摘　　要

由于新冠肺炎病毒的迅速传播，2020 年春季学期，中国几乎所有的学校都关闭校园，并迅速转向线上教学。这一转变使得翻译课等基于实践的课程的教学质量难以得到保证。自主学习因其对于语言教学的贡献受到教育界的广泛关注。尽管这一概念被广泛讨论，鲜有研究探究其在线上翻译课程中是如何体现的。为了解线上翻译自主学习的真实情况，本研究以自主学习为理论支撑，归纳并描述构成疫情期间线上翻译自主学习的 5 个维度（学习动机、学习计划、学习时间与环境安排、学习策略、元认知能力）以及内部、外部影响因素，以陕西省某大学英语专业学生为调查对象，采用问卷调查法和访谈法，调查了疫情期间英语专业学生线上翻译课程自主学习情况及其影响因素。本研究通过描述性统计分析、相关分析、回归分析以及访谈分析，总结了各维度之间的作用关系与影响程度。

数据分析结果显示：自主学习的五个维度，内在、外在影响因素与线上自主学习之间存在显著的正相关，且内在、外在影响因素对线上自主学习有显著的影响。总的来说，在新冠肺炎疫情期间，英语专业学生的线上翻译课程自主学习情况良好，内在、外在影响因素均可界定为影响英语专业学生线上翻译课程自主学习的因素。此外，通过访谈发现，新冠肺炎疫情对学生的线上翻译课程自主学习的学习主动性、学习质量以及学业成绩等不同层面均产生了一定的影响。

在将自主学习与线上翻译课程整合后，本研究提出了一些建设性策略，有助于在新形势下为英语专业学生在认知工具和信息资源方面提供帮助，丰富其学习活动的外延，对优化多元化翻译教育具有重要启示意义。

关键词：自主学习；线上翻译课程；英语专业学生；新冠肺炎疫情

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Chapter One Introduction

This chapter includes a total of three sections: background, aims and significance, and the organization of the thesis.

1.1 Background

Since January 2020, the Covid-19 pandemic has been raging all over the world all of a sudden and caught countries off guard. This epidemic has had a huge impact on all walks of life that has challenged many institutions, teachers, and students at the same time. Undoubtedly, it is a big challenge for the field of education. In the context of the epidemic, the traditional teaching cannot work normally, which brings new problems. At the same time, obstacles in translation courses using the online format are affected by its boundedness and passivity (Tan & Xiang, 2020). The Covid-19 required schools and educators adjusting and ceaseless appeals for reform emphasized that we must do more on- and off-line to make up the absence of off-line education. It is hoped that the campuses can alleviate the discrepancies in learning when the schools closed, meanwhile, give the instructors as well as their students enough support (Aull, 2020).

The new policy of "classes suspended but learning continues" proposed by the Ministry of Education emphasizes to guarantee the education amid the Covid-19 pandemic to the greatest extent. Therefore, in this context, online education has played an important role in supporting regular education, which puts forward higher requirements for both instructors and learners. It requires teachers to have the ability to know learners' weakness and try to give them individual help. In addition, it also requires learners to be capable of thinking about their learning process and method. In the implementation process of this measure, teachers can conduct online teaching and interact with students through DingTalk, QQ, Wechat, ZOOM, Rain Classroom, Tencent Meeting and other online platforms as well as provide consultation and guidance for students to fully ensure the smooth running of online education. In this

backdrop, translation online open courses were inundated with more than 500000 applications, greatly promoting the online education of translation courses (Tan & Xiang, 2020).

In practice, there will inevitably be some problems in online education. Specifically, it is debatable whether online learners' normal learning can be guaranteed in the absence of standardized management (Huang & Yuan, 2020); In addition, teacher-student interaction is difficult to achieve (Yang et al., 2020); Moreover, monotonous teaching content may result in failing to cultivate students' desire for active learning (Liu & Zhang, 2020); Furthermore, due to the randomness of online education, students' freshness is greater than their thirst for knowledge, in this case, the teaching progress tends to be entertainment-oriented in some ways of "likes", "sending flowers", which is an interference with normal teaching procedures; At the same time, there is no standardized assessment system for online education, bringing difficulties for teachers to know students' learning (Adedoyin & Soykan, 2020); Finally, in online translation courses, there is still a phenomenon of "repeating what the book says" (Mu, 2020), giving rise to many limitations and disadvantages, which is difficult to improve students' learning initiative and translation competence.

Consequently, learners were under great pressure to take control of their learning, while, instructors caved in pressure of providing high-quality guidance to learners in an unfamiliar teaching environment, thus enhancing learner autonomy in online translation education has received considerable attention throughout educational institutions during the post-pandemic era. In other words, only by allowing students to become participants, explorers and innovators of online translation education, can learner autonomy as well as professional knowledge be improved. Relying on information resource databases and virtual teaching environment, online translation education has the characteristics of diversity and openness, which make online translation learners enjoy greater autonomy in learning resources, time, mode and rhythm (Yang, 2005). Cultivating students' learner autonomy is particularly important to improve their translation competence for high-level translation ability largely depends on translators' long-term autonomous learning and practice. Therefore,

learner