, including motivational aspects such as usefulness and interest. Finally, they discussed the subject of self-study and how it is more motivational to work in groups. It is interesting to note that, at that time in Heriot-Watt University, the use of speech materials in DVD format with a multimedia projector in the classroom was a new concept.

In the second focus group, the students started by commenting on the advantages of using real-life speeches when learning to do simultaneous interpreting, as opposed to having speakers or lecturers read a speech aloud. Some believed the speech to be more spontaneous in the videos, and therefore easier, while others that it was not necessarily easier because the real world featured professional speeches. They mentioned the following factors as characteristics which make speeches easier or more difficult: structure, coherence, terminology, speed, accent, the interaction when there are discussions or debates, differences in fluency between first and second-language speakers, and length of speech. Finally, the students mentioned that when you see the context and the audience, you can imagine people are listening to you, you are explaining what someone else is saying to other people, and that increases the usefulness of the exercise. They also discussed the topics which interested them the most.

4.3.2 Results of the focus groups with interpreting students at the University of Salamanca: Academic years 06/07 to 13/14

The students in Salamanca, in general, responded well and participated actively in the focus group. When prompted by the moderators, debate was always sparked, and students having sometimes different opinions to varying degrees, with some students participating more loudly than others. It is to be noted that the researcher was their main interpreting teacher and therefore responsible for their final grade. The focus groups always took place at the end of the year, during one of the last practicing sessions, just before the final exams.

In the first focus group in USAL, the students were prompted first about their opinion on the videos used in class, with varying and contradictory replies. For example, some students thought the usefulness of the video was linked to whether the subject matter would be used in the final exam, while others linked it more to their professional activity in the future. On difficulty, some students found the videos had not been ordered from the easiest to the most difficult, while others admitted the class had started with speeches made by the lecturer and students before going on to real-life videos. Another student said the interpreting level of students within the class were varied to start with, implying the selection of videos should also depend on the level most students have to start with.

In general, students made comments that brought improvement in subsequent loops: they asked for more sight translation, more one-on-one feedback, and improvements in communication with the lecturer, and clarity of the structure of the programme, among many constructive ideas which were duly taken into account in the action research spiral. On the other hand, the students also voiced opinions on class assistance being compulsory, on receiving marks during classes (as opposed to just during the final exam), among other issues which worry students, and therefore should be tackled in class, and deserve clarification, but which at that time were not aspects which the lecturer was at liberty to change.

Some students expressed the opinion that videos of Social Forums were not useful and were perhaps only to the liking of the lecturer, while others said they did enjoy interpreting that kind of video. In general, and for all the questions addressed by the students, there is a very wide variety of opinions, some expressed louder than others. Most agree that sharing information in the spirit of Wikipedia and OpenCourseWare (OCW) is positive as a teaching philosophy, and in the use of free materials in self-practice hours. Students also presented ideas on the length of exercises and varying degrees of difficulty, which were incorporated in further teaching whenever possible. For instance, the students agree on the fact that the lecturer is always helpful and offers one-on-one tutorials which few attend. This was solved in subsequent years by declaring the first one-on-one tutorial compulsory from the outset, while subsequent tutorials continued to be optional.

One of the students highlighted she found it embarrassing to go to a one-on-one tutorial with the lecturer and correct her whole performance interpreting a speech.

In subsequent years the researcher tried to find solutions to this problem by first having the students give feedback to each other in the booth, and then receiving feedback by the lecturer during one-on-one tutorials.

On the subject of speech topics, some of the students underlined the fact that they did not find the subject of international tribunals interesting, while suggested the same for social subject matters. The lecturer solved this issue in subsequent years by asking the students on the first day of class to write down five topics they were interested in, to discuss and decide together which topics would be selected, and then introducing them into the general programme before the second class. The students also asked to be able to see videos of interpreters performing in a real-life situation, something which the lecturer also tried to find in subsequent years.

In the second focus groups in USAL, the students comment on the timing of the introduction of videos in their training, which they find adequate. As well, the students would like more specific, one-on-one feedback on the part of the lecturer in the classroom; they prefer working in a group rather than individually, correcting as a group rather than taking a recording to tutorials in order to correct them alone with the lecturer. The students comment upon the fact that the equipment in the interpreting lab does not always work properly. They value positively the fact that interpreting videos allows for practicing with different accents. Those who have used the OCW platform agree with the contents and philosophy of open shareware.

Students also comment on the factors that make a speech more difficult to interpret: level of specialisation, accent, speed, sound quality, image quality, and speech structure. It is interesting to note that the students think there have been too many compulsory one-on-one tutorials, yet think not enough one-on-one feedback has been given in the general practice sessions. In subsequent years, this was addressed by trying to focus specifically on giving feedback to a few students at a time in each session.

These participants value positively the use of videos and the subjects chosen, as well as the fact that the materials come from real-life situations. Students also value positively the more theoretical discussions on ethics in interpreting. They say they consider themselves lucky because they belong to a group that works well together, collectively. They seem to agree on the fact that collective feedback is good in the case of their group but may not be so in cases where the group does not have the same level of cohesion because it could be potentially humiliating. They believe the lecturer could give more feedback; one student thinks the lecturer does not want to hurt their feelings when giving feedback. Some students find that there should be more one-on-one feedback in the practical sessions on the part of the lecturer.

The third focus group in USAL was moderated by the lecturer herself, as due to logistical problems a suitable postgraduate student was not available at the time due to unforeseen circumstances. The lecturer tried to encourage all the students to participate, by going one by one in an orderly manner. The students agreed that the use of real-life videos was a positive experience. Some of them said they were tired of interpreting Social Forum videos. Others think the lecturer should give the speeches, but most agree that a mix of both real-life videos and in-person speeches would be ideal.

The students discuss the advantages and disadvantages of the use of speech videos. One of the advantages they find is that real-life speeches are more motivational. They agree that some are more useful and more interesting than others, for example if you can see the audience and the real context in which the interaction takes place. If the topic is not to their liking or boring, they agree it influences the students' mood and performance. Some students think that the choice of topics was adequate, others believe international tribunals is a boring subject and the time dedicated on some subject matters should have been used to treat new topics.

One student suggests it would be useful to interpret a speech and then see how a professional interpreter performs doing the same speech. The lecturer tried to find such materials in subsequent years. They like the topics, but they have the feeling the total number of credits was too small, the time was short, and gives them a feeling of superficial learning. The students think the best moments to introduce real-life videos in the classroom is December, that is, two months into their training.

The fourth focus group in USAL took place with two moderators who were only a year older than the students, with the purpose of trying to make the focus group more dynamic and participatory, and to have one extra moderator just in case the first one was unavailable due to unforeseen circumstances. The students value positively the use of the chosen videos in the interpreting class, although they think the use of videos has started a bit too late in the year (meaning December was too late). One student believes it is necessary to work more on interpreting techniques in the classroom. The students do not agree with the way the interpreting exams have traditionally been organised in that if a student has a bad day in the final exam, their grade depends on that one performance. The lecturer tried to solve this issue in subsequent years by giving only a partial percentage of the final grade to the last interpreting exercise, and increasing the relative weight of exercises performed throughout the term.

The students did not like the theoretical classes of the first month of the year (taught by other lecturers) and believe they should have started the practical sessions before. They do not approve of the fact that, in other classes they attend, it is always the same students making speeches, because this means they get fewer opportunities to practice interpreting than their peers. They are happy to have received native speakers in the current interpreting class on Fridays. They believe the lecturer should have explained earlier on, in the computer lab, how to download videos from the platform, and not only after realising that no-one had done it yet. The lecturer explained it earlier on in the term in subsequent years.

The students would have liked to start the one-on-one tutorials earlier in the year. They complain that another teacher who shares the same group and subject changes her classes too often. On a positive note, they believe they are being very well prepared by the lecturer, that the lecturer makes an effort to do new things and bring videos, because they get extra ways to practice. The disadvantages of having this lecturer are that they have a lot of homework with the glossaries and speech structures, and they have found specific sound problems on some videos, which the lecturer tried to solve in subsequent years. The students agree that they concentrate much better when they interpret a video of a real-life speech, and they get a feeling of having stood up to the challenge when they manage to interpret a well-known person such as Barack Obama.

They value positively the OCW platform created by the lecturer, although they regret that the subject matters of the speeches sometimes do not entirely coincide with the topics of the official programme for their final exam. The lecturer tried to solve this in subsequent years by not only asking them to write down 5 topics they were interested in, and then deciding collectively all the topics for the year, but also by changing the programme, and minimising the percentage the last interpreting exercise counted for their final mark.

The students prefer using the videos in the classroom rather than in self-study hours. They agree that the videos are well ordered and the difficulty increases progressively in the subject's Moodle and in the OCW platform. They believe it is a good idea to use real-life videos and they would like to use them as well in other classes. They value positively the idea of sharing knowledge and being able to do self-study work in a free platform, but highlight the role of the teacher and receiving the necessary feedback. They feel more motivated and more nervous in a real booth than at home using their computers.

The participants commented positively on the usefulness of the real-life videos and the consecutive class they had the previous year. Among the characteristics that make a video speech more difficult the students mention the following: noise, accent, structure, reading, speed. Some participants mention they are not motivated by contextual information and gestures, while others feel motivated by them. Others say the videos motivate them a lot.

On the subject of feedback, finally, the students mention they are happy with the amount of feedback received because the lecturer opens the transcript after the exercise and corrects the most important mistakes made in a few booths. They do not like other methodologies whereby whole speeches are analysed in depth in other classes. The students mention the lecturer corrects as well on a one-on-one basis, also saying what they did well, not humiliating anyone in front of the rest of the class, in what they consider to be an appropriate manner. One of the students did not like the manner in which, at the beginning of the year, they each had to come out of the booth and tell the rest of the students what they had done well in the exercise, and what could be improved. The students believe the two lecturers of the subject should coordinate better, as the other lecturer arrived a few weeks late; the lecturer did her best to make improvements in that aspect, but some organisational aspects are not within her remit.

4.3.3 Results of the focus groups with volunteer interpreters

The focus group that took place at the end of the crash course in the Malmö Social Forum had a double purpose: firstly, to improve teaching practices by receiving feedback from the trainees and allowing them to verbalise their own learning processes; secondly, to study how ethical values can influence ad-hoc volunteers' motivation. The focus group was conducted by Margareta, a graduate student of interpreting who, at the time, wished to continue her studies on research in interpreting. She was asked to moderate the session because she was close in age and interests to the volunteer trainees, having only recently finished her training herself in an interpreting school. This made it easier for the group to bond with her and reply truthfully to her prompting during the focus group, rather than to the instructor who had trained them.

Margareta's preparation for the task of moderator during the focus group consisted firstly in her attending a session conducted by the instructor with one of the students, Sophia, who, due to unrelated circumstances, knew she would not be able to attend the focus group with the other volunteers. The instructor prepared the setting and questions, meant just as guidance for Margareta (it was not entirely scripted, nor completely improvised), and then carried out the mock session which was also recorded. Margareta was to let the volunteers speak as freely as possible, and only prompt them when no-one had anything additional to say, in addition to the more traditional role as moderator, making sure that everyone spoke in turns to facilitate transcription.

During the focus group with the wider group, Margareta reminded them that their answers would be anonymous and that the recording would be used only for transcription purposes. She tried to make them feel at ease and relaxed (sitting in a circle, nodding and encouraging their answers with smiles and expressions of interest) so that they could speak more freely about the whole experience in the crash course. She began with a series of general questions, then directed the conversation towards the parameters under study (interest, usefulness, difficulty), without mentioning the variables directly. There were also a few questions about logistical issues and some general concluding questions so that trainees verbalised their experience and evaluated their progress as a whole.

The trainees participating in the focus group discussed various ethical issues that have been at the heart of criticism directed at ad-hoc volunteer interpreters, namely, the supposed lack of respect towards the profession—although the volunteer interpreters were completely unaware of these controversies. When asked whether they had been aware of how much work goes into an interpreting task, some replied that they were, but most that they were not, and even pointed out that they had never thought of it as a job because interpreters are invisible people. They realised it was more difficult than they had previously thought, and were impressed by how professionals could continue getting the message across regardless of how good (or bad) the speaker was, whether they agreed with was what being said, or not.

The choice of format for the real-life speeches used in training did not constitute an ethical issue for the volunteer interpreters because they had never attended any other interpreting course where other materials could have been used. Ad-hoc trainees appreciated that the videos used had a transcript to check the quality of their production. Among the factors they quoted as making their training seem more difficult (though, revealingly not less interesting nor less useful, as we will see below) were poor sound quality (in two cases), differences in accent, vocalisation and rhythm. One of the open questions in the focus group centred on the variables that helped perceive an interpreting task as more or less difficult. Without mentioning any of the variables or explaining the purpose of the question, Margareta prompted them to speak about their experience and opinions. They mentioned accent, specialised terminology, vocalisation, speed, rhythm (i.e., "They often stop with the sentence and then they interrupt themselves. And you have to decide if you want to continue or if you also stop and that's really important that will happen in real life as well." Malmö Recording 2, Focus Group 2, min. 17:07).

One of them, for example, replied: "I think it's also important to train with different accents. "Because if there is only going to be one speaker for reading the text then it isn't going to work in real life. We've got to get used to African people, Irish people, American people, all kinds of people" (Malmö Recording 2, Focus Group 2, min. 17:30).

When Margareta prompted them about motivation (without mentioning the term) by asking them whether they had found the interpreting exercises interesting, the volunteers themselves mentioned the word motivation of their own accord:

T: I found it much easier if the topic was actually really interesting. I found it much easier to convey it and to really stay with it and not to hang like that behind.

T1: I think it's also some kind of motivation that lies behind really, because if you are listening to some topic that interests you, then you can practice a little bit more, maybe than with something that... it's something boring. But without forgetting that you need to practice with more speakers. Not only with one speaker that suits you.

T2: Yeah... yeah. But our job is just to translate many things that people say, that we have to translate, I don't agree with it or if it doesn't interest me, but I have to do my job so...

T1: Yeah. Absolutely.

T2: Why, why should it interest... I don't understand why should it interest me if I have to translate it.

T1: Or for example, if I'm listening to videos that I'm not understanding many things, or if I listen to videos that are about topics that doesn't interest me at all, then I'm going to train less.

T: Yes. But you can't be, you can't be interpreter and say I just wanna do a speech about the ocean...

T1: No, no... That's not what I mean. I mean for practicising, for training.

T: No, no, but maybe you can have more fun, more fun. Maybe it's more fun to have a topic and easier.

T: I don't know...

T: At the beginning at least.

Margareta: Maybe there're subjects that you are interested in, I think that is the point here with this question like, If you are invited to a conference on, I don't know, nanotechnology. Would you... Would it be as interesting as a conference on Human Rights or something? So do you think this will also influence the way you work?

T2: Don't knock it until you try it. Don't knock it until you try it. You don't know, maybe it would be very interesting. You don't know.

T: I think it's up to one. I mean, you are going to have to deal with many different things and then if you think that you need to practice a little bit more. Then you can think, ok I will try to find a speech from Chomsky that I like so much.

Margareta: Are there any subject, by the way, that you like? Like that you, you particularly like. If you like just leave...

T: No, no. It's ok. I just were going to say that I really don't agree with you because we are all here voluntarily, this is not a job. It's something

> that we do because we are interested in the issue, of the Forum. I would never volunteer to translate conferences that is about something that I'm not interested in. (Malmö Recording 2, Focus Group Session 2, 18:54–20:44).

The focus groups in Heriot-Watt University, USAL, and the Malmö Social Forum, together with the quantitative and qualitative results presented at the beginning of this chapter, are brought together in the action research spiral designed. For each loop, quantitative, qualitative open-ended replies, and focus groups results were taken into account in order to improve the next loop in the spiral and the next steps of planning, gathering data, reflecting and implementing again, with the aim of improving practice for each of the groups involved and their teaching and learning experience. As we have explained in the procedure, every time the participants interpreted each of the speech videos used for this study, a new loop started in the action research spiral implemented. They then filled in the questionnaires, and they explained their choices in the form of open-ended replies. When they had done this for each of the videos, they participated in a focus group, before the loop started again with the next group of participants.

As we will see in the next section, the results obtained from data gathering in each of the loops can also be brought together in order to obtain empirical evidence for a wider educational purpose: the exploration of ethical motivation in the spirit of the ethic of care.

Chapter 5

Discussion

A well-established caution about statistical analysis is that correlation is not causation and, in the reports of the statistical analysis of the empirical results, I have been punctilious about avoiding assignment of cause. In the discussion, however, it must be noted that one variable in these correlations is under the control of researchers: the choice of speeches in the form of videos, or other educational materials, that the instructors choose, which can affect perceptions of the participants performing the task at hand. The other variables, the researcher cannot control. The ability to change the independent variable allows researchers to test for causation, not to assume causation. When only one variable can, in practice, be changed, that could be treated as a possible cause, and the other, as a possible effect: lecturers will attempt to enhance student interest with choice of video, choice of context, choice of directionality, in order to obtain positive educational effects. Thus, in the practical discussion that follows, the terms cause and effect will be assumed to be appropriate.

In this section the results of the empirical data obtained will be discussed. For this, I will proceed in the same order as I have done before: first, the quantitative results obtained from the questionnaires and the statistical analysis of the data produced will be discussed; then, I will comment upon the results extracted from the qualitative approach and, thirdly, the results obtained from the focus groups will be analysed. Finally, I will see how these three types of results can be understood as part of the same action research spiral.

5.1 Discussing general results

Generally speaking, we will see that the empirical results of the quantitative study are in accordance with the main and secondary objectives, and the expected results, stated in the introduction. When taking into account all of the speech videos as a whole, most of the participants found the exercises useful and interesting, and most participants value the videos as being of medium difficulty. This may indicate that the level of difficulty of the videos was optimally adapted to the general level of each group of participants.

The first quantitative results, on the correlation between general perceived difficulty and perceived interest, seem of special educational value: if a person is interested in the task, they will find it less difficult, and vice versa. If an interpreting student is enjoying the task of interpreting a speech, they will find the task less difficult, as was expected in the general literature on motivation (Meece, Pintrich, and Schunk 2014).

This, however, is not true when the speeches are very easy; minimal difficulty does not seem to elicit maximum interest in the participants of this study. Similarly, maximum interest is found when the videos are of medium difficulty, not when they are deemed easy. This has educational implications which need to be taken into account when choosing interpreting exercises: the selection of topics may be as crucial as fine-tuning the level of the exercise.

These results may have other implications of consequence in interpreter education. In the introduction, I spoke of mastering the soft skills of the emotional equilibrium at the same time as the hard cognitive efforts taking place in interpreting, in order to maintain the concentration on the task at hand, or focused attention (Jiménez Ivars and Pinazo Calatayud 2013a; Fortenbaugh, DeGutis, and Esterman 2017). These results show that when interest is sustained, the perception of difficulty decreases; in the emotional equilibrium, this may be of special use when trying to help students to concentrate while interpreting, by using their interest in a specific topic, or other emotional variables such as their empathy towards the speaker (Korpal and Jasielska 2018). These general results justify incorporating soft skills such as empathy or motivation in interpreter training (Valero-Garcés and Peñalver 2021).

Of great interest is the unusual zero p-value; all the data gathered showed correlation: the students were consistent among themselves in finding that they perceived less difficulty for videos in which they had greater interest; essentially, no participants had the reverse experience. This general result demonstrates that the choice of task matters in interpreting, as is the case for other complex tasks (Waloszek 2021), as well as being in accordance in general with studies on perception of interest, for example, in maths (Harackiewicz and Knogler 2017; Hidi 2000; Renninger and Hidi 2016; Elliot, Dweck, and Yeager 2017b; Locke and Schattke 2018).

Table 4.6 confirms the connection. A graph of the first and last columns in the table would show that the least-interested students mostly found difficulty around 4, whereas the most-interested students were around 3 (fig. 5.1):

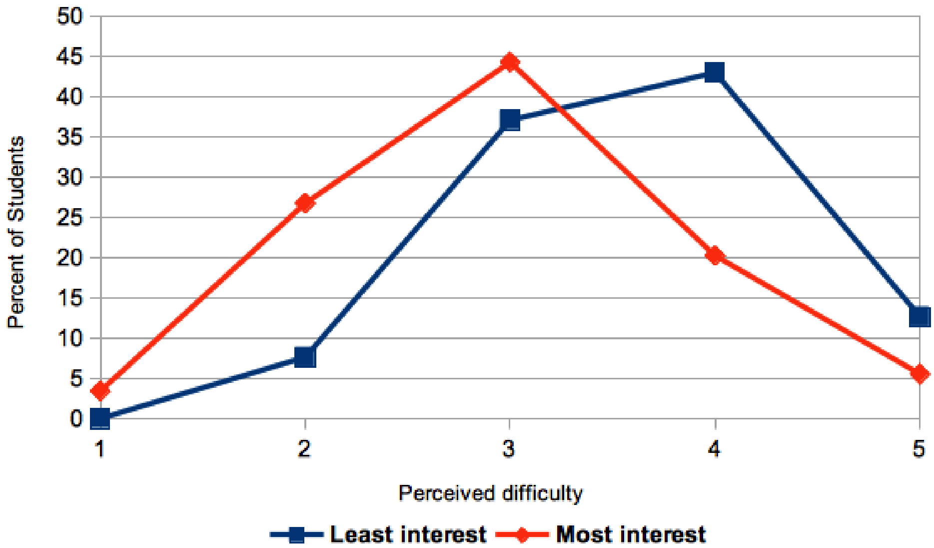

Figure 5.1: Interest vs Perceived Difficulty

The correlation between perceived difficulty and perceived usefulness is also negative, meaning that when participants do not find an exercise useful, it is quite probable that they will find it difficult to interpret. This would have also been expected from having reviewed the literature on perception of interest (Eccles and Wigfield 2002; Eklöf 2021).

Again, as with the results obtained for the variable interest, when we take into account the results for all the exercises together, maximum usefulness appears when the difficulty is medium. Minimal difficulty does not seem to elicit maximum usefulness either. Perceived interest and perceived usefulness are clearly connected as emotional variables, so we may think that since interest correlated with lower perceived difficulty, usefulness will have the same correlation.

The data were subjected to the same tests to test this hypothesis, which shows very similar connections: table 4.7 is very much like table 4.5 with the same negative correlations of very similar magnitude, and again with perfect statistical significance (p-values of zero).

Similarly, the contrast-test table leads to the same conclusions, and a graph of the difficulties perceived by the students perceiving a video "least useful", versus "most useful" looks very much like those graphs for grading by perceived interest (fig. 5.2):

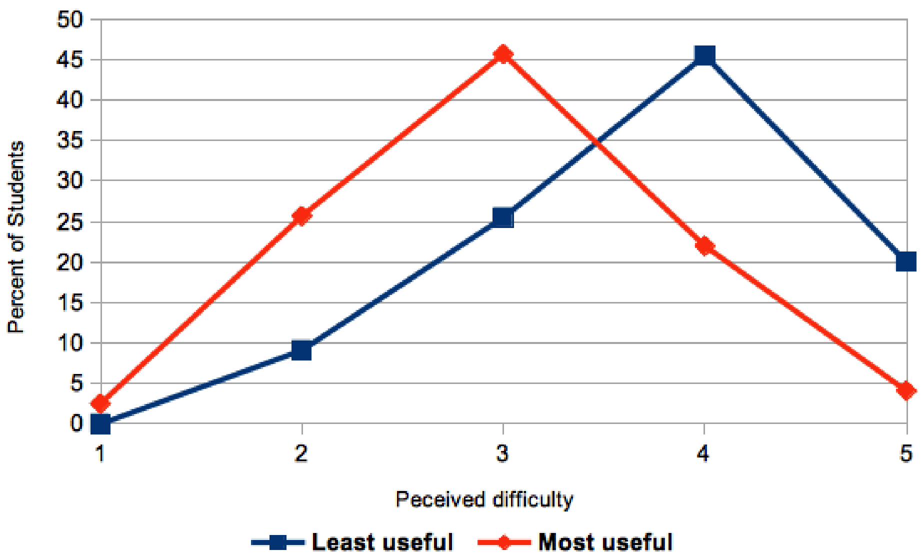

Figure 5.2: Usefulness vs Perceived Difficulty

Thus, the variables perceived interest and perceived usefulness behave similarly as compared to perceived difficulty of the exercise. The relation between perceived usefulness and perceived interest is also shown in the results obtained: when participants find a speech interesting to interpret, they also usually find it useful as an exercise. This relation makes sense if we bear in mind the main motivational theories: self-determination (Ryan 2023), expectancy-value (Wigfield and Eccles 1992; Eccles and Wigfield 2020), and self-efficacy (Bandura 2016). The latest theories on motivation focus more on situatedness and start to look at feelings as a key part of the motivational equation.

In this case, when perceived interest is minimal, perceived usefulness also tends to be low; when perceived interest is maximum, perceived usefulness also tends to appear high for a larger percentage of participants. In conclusion, we should be confident that the videos selected were engaging enough that we can neglect lack of perceived interest and usefulness as a factor in other answers.

Finally, the results show that perceived difficulty varies according to the context of the videos. In this case, because there were a relatively small number of videos (21), we can only reach tentative, localised conclusions with respect to the results. For these specific 21 videos chosen for the study, however, the perception of difficulty is almost double in institutional videos: perceived difficulty was rated higher by the participants for institutional videos (on the medium to maximum perceived difficulty range) than for Social Forum videos (on the medium range, tending towards lower-medium).

The statistical tests applied show the clear correlation that Social Forum videos were perceived as less difficult. What it noteworthy is how clearly figure 4.1 displays this effect with the blue bars depicting institutional context as a near mirror-image of the Social Forum context bars. Both sets of students had a most-frequent answer of medium. But, of those students not answering medium, the values are exactly reversed. Far more students answered with 4 or 5 for difficulty in Institutional context than Social Forum, and the reverse for answering 1 or 2. From this we can conclude Social Forum videos were perceived to have strikingly lower difficulty, for the two-thirds of students that did not answer medium to perceived difficulty.

Educational efforts that work to stimulate perceived interest and perceived usefulness will be beneficial for all students by effectively lowering their perceived difficulty, if only slightly. The fact that these results have high statistical significance, and that the difference between the least—and most—interested students was also large enough to be important, allows us to conclude that greater perceived interest and perceived usefulness are worth consideration as a selection criterion for educational videos, along with appropriately challenging content.

To test that last conclusion, we can compare perceived interest and usefulness by testing them directly to see if they are always closely associated, perhaps allowing one to be eliminated in future research. The result is, again, a p-value of zero: it does not mean that it merely shows significance; it means it has a perfect significance, and all the data points in the same direction. The statistical analysis shows the correlation is strong. A graph of the minimum, medium, and maximum perceived-usefulness students against their interest level shows it clearly (fig. 5.3).

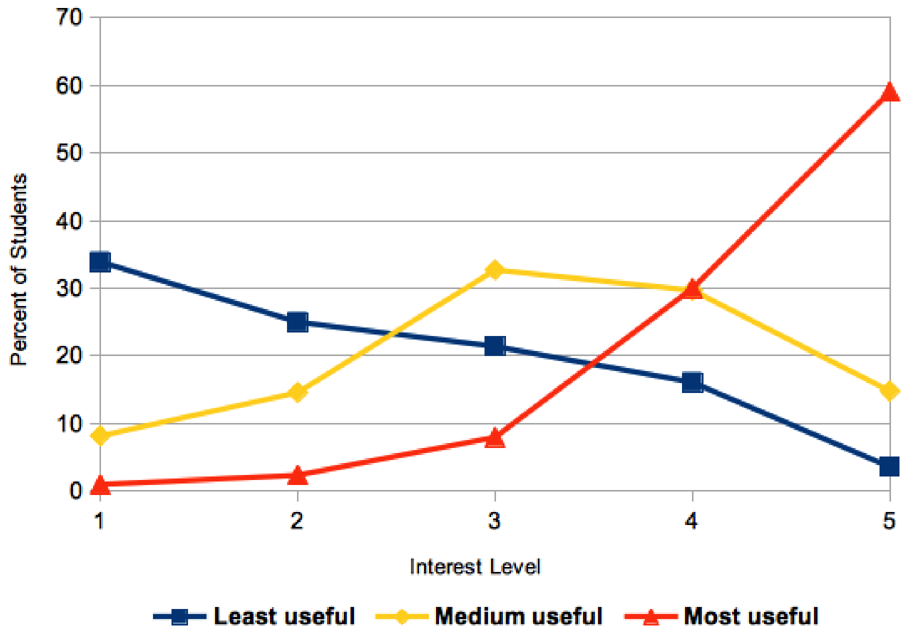

Figure 5.3: Usefulness vs Interest

The students who graded perceived usefulness in the lower range are clumped up as well with least interest as a variable value, almost none have high interest. The line for the students seeing maximum usefulness is the opposite: rising to the high end, nearly 60% grading such videos both most useful and most interesting as variable values. Those who perceived medium usefulness, were nearly all as well in the middle of the interest level, or one grade on either side of it. Only about 20% of those finding medium usefulness had extreme levels of interest.

5.1.1 Conclusion

The first general objective (MO1.1) was to determine whether the students' perceived difficulty decreases proportionally as perceived interest increases. As I explained in the introduction, the expected result, that indeed there is a correlation between these two variables, has been found to be the case. This is also pertinent in the light of the literature reviewed, as it confirms what has happened with other contexts and tasks, such as education or maths (Eccles and Wigfield 2002; Jiang, Simpkins, and Eccles 2020), where students' perception of interest increases as perceived difficulty decreases. The result is also in accordance with the literature on interest as a component of intrinsically-motivated behaviour (Hidi 2000; Harackiewicz and Knogler 2017), and of interest as an emotion schema (Renninger, Nieswandt, and Hidi 2015). This result, however, has limitations at the extremes: when the speeches are perceived as very easy, or perceived as very difficult. The speeches perceived as most interesting correspond to videos of medium perceived difficulty.

The general and pedagogical implications of this first result on the correlation between interest and difficulty are in accordance with findings in motivation in education (Knogler 2017; Spielberg and Azaria 2022). Applied to our field of study, this would mean that the selection of topics and speeches should bear in mind at least both variables, in order to fine-tune not just the level of difficulty of the exercise, which is standard practice in an interpreter lecturer's class preparations, but also the perceived interest the students may have for that speech. For this, asking the students what topics they are interested in at the beginning of the semester would be a crucial first step. Another recommendation could be to ask them about speakers and contexts that inspire them, people they share values with, or even actors they like.

By way of example, most of my students enjoy interpreting Emma Watson's feminist speeches at the UN at a given point of the semester. Identifying these preferences in the first few sessions may help the lecturer choose similar content for the rest of the year, or for future students who may share similar tastes if they are of a similar age.

The second general objective (MO1.2) was to determine whether perceived difficulty varies with perceived usefulness, and the result we expected was that these two variables do correlate. The result confirms that students' perception of usefulness increases as perceived difficulty of the exercises involved decreases. Studies on perception of usefulness also support this result (Eccles and Wigfield 2020). Thus, when students' perception of usefulness increases, that is, when the subject matter of the speeches is closer to their beliefs, the perception of difficulty decreases.

The general and pedagogical implications of this second result, on the correlation between perceived usefulness and perceived difficulty, are similar to those explained for the first specific objective; the lecturer can choose speeches and exercises according to perceived usefulness of the students, whether in the perceived usefulness of a given topic, or of speakers and contexts, thus taking into account the students as empowered participants in the teaching and learning process.

Results pertaining to objectives MO1.3 and MO1.4 will be treated in subsequent conclusions in subsection 5.4 Discussing results on ethical motivation.

5.2 Discussing results for retour interpreting

When it comes to the relation between perception of difficulty and perception of interest in retour interpreting, the empirical evidence demonstrates there is a correlation, and that this correlation is stronger when the participants are performing retour than when they are interpreting into their mother tongue. This was an expected result which we had started to look at in preliminary research with only a few students (Brander de la Iglesia and Opdenhoff 2014).

In this instance all analyses had perfect significance, so we will be able to draw strong conclusions about any effects that are seen: the relationship of interest vs difficulty, seen overall in table 4.5, splits out into a more-negative relationship, as measured by Rho of $-.228$ overall, but $-.235$ for retour direction, and less, $-.155$ for interpretation into A.

Since the statistical significance is high, we can conclude that higher levels of interest correlate with (may cause) lower perception of difficulty, even more for retour interpreting than interpreting into A. We can only speculate as to why this result has emerged: perhaps this happens because most of the participants have received more training into A than in retour—and, the more they have trained, the less they are affected by both difficulty and interest—or, perhaps, when an exercise is perceived as very interesting by the participants when they are listening in their mother tongue and understanding perfectly, the efforts vary in such a way that they do not find it difficult at all to convey a summary into their second language, as compared to when they perform into A. Contrariwise, when participants find a retour exercise exceedingly difficult and do not manage to convey the message adequately into their second language, they may not enjoy it at all as a result. These are hypotheses which would merit further research.

Another finding requiring creativity in its explanation, when it comes to the relation between perceived interest and perceived difficulty in retour, is the fact that interpreting into English B, followed by interpreting into English A, has a stronger correlation than doing so into Spanish—whether into A or B. Maximal statistical significance is again found with splitting those categories further into the target language. The Rho becomes even more negative for interpreting into English, regardless of direction. When participants are interpreting into English, they display lower perception of difficulty, regardless of whether it is retour or into A; but again, it remains still higher for retour as compared to interpreting into A.

Why the language pairs would matter in this instance is a question which merits investigating by designing another study for further research. A possible explanation—which would require a more specific type of study—could be that interpreting from Spanish into English (whether into A or in retour) requires an equation of cognitive efforts different to other pairs and language combinations, including interpreting from English into Spanish, and that these differences somehow affect perception of difficulty in students. For example, if when interpreting into English we use fewer words than when interpreting into Spanish, that is, if the sentences and words are shorter, perhaps the cognitive efforts vary in that sense. In sum, the relationship between cognitive efforts and perception of difficulty in retour interpreting remains to be explored (Gumul 2017; Doubalová 2019), but according as well to specific language pairs. More research would be necessary before attempting to answer the questions emanating from these exploratory results.

Similarly, the correlation between perceived difficulty and perceived usefulness is stronger in retour than when interpreting into the mother tongue. Again, we have the highest possible statistical significance. The negative correlations for the overall sample split out into an even stronger negative Rho for retour interpreting, and a lesser negative for interpreting into A. Participants' higher interest associates with lower perceived difficulty even more for retour interpreting, though the effect is nearly as strong with interpreting into A. Table 4.16 is similar to table 4.14 in confirming that, without regard to directionality, interpreting into English enhances the correlation between perceived usefulness and perceived difficulty.

What is perhaps noteworthy in this instance is the fact that participants' perception of usefulness correlates with their perception of difficulty in a stronger manner in retour and, specifically, in interpreting into English A, followed by interpreting into English B. This could be the case because English, as the *de facto lingua franca*, is considered by the participants as a specially useful language to be able to interpret into, whether using a mother tongue, or in retour (Opdenhoff 2011; Pokorn and Južnič 2021).

The fact that perceived usefulness seems to behave in the same way as perceived interest in relation to perceived difficulty is not surprising: the two motivational variables are intrinsically related. Whether overall results, or split into retour versus interpreting into A, and regardless of language, perceived interest and perceived usefulness were strongly connected. Participants in all situations perceived that when videos were more interesting they were also more useful, and vice-versa.

Why this direct correlation between perceived interest and perceived usefulness is stronger in the case of retour interpreting than in interpreting into a mother tongue for the language combinations explored in this study, could also be a matter of speculation. Perhaps perceptions of usefulness and interest are felt as more powerful by participants when the original speech is in their mother tongue because they understand the speech in all its cultural idiosyncrasy; perhaps they empathise more with the speaker in their own language and this empathy triggers both interest and usefulness in a more powerful manner than when the speech is in a second language. It is a result with no clear explanation, as are many of the emotional aspects of simultaneous interpreting education. In the line of work by Gumul (2021) and Rosiers, Eyckmans, and Bauwens (2011), it could be that retour elicits both positive, and negative, emotions in a stronger manner—because it is considered more challenging, perhaps, but we can only speculate at this point.

The context of the video affects perceived difficulty as proven by the results. Participants perceive it is more difficult to interpret institutional videos than Social Forum videos. The same happens in retour and into A. The results here are clear and simple: whether they were interpreting into A, or interpreting in retour, participants found working on institutional videos to have an almost-exactly mean difficulty of 3; but that score went up by a significant amount, almost exactly half a point, halfway from "medium" to "medium–maximum" when interpreting Social Forum videos. The standard deviation of all scores is just under one, so over two-thirds of results within one point of each mean; a shift of half a standard deviation is thus like a shift of a third of the population studied.

5.2.1 Conclusion

The first specific objective pertaining to retour interpreting (SO2.1) was to determine whether the students' perceived difficulty varies as compared to interest perceived when interpreting in retour. As I explained in the introduction, the expected result, that indeed there is a correlation between these two variables, and that this is the case also in retour interpreting, has been found to be the case. Even more so in the case of retour, as we have seen in the discussion above.

In the light of the literature reviewed, this result confirms what has happened in other contexts and tasks, for instance in education or maths (Eccles and Wigfield 2002; Jiang, Simpkins, and Eccles 2020). That is, students' perception of interest increases as perceived difficulty decreases. The result also corroborates the literature on interest as a component of intrinsically-motivated behaviour (Hidi 2000; Harackiewicz and Knogler 2017; Knogler 2017), and of interest as an emotion schema (Renninger, Nieswandt, and Hidi 2015). However, there exist limitations when the speeches happen to be either very difficult or very easy; also in the case of retour, speeches perceived as the most interesting correlate to the perception of medium difficulty on the part of the students.

The implications of this result on the correlation between interest and difficulty in retour are, as was the case for the general results, in accordance as well with general findings in motivation in education (Spielberg and Azaria 2022). Applied to interpreter education, we could bear in mind both variables when selecting speeches and topics. Thus, fine-tuning the level of difficulty of the exercise is as important as the interest the students might perceive. Again, asking the students topics of interest in the first session, as well as inspiring speakers or contexts may be recommended.

The second specific objective pertaining to retour interpreting (SO2.2) was to determine whether perceived difficulty varies with perceived usefulness when interpreting in retour. The result we expected was that these two variables correlate as well when performing retour. The result confirms that students' perception of usefulness does indeed increase as perceived difficulty of the exercises involved decreases in the same way. Studies on perception of usefulness in education also support this result (Eccles and Wigfield 2020); perception of usefulness increases when the subject matter of the speeches is closer to what they believe is important, while perception of difficulty decreases.

The implications of this second result on the correlation between perceived usefulness and perceived difficulty in the case of retour interpreting, are also pedagogical in nature: the lecturer can find speeches bearing in mind the perceived usefulness triggered in the students, whether in topics, speakers, or contexts, and empower students as participants in the educational process.

Perhaps the most surprising result is the possibility that language pairs may matter: interpreting into English B, followed by interpreting into English A, has a stronger correlation than doing so into Spanish—whether into A or B.

Results pertaining objectives SO2.3 and SO2.4 will be treated in subsequent conclusions of the subsection 5.4 Discussing results on ethical motivation, below.

5.3 Discussing results for ad-hoc volunteer interpreters

When comparing general perceived difficulty in students and volunteers, the results indicate that it is very similar when they are interpreting into their mother tongue. There are no differences at all in perceived difficulty between the three contexts that should affect this work. Where there was statistical significance to a difference (USAL vs ESF) it was too small to be important (0.02 of one difficulty point). The only group that varies is the Heriot-Watt group (but so slightly it is barely worth mentioning; it appears in the statistical results, but the difference between 0.16 and 0.18 is so close one would need about a thousand data points to make sure it is different at all), while the USAL students and the Malmö volunteers, as a whole, perceived difficulty in a similar manner when interpreting into A.

When interpreting in retour there are no significant differences in perceived difficulty between the three groups. Tentatively, participants in any setting—students, volunteers, in different settings—all have about the same perceived difficulty: 3.2. Summing up, not even the Heriot-Watt difference is large enough for it to be worth commenting upon. A difference in mean difficulty of 0.29 or 0.3, less than a third of the way from medium to medium-maximum is worth noting, but unlikely to affect conclusions, and certainly does not support deprecating results from any group as unusual. Thus, it seems that, among the volunteers, the fact they did not know that retour has been historically considered as a difficult activity in interpreting does not affect the results for perceived difficulty.

The results for perceived interest vary slightly between the USAL group and the Malmö volunteers and, in a lesser degree, between the Heriot-Watt students and the Malmö volunteers. The ESF students were somewhat more interested, but not dramatically so. A score about 0.3 higher than the other two student groups is noteworthy, but not enough so to treat their data further.

In general, the fact that the Malmö volunteers perceive more interest than the students could be due to the fact that, although both the students and the volunteers are performing the interpreting task at hand of their own accord, as a choice they themselves have made, the students may feel attendance in class as compulsory. Alternatively, there could be more pressure to remain, performing the task in order to pursue their studies, practice, and graduate. The volunteers, however, may not feel the same sort of pressure or, perhaps they feel stress of a different type; they will be interpreting at a Social Forum with a real audience within days of their crash course and therefore have to train to do it properly.

Finally, when discussing perceived usefulness, the results show it is higher in the Malmö volunteers than in the USAL group, but the results do not differ as much when doing other comparisons among the three groups. This may be because the Heriot-Watt group found the videos especially useful, as it was the first time they had used real-life videotaped material at all. Thus, table 4.29 looks a lot like table 4.27 because, again, "interest" and "usefulness" are closely associated for participants, in all contexts, directions, and languages.

5.3.1 Conclusion

If we focus on the results obtained in the case of volunteer interpreters, we can safely conclude that they are very similar to other groups, when interpreting into A, when doing retour interpreting, and also when looking specifically at each variable: perceived interest, perceived usefulness, perceived difficulty. The objectives specified in the introduction pertaining to interpreter volunteers (SO3.1, SO3.2, SO3.3, SO3.4) are therefore answered in full, as are the expected results.

It was expected that the students and the volunteers demonstrate a similar degree of perceived difficulty, and that this difficulty would correlate to perceived interest and perceived usefulness in a similar manner. In this instance, the results confirm there exist some differences, but none that would justify treating the results as significative, when treated separately and without taking into account the context of the videos.

When performing retour, however, we had expected that the results would be different: we thought students might be more aware of the difficulty involved than volunteer interpreters, whereas the volunteers may be more interested in the values, and find the speeches more useful according to their beliefs. We had based this expected result on subjective experience, and on the literature available on retour interpreting to date treated in chapter 2, which does not specifically focus on the three variables at hand (Apfelthaler 2020; Pokorn and Južnič 2021).

This guess, thus, was proven wrong, when looked at independently—in the next section we will see that, when looking at the ethical motivation equation as a whole, Social Forum participants do show significative differences, when taking into account the specific contexts of the videos.

What is worth noting, then, is the result that volunteer interpreters' perceptions of interest, usefulness and difficulty—without taking into account the context of the video—are similar to that of student participants, whether into A or in retour. The general implications of this result may be that values and beliefs remain a motivational factor regardless of where the participants are.

5.4 Discussing results on ethical motivation

The result of the operationalisation of motivation as the sum of perceived usefulness and perceived interest was confronted with the ethical aspects of this study, also operationalised as group context and video context, thus exploring ethical motivation in a quantitative manner, with the variables at hand.

The data indicate that motivation is indeed higher in the group of Social Forum volunteers when interpreting videos of Social Forums. Contrariwise, the motivation of the volunteers is lower than that of the other groups when interpreting institutional videos. As for the students, it seems Social Forum videos motivate them more than institutional videos, but the difference, although significant, is not as large as in the case of the volunteers.

These results are in accordance with the literature reviewed on ethical motivation, specifically on the interest triggered by personal values and beliefs (Narváez and Lies 2009), and on the importance given to a task (Wigfield and Eccles 1992, 265). Negative emotions, such as perception of difficulty (Brown 2018), or anxiety (De Groot and Pintrich 1990), change the motivational equation when perceived interest and perceived usefulness are triggered. Lecturers can thus work on changing negative emotions as well (Schutz and Pekrun 2007; Brown 2018; Meece, Pintrich, and Schunk 2014).

One of the ways in which lecturers can do this is by providing a clear setting for the task. Eccles and Wigfield (2020) apply their 2002 perspective on the perception of usefulness to situatedness and sociocultural beliefs, as does Bandura (2016), including intercultural aspects. This focus on situatedness will also be key when discussing results taking into account the context of the speech and the setting the participants are interpreting in.

The results in this sense are so clear, even a momentary inspection of figure 4.7 eliminates the need to consider the statistical analysis in detail, save to confirm on table 4.31 that every contrast has very high statistical significance: the motivation level for Social Forums was sharply higher for every student group tested. The effect was strongest for the ESF group, nearly 3 points out of a possible variation of 8; it was twice the effect seen for the other groups, which still had important differences themselves.

Then, the operationalisation explained above for motivation was confronted with yet another of the existing variables at hand: difficulty. When motivation is low, the perception of difficulty tends to be higher; when motivation is considered average, perceived difficulty on the part of the participants is slightly lower, and when motivation is high, the perception of difficulty is even lower, especially in the case of Social Forum videos as compared to institutional videos.

To sum up, as ethical motivation increases, both contexts show a decrease in perceived difficulty, with Social Forum contexts always having lower difficulty than institutional contexts of the videos. Further, perceived difficulty falls more with increase in motivation for Social Forum contexts than in institutional contexts, that is, difficulty drops by 0.53 in Social Forums across figure 4.8, but only by .28, half as much, in Institutional contexts. Table 4.33 merely confirms the high statistical significance of that conclusion, which is of special educational value to our study.

5.4.1 Conclusion

Objectives MO1.3—to identify how ethical motivation affects students' perceived difficulty, and MO1.4—to identify ways in which ethical motivation can be improved, can be addressed in the first set of results discussed above. The same applies for the equivalent objectives applied to retour interpreting, SO2.3—to identify how ethical motivation affects students' perceived difficulty in retour, and SO2.4—to identify ways in which ethical motivation in students can be used to improve the learning process when interpreting into their B language.

In this instance, the expected results, and the initial hypothesis (H1)—that ethical motivation directly influences participants' perception of perceived interest, perceived usefulness and perceived difficulty in students and volunteer interpreters alike—has been addressed successfully, as explained in the discussion above. As we have seen, volunteers show ethical motivation to a higher degree than students when interpreting Social Forum videos, and lower ethical motivation than students when interpreting institutional videos.

These results are in line with the literature review on ethical motivation in education from a feminist ethics perspective, such as Noddings (2002), who highlights that cultivating the moral sentiments is essential to education, or with educational psychologists such as Narváez and Lies (2009) who speak of the use of values and beliefs in the occasioning of moral development. The fact that motivation can be seen to be elicited by empathy (towards the speaker), principles (shared in the speech) and affiliations (eg., cultural or political) (Schulman 2002) can be the key to understanding the reasons behind the results obtained for ethical motivation.

The implications of these results can be looked at from the point of view of interpreter education, but also from a more a general pedagogical viewpoint. Lecturers can choose specific exercises, using their knowledge of which topics the students prefer. The perceived interests of the students could be different from those of the lecturer and this has to be taken into account. The information provided by these results can help trigger and sustain ethical motivation in the classroom and in the curriculum.

5.5 Discussing qualitative results

The qualitative results are valid in the sense that they give an explanation to the choices the participants made when answering the questionnaires. Still, because it was not compulsory to offer this explanation, the number of answers is not representative, as there were only 278 answers in total, in a database containing 39 000 entries. In addition, out of 21 videos only 16 received open-ended explanations to the answers given in the questionnaire, and some videos only elicited one open-ended answer from a single participant, while others get several comments. This is probably due to the fact that writing an explanation was not compulsory; the researcher insisted and reminded the participants at the end of each exercise, but it seems participants probably wrote only when they had something additional to say, when they felt like writing, or perhaps when they had extra time before the session was over.

Nevertheless, some conclusions can be extracted form the qualitative answers in the form of open-ended results. Firstly, that most of the comments are on difficulty in the content of the speech, followed by comments on difficulty in expression, such as the speed the speaker is delivering the speech at, and interest and usefulness. This may mean the participants only felt an urge to explain their quantitative answers in an open-ended explanation when they had had trouble with the speech, or there was a clear issue they wanted to comment upon, whether positive or negative.

In this respect, the amount of positive comments (64.4%) as compared to negative comments (35.6%) is surprising to the extent that, as there are only 278 open-ended answers in total, it would have be expected that the participants would write extra explanations only when they encountered a problem or complaint. This has, however, not been the case at all. We can only speculate as to why: perhaps the most advanced students, who found the exercises less difficult, are those who like writing, and thus preferred to comment more on their experiences. We can find out if this is the case in further research by comparing these results with the final marks of the students.

The small number of total answers for the qualitative part of this study makes it impossible to reach conclusions pertaining the contrast hypothesis offered in order to treat the qualitative data. For example, we cannot say that participants make more open-ended questions after having interpreted a video into their mother tongue as compared to retour. Another example is the fact that retour interpreting was mentioned only in four cases in the open-ended replies. We can therefore reach no conclusions with the information produced in these four comments by participants.

Even though there is a larger number of positive open-ended comments by participants who have just interpreted in retour, as compared to the number of positive comments after having interpreted into A, we cannot say this result is significant, again due to the reduced number of open-ended answers. The same occurs with the fact that more positive comments feature usefulness (27.5%), interest (27.5%), and the fact that the content was not difficult (19.6%) after the participants interpreted into A, than after performing retour, where the positive comments were distributed between usefulness (12.7%), interest (23.4%), the lack of difficulty in content (20.8%) and in expression (19.5%). These results, though interesting because they provide information about the teaching and learning experience of specific participants, are not statistically significant.

Despite the small number of answers, it is relevant to underline the fact that, for negative comments, the variables difficulty in content (33%), difficulty in expression (33.3%), difficulty in presentation (13.6%), and accent (13%), in that order, are present in high percentages after the participants have interpreted into A. After having done an exercise in retour, it is of special relevance to underline the fact that 42.2% of negative answers were comments about difficulty in content, followed by difficulty in expression (18.2%) and difficulty in presentation (12.1%). It would seem that, when there have been negative comments about interpreting into A they have focused on difficulty in content and expression, whereas in retour the majority of negative comments have been about difficulty in content. Again, the numbers are small—that 42.2% represents only 14 comments out of a total of only 278—and we cannot generalise our conclusions.

Although comments about Social Forum videos are mainly positive, and more so than comments on institutional videos, the small size of the data sample effect renders this result insignificant. The same occurs with several of the initial statements used to analyse the qualitative data, such as the fact that there are more comments about Social Forums than about institutional videos, among others. Nevertheless, as we have seen, the qualitative results are useful for certain specific information they provide, and in that they offer a partial explanation to the answers the participants gave in the questionnaires.

5.5.1 Conclusion

In general, the qualitative results obtained contribute, if only partially, to the information allowing us to find answers to the general hypothesis. The qualitative results are thus valuable in that they provide added information on the quantitative answers, which will be of use when fine-tuning the questionnaires and the open-ended qualitative comments in future research. They are also valuable in that they provide individual accounts of specific reception for a given exercise which may be of use when improving day-to-day classroom experiences.

The practical hypotheses created for the analysis of the qualitative results are standard use in statistical treatment of data, but not part of the initial hypothesis of this study, nor of the essential objectives I explained in the introduction. These practical questions in the form of hypotheses were used solely a way to treat the data we had in the form of positive and negative comments on the database, but were not meant to elicit further implications. Furthermore, the fact that the number of answers is negligible, makes these practical hypothesis useful as a way of organising the qualitative results in further research, but not as a means for generalisations or conclusions for this study.

On their own, these qualitative results are useful for the lecturer as examples of how participants voice their experiences in the form of first-hand accounts of their perceptions when interpreting a given speech. These qualitative results are also valuable in that some of them provide food for thought from a pedagogical or philosophical perspective: for example, a couple of comments speak of emotional aspects, without specific prompting. The way students word these concerns may allow for further research upon aspects which have until now been neglected in interpreting education.

Although the small number of answers does not allow for generalisations, the qualitative results discussed above offer explanations as to what types of difficulty (content, expression, presentation) are most discussed by participants. These qualitative results are also valid as a means for triangulation in that students offer first-hand accounts of their interpreting experiences. We can only, however, use these limited data together with the other results, in triangulation, in order to offer recommendations or proposals, as we will see at the end of this chapter.

5.6 Discussing the focus groups

The focus groups were successful in that the participants expressed themselves freely, and spoke about their educational experience with the speeches. In all the focus groups, the participants responded positively to the moderators' comments, and showed commitment towards their teaching and learning process, by reflecting upon what had happened during their training. The participants gave their candid opinion on all subject matters presented. In this sense, all of the focus groups presented a positive outcome, as can be read in the transcripts (see Appendix 4: Transcripts of the focus groups).

As to the results of the specific topics treated in these discussions, the participants' replies and interactions have several topics and characteristics in common, each of which were improved in subsequent loops of the spiral. I will discuss these issues one by one in this subsection.

The first recurring topic that comes up in the focus groups is that of the technical and sound problems there used to be with the videos in the first few years. Very few of the speeches had been recorded with a sound problem, and were identified so as not to be used again. At that time, in order to use a speech video in DVD format in the classroom, the lecturer had to carry a multimedia projector, a laptop and necessary cables in order to input the sound into the booths. In consecutive classes, loudspeakers would also have to be brought to the classroom. Computers sometimes had to be restarted, DVDs taken out of their slots and put back in, cables moved, etc. The result sometimes was an impression of extra noise, or loss of volume in the booth. When in doubt I would get in the booth and try out the video; on some occasions there was no such sound problem but a lack of familiarity with a specific accent. Occasionally, the sound problems were real. This changed over the years, as shown in the transcripts of the focus groups when the participants sometimes note that a booth is not working, or the first lab is about to be digitised. In USAL, one of the labs still works with cassettes to this day. The sound issue has not only been solved, as technologies develop, and participants use digitised videos in their everyday lives, but it also mirrors the slow acceptance of remote interpreting.

The advantages and disadvantages of the use of technology, as opposed to having students or lecturers reading a speech, is the second recurring topic in the focus groups, together with the factors that make a speech in video form easier, or more difficult, to interpret. The participants from different groups or ecosystems tend to mention the same variables: accent, speed, density, clarity, structure, interaction, and contextual information. The transcript of the last sessions bear witness to the fact that, year after year, participants became more and more accustomed to using videos in the interpreting lab, to the point where there was no question about the use of such technology anymore, just about how to improve the timing of their introduction in the programme. The same occurs with perception of difficulty on the part of the participants: in the first sessions it was a question of acceptance of the new format, whereas in the last sessions the participants valued the fact that the difficulty of the speeches was graded, that there were several platforms they could use, and that they had interpreted the easier ones first, or that they could selected them by topic.

Topic selection is a third favourite subject of discussion among participants of the focus groups. At first, the topic selection was established by the official programme of the subject, which was structured to include solely institutional contexts, and speeches prepared by lecturers, assistants, guest speakers and, largely, by the students themselves. As shown in the transcripts of the focus groups, this has changed year after year in order to include videos at an earlier point of the learning curve, as well as making the choice of topics more participatory. Easy videos can be included from the start of simultaneous interpreting education, yet traditions are slow to change; the fact that video material in original language is now widely available from school age has no doubt changed perceptions and value judgements. In each loop, we can see an improvement in this respect. Additionally, students are now asked to select the topics they are more interested in at the beginning of the year to fill in a generic official programme, as well as those they find more useful.

The discussion on usefulness was at first linked to final exams on the part of some students. Others thought of this variable as relating to future professional opportunities, and all valued the fact that real-life videos made their experience more similar to that in the professional life of interpreters. In the last loops we can see a drift from this purely utilitarian point of view to a more practical approach whereby usefulness refers to how much the participant has profited from the exercise in their educational experience.

For some years now, the exam prepared by the lecturer is in real-life video format, and counts only a small percentage of the final class mark, in accordance to the results of the first few focus groups, a change which still requires some getting used-to on the part of certain students and faculty, but has been progressively finding its way into many interpreting schools. Many lecturers and schools still use other more traditional methods for class practice and exams, and maintain an institution-oriented programme.

The programme and structure of the interpreting classes has also varied from one loop to the next of the action research spiral, as a result of the information gathered in each focus group. Although the videos were put in order of difficulty from the start, the perception of the first participants in the focus groups was that of an unstructured interpreting class, where the students arrived with different language levels and therefore mastered interpreting in varying degrees. This perception changed over the years as the lecturer tried to explain more clearly the variables at stake; in the last focus groups, participants are aware the videos have been put in order of difficulty, they participated in the making of the programme, and are well aware that practice makes perfect.

More practice is also a recurrent theme in the focus groups: from asking for more specific sight translation exercises, or for more one-on-one tutorials, the participants are always ready for improvements to be made. In this instance, the main problem to be solved was the fact that some participants called for more feedback, while others were the ones who needed it the most but did not seek to be corrected; few participants attended one-on-one tutorials voluntarily in the first few loops of the action research spiral. This problem was summarily addressed by making the first one-on-one tutorial compulsory, which allowed the lecturer to identify students who needed a second and third compulsory one-on-one tutorial, and which of the students could seek correction voluntarily.

The next focus group revealed some participants thought very little of one-on-one tutorial sessions, while others enjoyed them. In the end, the one-on-one tutorials were declared semi-voluntary: the lecturer listens to a few students in class, and tells some of them to attend tutorial sessions, which are voluntary for the rest. In the last loops, participants are happy with the fact the lecturer makes corrections, without naming students. The lecturer instead projects the original transcript of the speech on the wall, for reference. Then the lecturer can bring up, for example, the four different fragments of renditions she has been able to listen to and make notes on, while the students were interpreting, for instance, a 15-minute speech. Thus, correcting a student by name in front of everyone is avoided, unless the student in question wishes to be corrected in this way and, even in that instance, the lecturer explains to the student in a one-on-one tutorial that there are other, perhaps better, ways to receive feedback. Albeit this would be normal educational practice in other fields and many parts of the world, it took some getting used to on the part of students and faculty, and is still done differently by other lecturers, and in other schools.

The subject of interest in the topics of the videos was broached in every focus group. In this instance it must be noted that one participant of the first focus group taking place in USAL did not find Social Forum videos to their liking—the majority found them interesting, and also said so in the focus group, although less assertively. The fact that some participants expressed their views perhaps more loudly than others was a recurring problem in the groups moderated by people close to their age. This was solved by prepping the moderators for subsequent focus groups on how to make all opinions be heard. In the end, the empirical data spoke for itself, and so did the quieter participants of the focus groups.

As for the ethical component of the focus groups, at the beginning participants were not very familiar with the concepts the moderators brought out for discussion, despite the fact that they have a separate subject on deontology, which at the time focused largely on the practicalities of the profession. This gap was addressed in the groups in question by making the ethical aspects of the videos and platforms less tacit and more explicit throughout the duration of each loop. In the end, specific hours dedicated to ethical aspects in interpreting were allocated in the official programme of the course, with voluntary readings and a voluntary theoretical exam, which can bring their final marks up half a point, putting special emphasis on social and humanitarian views of ethics, the values of the Open Learning Model in the use of OpenCourseWare, and the difference between ethics and deontology, among other aspects. As of late, readings on feminist ethics are a favourite among participants, who are mostly women.

The ethical component was especially present in the focus groups for loops pertaining to Social Forum volunteers, who showed a natural proclivity towards discussing ethical issues when prompted, without previous preparation, whereas the student participants only discussed ethics in the focus groups in the latest loops taking place in academic years where ethics had been briefly treated in the classroom, or in voluntary reading assignments.

5.6.1 Conclusion

Each action research loop provides the lecturer with a new opportunity to improve what was lacking in the previous loop; a year-long "Groundhog Day" of sorts, with different actors in every new loop, thus giving the lecturer a fresh new chance at the beginning of each academic year to increase ethical motivation in the students. The main conclusion to the results of the action research spiral has to be that, when not consciously present in the curriculum, critical thought skills, and indeed ethics, can be taught at the same time as interpreting practice.

The focus groups thus allowed the lecturer to improve the teaching and learning process after each loop, and to ascertain what was happening in the classroom and in the volunteer crash courses, in order to maintain practices that were working in each of the groups, and to in turn change those that were not. The results also allowed the researcher to identify ways in which practice could be developed further through constructive criticism.

Thus, the results of the focus groups provide ample personalised and group information through the explanations of the participants in order to address the main hypothesis (H1)—that ethical motivation directly influences participants' perception of the variables studied. It provides useful information as well that clearly contributed to the main objective of this dissertation: to improve educational practice in interpreting by offering a deeper understanding of how ethical motivation affects perceived difficulty in groups of students and volunteers, as well as the secondary objectives in a specific manner.

Focus groups provide information on the experiences and context in which practices and research take place. Because most participants candidly expressed their opinions in the focus groups, the results obtained are of great help in understanding the quantitative results, and vice versa.

5.7 Triangulating ethical motivation

We have looked at the results extracted from the data obtained by the three instruments: Likert-scale questionnaires, open-ended replies, and focus groups. Then we have discussed each of the results separately according to the hypothesis and objectives that each of these results address. Finally, we have proposed conclusions, where pertinent, bearing in mind the limitations of the results, for each of the main result subdivisions discussed above, in view of the literature treated in the first three chapters. We will now look at our conclusions as a whole, from the viewpoint of our main objectives within the action research spiral that holds together this mixed-methods approach.

As for the triangulation of the three methods: action research, quantitative, and qualitative results in order to round the mixed-methods approach, there are several ways in which these three methods overlap to work together, as we will see for each of the three main blocks of objectives. Triangulating results in a mixed-methods approach is regarded as a good practice in translation and interpreting studies (Alves 2003), as is using a variety of theories and the embracing of interdisciplinarity (Angelelli and Baer 2015).

As we have seen in the results and discussion, the amount of data obtained surpasses, in many cases, our objectives and expected results. We have not only answered our research questions, but many more along the way—that is, our mixed methods approach has addressed all our objectives, and created new questions as well. Some of the results obtained, however, do not correspond to the objectives we were set out to address. Here, we will focus only on the triangulation of the results obtained by all three methods in accordance to our preliminary objectives.

The first of these pillars is the main objective (MO1): to improve practice in interpreting by offering a deeper understanding of how ethical motivation, including values and beliefs, affect perceived difficulty in interpreting exercises in groups of students and volunteers. The main objective is then subdivided into another four within the same block, featuring specific variables two by two and general ethical motivational objectives.

From the results and discussion of the three types of data gathered we can see that MO1.1 (to determine whether the students' perceived difficulty decreases proportionally as perceived interest increases), as well as MO1.2 (to determine whether perceived difficulty varies with perceived usefulness), have been answered successfully, first by the quantitative data provided in the results and discussion, and then partially by the qualitative added personal experience in the form of positive and negative comments from qualitative data. Integration of the third type of data, elicited from the focus groups, on participants' perceived difficulty in relation to their perceived interest (MO1.1), perceived usefulness (MO1.2), allows us to understand more comprehensively the situation in which the research took place.

The focus groups were created with the wider objective of improving practice and they have addressed the wider pedagogical objectives of this thesis (MO1: to improve practice in interpreting by offering a deeper understanding of how ethical motivation, including values and beliefs, affect perceived difficulty in interpreting exercises in groups of students and volunteers), as well as MO1.4 (identifying ways in which this could be done through the use of ethical motivation). The focus groups, however, have also addressed important questions on the relation of the three motivational variables under study by confirming with experiential information, that what the participants had answered about their perceived interest, usefulness, and difficulty (MO1.1, and MO1.2) was in accordance with their situational experience.

The objective MO1.3 (to identify how ethical motivation affects students' perceived difficulty) has been answered mainly by the quantitative results in that we have added the variables of perceived interest and perceived usefulness in order to obtain a value for general motivation, and we have then confronted that result to the information we had on the setting the participants were in and the context of the video. It is precisely the fact that interpreting, and interpreter education, takes place in a setting which influences motivational factors, that makes the qualitative and focus groups information obtained essential to understand this situatedness.

The integration of three methods help us address the last objective of the first block: MO1.4 (to identify ways in which ethical motivation in students can be improved). By working on each of the positive variables (perceived usefulness and perceived motivation), we manage to decrease the negative variable (perceived difficulty), and therefore largely improve the motivational equation. Adding an ethical aspect to the equation, in the form of not just values and beliefs, but also additional situational information, we make sure that what the lecturer is changing also works in the specific setting where the educational practice takes place.

With respect to the triangulation of results pertaining to retour interpreting (SO2.4: to identify ways in which ethical motivation in students can be used to improve the learning process when interpreting in retour), the above reflections must also be made, in each of the specific objectives mirroring the general objectives explained above (SO2.1 and SO2.2). Additionally, in the case of retour, we have attempted to use integration through data transformation—transforming qualitative data into quantitative data. The small number of results on the qualitative front, however, does not allow for further triangulation, other than the acknowledgement of experiential and situational aspects contributed by the open-ended qualitative comments. The last secondary objective with regard to retour interpreting education (SO2.4: to identify ways in which ethical motivation in students can be used to improve the learning process when interpreting into their B language) has also been addressed extensively in the discussion, especially with regard to the fact that emotional variables such as motivation seem to reflect strongly when performing retour interpreting in the language pair of the participants.

Blending the three sources of data comparing results pertaining to student participants and and-hoc volunteer interpreters in perceived difficulty (SO3.1), in perceived difficulty in retour (SO3.2), in perceived interest (SO3.3), and perceived usefulness (SO3.4) is a straightforward affair in that the results are very similar in nature. The quantitative data, the qualitative comments, and the focus groups account for the fact that the three motivational variables: perceived interest, perceived usefulness, and perceived difficulty behave similarly in the different groups of participants. These is, however, one difference—that setting and video context together do affect ethical motivation as the sum of perceived interest and perceived usefulness—but this result obtained was not in the initial objectives. Nevertheless, whether expected or not, is a natural result of the quantitative approach, but brought together and corroborated by the triangulation of the three methods.

Chapter 6

Conclusions

Concluding this dissertation has been no easy task: the interpreting labs's ecosystem, as is Calvo Encinas' (2010) translation classroom, is a garden full of unique people who deserve attention; the ecosystem needs constant sprucing up, watering, and a need to be looked at through research with the utmost respect.

This dissertation has explored the landscape of several transversal fields such as education, ethics, psychology, and feminism, in those specific aspects essential to interpreting studies, and to teaching. Some of those fields have been explored from the viewpoint of each other, and from that of interpreting studies. Technofeminism has been treated as an updated version of ethical approaches to freedom of knowledge and research, with a focus on the emotional aspects of the ethics of care, including its ethical values and beliefs, in the study of motivation in interpreter education. An empirical study has been designed and put in practice, then the results discussed. This dissertation tries to build upon the knowledge created by others, and to construct, and share, the knowledge occasioned here in the hope other people will share and build upon it as well.

In this last chapter, I will recall key aspects of the contextualisation and theoretical foundations of this dissertation. I will revise the arguments of the knowledge obtained and its relevance, linking the empirical study with the theoretical arguments explored. Finally, I will describe the practical implementations of this study, and put forward future lines of research.

6.1 Ethical motivation in interpreter education: The caring turn

This dissertation is an endeavour to understand in more depth, first in theory, and then by means of an empirical study, how emotional and ethical aspects influence the perception of motivational variables in interpreting students and volunteers.

In an interpreting class, the occasioning of knowledge is completed by the addition of situatedness, found in Risku's (2020) distributed cognition, centrifugal research foci, and the third principle of situated learning: self-organisation. These factors may account for the impulse, and persistence, in Kiraly's (2017) vortices' swirl.

Constructing knowledge, but from a 4E cognition scaffolding, thus brings long-neglected aspects such as emotions into interpreter education, including, among other areas of study, self-efficacy and mindfulness (Jiménez Ivars, Catalayud, and Ruiz i Forés 2014). Motivation not only belongs in the realm of emotions, it also feeds from other feelings and perceptions the interpreting students may have, largely influencing the way they see their educational process, and themselves.

Historically, emotional aspects have not been taken into account in interpreter education, in the pursuit of neutrality. In this sense, our field of study mirrors psychology and the wider academic world, where emotions were thought of as opposing objectivity in scientific research. Gilligan spoke of an initiation that forced a "separation of the mind from the body, thoughts from emotions, and the self from relationships, that is, the privileged masculine qualities" (2022), and that this separation of thought and emotion "is in fact the manifestation of brain injury or trauma."

In our field, Roy et al.'s "Interpreting Studies is not alone in the testosterone-washing of history" (2018) accounts for similar research practices. The lack of inclusion of emotional aspects of interpreting, in research, education, and in the profession has by no means been resolved. Norma and García Calvo's (2016) heartbreaking account of how interpreters may fail, in the pursuit of neutrality, to stand emotionally by victims of violence and therefore may put women and children in danger is one of the accounts corroborating this phenomenon.

As long as these ethical issues are not tackled, whether in the West or elsewhere, we can talk of the fourth wave of feminism, and of technofeminism to our heart's content; this would be to no avail. The fact that technofeminist values and beliefs are at odds with the realities of our profession may create ethical stress (Hubscher-Davidson 2021, 417). The same occurs in academia: "But who was I, just a graduate student, to see this or say anything? I admired and respected the social justice work of these men, but you see what you see" (Maguire 2021). The field of participatory action research is by no means an exception to the fact that women are not allowed to participate in the same way as men.

Yet, to use again Washbourne's words, "a task or concept model is inauthentic to the extent that it ignores the ethical dimension" (2013). As we have seen, in the case of interpreter education, the ethical dimension involves various levels of ethical choices on the part of lecturers: from scaffolding, 4E cognition—including emotions such as motivation—and to the ethics of care. The values and beliefs explored through the framework of the ethics of care are present here not just in the study of motivational constructs and variables but, crucially, in a wider perspective where femininity, embodiment, and ethical choices are at the heart of educational activities and research. Ethical decisions can be taken from perspectives choosing neutrality and so-called objectivity, or from the point of view of social justice; as Monzó-Nebot (2023, 130) puts it, "in a perfect equilibrium, the game outcome is the best possible outcome for all players and every player plays their optimal strategy." Social justice, and other postmaterialist values such as human rights, and equality, are also at the centre of the framework and contextualisation of this dissertation within the ethics of care.

As we have seen in the literature reviewed in section 3.1, although in the 1960s feminist research focused on the study of women and challenged androcentric theories, feminist participatory research in this day and age does not necessarily have to point out male bias, be done by women, or feature women's specific issues (Jaggar 2015). Feminist research can be done on any subject, and by anyone, as long as it is research considering the ethical aspects involved. It may also feature aspects historically neglected by the androcentric eye, or look at such androcentric research from a feminist perspective.

Thus, the present dissertation can be considered feminist in every aspect: it is framed within the perspective of technofeminism and the ethics of care, and it explores ethical values and beliefs in the study of motivational aspects in interpreter education.

The main hypothesis of this dissertation has been proven empirically: ethical motivation directly influences participants' perception of the variables: perceived interest, perceived usefulness, and perceived difficulty.

What is more, as explained in the results and discussions (4.4.4), the empirical results obtained for ethical motivation are clear (see figures 4.7 and 4.8), and of very high statistical significance: perceived interest and usefulness elicited by videos of Social Forums is sharply higher for student participants, and even stronger for ad-hoc volunteers. In all settings, as perceived interest and perceived usefulness increase increases, perceived difficulty decreases, and, overall, Social Forum videos are perceived as less difficult than videos from institutional contexts.

Intuitively—though still to be proven empirically in future research—this will happen with any other topic the participants enjoy; as of late, for instance, I have been experimenting with feminist speeches, my students being mostly women, and my educated guess is that these videos motivate them even more than Social Forum videos.

The proof that there is a relationship between ethical motivation and difficulty, together with the more specific results explained in the discussion, is our fundamental contribution to the main objective of this thesis: to improve educational practice in interpreting by offering a deeper understanding of how ethical motivation (including values and beliefs) affects perceived difficulty in interpreting exercises in groups of students and volunteers (MO1).

The main objective of this dissertation was divided into three groups for the sake of clarity: general objectives, specific objectives for the study of retour interpreting, and secondary objectives for the study of ad-hoc volunteer interpreters at Social Forums. The specifics of the empirical results obtained for each of these separate objectives have been addressed in depth in the section on discussions. In what follows, we will focus instead on providing a general conclusion for each of these objectives, where all the components of the action research spiral, and the elements explored in the contextualisation and the theoretical framework, come together as one.

The first conclusion with pedagogical implications treated in the discussion is that, when interpreting in simultaneous, if a participant is interested in the task, they will find it less difficult (and vice versa). Nevertheless, maximum difficulty is found when the videos are of medium difficulty (minimal difficulty does not elicit maximum interest). The same principle applies to the way perceived usefulness behaves in relation to perceived difficulty. This would imply that the selection of topics and contexts for the videos may be as crucial as fine-tuning the level of difficulty of the exercise itself.

This result is in consonance with what we have explored in Chapter 2 about ethical motivation: according to philosophers and ethicists in the literature reviewed, empathy, principles, and affiliations (also called relatedness) influence ethical motivation; according to educational psychologists, it is values and beliefs that participate in the ethical motivation equation. Perceived difficulty, in turn, is related to constructs such as self-efficacy, perception of competence, self-perception, self-schema, or empowerment. As we have seen, these emotions and their conceptualisations in the shape of constructs can overlap, complement, or fill each other's voids within the same area, or from field to field, as do all emotional and motivational variables, and have to be operationalised in order to be studied empirically, as we did in Chapters 2 and 3 with each of the variables we are using.

Thus, when a participant interprets a speech they enjoy, many things are going on at the same time emotionally, of which we can only see a glimpse when we measure perceived interest, perceived usefulness, and perceived difficulty: the participant might also be feeling empathy for the speaker they especially like. If we take a speech by Lupita Nyong'o, or Michelle Obama, for example, interpreters may feel good, because she has a contagious smile, and knows how to make an audience fall in love with her; they may share the principles behind what she is saying about education being key to improving girls' lives around the world; their ethical and political affiliation may be close to that of the speaker as well; they may feel relatedness when the speaker says she was born in a poor neighbourhood, and had to climb up the social ladder; they may be empowered by how she tries to motivate the girls in the audience to pursue their studies. It could happen that the participant is feeling all these emotions at the same time, and many more that have not yet been mapped by experts.

When a participant interprets a speech they enjoy less—for obvious reasons, we did not use in this study speeches that would have been considered boring, as we wanted the participants to remain motivated and be successful in their pursuits—the inverse emotions appear. As explained in the introduction, the lecturer can turn the metaphorical volume wheel up and down when choosing a speech. Perception of difficulty in thus intimately related to the way the participant see themselves, with what they think they can achieve, their sense of competence, but also of self-esteem and self-worth which, when interpreting, is essential to keep on talking confidently. This self-confidence can be encouraged through means other than the choice of speech: through feedback, for example. When a challenging exercise is brought into the class, the lecturer can play with all these variables in order to maintain an optimal level of motivation despite the increased difficulty.

This is of special concern when performing retour interpreting, as sometimes the perceptions of difficulty in the task, and of self-competence on the part of the participant, may vary with respect to interpreting into A. We have seen in Chapter 2 that beliefs, such as the fact that social norms describe a task as difficult, may allow for biased perceptions about that task.

With respect to retour interpreting, our results are also clear: the correlation between perception of interest and perception of difficulty is even stronger when the participants perform in retour. In addition, it seems language pairs matter in the correlation when performing retour. In our specific study, for the language pair Spanish/English, it seems interpreting into English is perceived as less difficult than into Spanish, whether into A or in retour. Regardless, the strongest correlation between perceived difficulty and perceived interest is found for the modality or retour interpreting.

The same happens, again, in the case of the correlation between perception of difficulty and perception of usefulness in retour interpreting. The results on the language pair according to directionality are unexpected, and deserve, of course, more attention in future empirical research. I have tried to suggest plausible explanations in the discussion section, but only further research could determine their plausibility.

Despite the need for further research, the results are sufficiently noteworthy to demonstrate, in the specific language combinations here studied, that retour is not perceived as more difficult than interpreting into A when participants interpret into English—if anything, interpreting into English was perceived as the easiest of the four language/directionality pairs. More research is needed on retour interpreting education at university.

These results have important pedagogical implications: from the inclusion of simultaneous retour interpreting in the curriculum as a year-long compulsory subject in its own right—whether in the case of widely-used languages like English, which are necessary and useful in the interpreting market, or of any other second languages equally important and needed in society—to the fact that participants performing retour may require extra motivational triggers, in the form of interesting exercises, especially at the beginning of their learning process, until they are confident enough to learn retour.

As for the differences in general perceived difficulty between the students and the volunteers at Social Forums performing in retour, they are very similar. Though not drastically, the Malmö volunteers did perceive more interest and usefulness in the tasks than the students, which also shows in the results on ethical motivation.

To sum up, it is the results on ethical motivation, and on perceived difficulty in retour interpreting, where we reach the most interesting conclusions, not just pedagogically speaking, but also in ethical, and motivational terms, as we have seen.

The results are clear and simple: participants did not care whether they were interpreting into A or into B; their perception of interest, usefulness and difficulty varied solely according to the topic or the context of the video (whether from a Social Forum, or an institutional setting). The different groups of participants valued ESF videos higher than institutional videos, both in perceived interest and perceived usefulness.

The empirical results obtained for ethical motivation are of very high statistical significance (see figures 4.7 and 4.8). The motivation elicited by videos of Social Forums is sharply higher for every student group tested, and even stronger for the Malmö Social Forum group of ad-hoc volunteer interpreters. In all settings, as ethical motivation increases, perceived difficulty decreases.

6.2 Practical implementations: Ethical environments for interpreter education

Throughout the years, several tools, frameworks, and learning environments for the teaching and learning of interpreting have been used in order to give a structure to the videos used in the classroom, and in self-study hours.

The first one was the Halcón server, and its website, created by Prof. José Luis Alonso Berrocal in 2009, in the context of a research project in the Department of Information Technologies at the University of Salamanca. The website and the server ran until 2012, and were particularly useful in that they provided a homepage for self-study hours where I specified homework and videos to be used. The second learning environment was an OpenCourseWare class at the University of Salamanca created in 2008, which lasted ten years—the website is still available, and it worked until the end of the pandemic, but the contents of the course can no longer be accessed by the general public. Around 2012, the use of Studium (the Moodle instance used in USAL) became, for the first time, easier and faster to manage than the previous options when dealing with heavy videos and student recordings, making it the most practical option, which also allows for the treatment of online questionnaires. This is what is being currently used. Studium is not, however, available to the wider community; it belongs to USAL and cannot be accessed freely.

In the case of the volunteer interpreters at Social Forums, the DidactiBels project was created in 2007 with a view to implementing a long-distance crash course for ad-hoc volunteer interpreters for minorised languages and peoples. DidactiBels was a free software collaborative environment accessed through the Babels website, allowing people who wished to try out, and subsequently train in order to prepare for a Social Forum, to access instructions and videos. It was created in the months before the crash course for the Malmö European Social Forum took place, and was used subsequently in a number of local and global Social Forums (for a full report and history of educational issues in Social Forum interpreting, see Brander de la Iglesia 2010).

6.3 Future lines of research

As we have seen, this study has explored traditional and new approaches to occasioning knowledge in interpreter education; from the treatment of emotions, and ethical values and beliefs, to retour interpreting seen as an emancipatory modality for minorised languages in the technofeminist era. The main objectives about ethical motivation have been addressed, as have the secondary objectives on retour and ad-hoc interpreting in the empirical approach. This study, however, leaves us with unanswered questions, and with many results that deserve explanation and further research.

Firstly, there still exists data from the questionnaires that does not appear in the final matrix, either because the videos used for the exercises were in other languages—namely, in the French/Spanish language combination—or because the videos were only used only for two or three years, and not for the duration of this study. There exists also later, untreated data which can be analysed and discussed upon in smaller studies on retour interpreting, or on ad-hoc volunteering.

Secondly, there are variables in the matrix that were not taken into account, as explained in the procedure, as a conscious decision, but which can offer useful information in future studies specialising on those issues. One of them is the mark obtained by students. Another one is gender. Similarly, some of the results were analysed using, consciously, only general perceived difficulty as a variable, but we could expand the statistics and look at each of the aspects bringing general perceived difficulty together, for instance, in order to look only at the perceived difficulty in the content of the speech in retour interpreting.

In further research we can change the original design so that results can still be comparable throughout the years, but including additional aspects. The questionnaire could include more emotional and motivational variables about interpreting exercises. By using Studium's—USAL's Moodle—online survey methods, we can make sure participants fill in the open-ended explanations more easily and frequently. We can do at least two focus groups per academic year, in order to have the ability of changing the teaching method in the current group, not just for the next set of students. The nature of the first focus group in each term would have to be different, though: students cannot be asked to answer candidly if the lecturer is going to look at the results before their finals. As there are only 14 students in interpreting classes in USAL, and it would be very easy to guess who said what from a transcript, anonymity was the main reason why only one focus group per year was planned from the start.

The list of new ideas emanating from this study is long. We have mentioned a few throughout this dissertation: looking at predictability of task in perceived difficulty sounds promising; trying to find out why participants find interpreting into English less difficult than into Spanish, regardless of directionality, would merit further study; using feminist videos to see if they are as ethically motivating as other topics, for example, would add another layer of ethical thought to our research.

Finally, there is a pressing issue that not just deserves further study but which calls for urgent help in every country, in all strands of society, and in every profession and field. Interpreting Studies, like the rest of the world, needs to put on its gender glasses, as it should have been done years ago. That is where I would like the most to be of help looking forward.

Resumen en español

La tesis explora aspectos motivacionales de la enseñanza y aprendizaje de la interpretación simultánea desde el punto de vista de la ética del cuidado.

La hipótesis principal es que la motivación ética influye de forma directa en la percepción, por parte de los participantes, de las siguientes variables: percepción de interés, percepción de utilidad y percepción de dificultad. El objetivo principal es la mejora de la práctica educativa en la enseñanza de la interpretación, al explorar cómo la motivación ética, incluyendo valores y creencias, afecta la percepción de la dificultad en los ejercicios de interpretación en grupos de estudiantes y voluntarios. Los objetivos secundarios de esta tesis se refieren a la percepción por parte de los participantes de las mismas variables en la interpretación simultánea inversa, en el par de lenguas inglés/español, así como a la obtención de resultados secundarios con discursos de distintos contextos. Los participantes son estudiantes universitarios de interpretación e intérpretes voluntarios en foros sociales.

La tesis se enmarca en perspectivas tecnofeministas y de la ética del cuidado. Explora los conceptos de valores y creencias éticas en el estudio de aspectos motivacionales del aprendizaje y enseñanza de la interpretación. La motivación ética, y los valores y creencias emancipatorios en particular, se estudian desde un espíritu tecnofeminista, como acercamiento ético a la libertad de conocimiento e investigación, donde los aspectos emocionales y feministas han sido ignorados históricamente. Construir el conocimiento desde el andamiaje educativo que proporciona la cognición 4E en la enseñanza de la interpretación nos permite ahondar al fin en aspectos que han sido pasados por alto, como las emociones. La motivación no sólo pertenece al ámbito de las emociones sino que, además, se nutre de otros sentimientos y percepciones que los estudiantes de interpretación puedan experimentar, influyendo en gran medida en la manera en la que ven su proceso educativo, y en la percepción que tienen de sí mismos. Los valores y creencias explorados desde el marco de la ética del cuidado se encuentran presentes no sólo en el estudio de los constructos y variables motivacionales sino también, más significativamente, desde una perspectiva amplia, donde la feminidad, la representación corporal en el aprendizaje cognitivo, y las decisiones éticas están en el centro de las actividades educativas y de investigación.

Los resultados obtenidos sobre motivación ética, y con respecto a la interpretación inversa, proporcionan conclusiones relevantes, no solo pedagógicamente hablando, sino también en términos éticos y motivacionales. Los resultados son claros y simples: a los participantes no les importaba si estaban interpretando hacia su lengua A o su lengua B; su percepción de interés, utilidad y dificultad variaba tras la interpretación únicamente según el tema o contexto del discurso (perteneciente a un foro social o a un contexto institucional). Tampoco importaba si se trataba de estudiantes o de voluntarios; los participantes preferían siempre un tipo de discurso. Los resultados empíricos obtenidos para motivación ética son de significancia estadística muy alta. La motivación suscitada por los vídeos de discursos de foros sociales es claramente más alta para cada grupo de estudiantes que participaron en el estudio, y aún de forma más marcada para el grupo de intérpretes voluntarios ad-hoc. En todos los contextos, cuando aumenta la motivación ética, la percepción de dificultad disminuye, y los vídeos de discursos de foros sociales provocan menor percepción de dificultad que los vídeos institucionales.

Por lo tanto, la motivación ética influye directamente en las percepciones de interés y utilidad de los participantes, de forma positiva, así como en la percepción de dificultad, que disminuye cuando las variables motivacionales positivas aumentan. Además, la interpretación simultánea inversa en el par de lenguas estudiado no se percibe como más difícil que la interpretación hacia la lengua materna por parte de los participantes, lo que podría animar a incluir la interpretación inversa como parte integral del currículum.

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Appendices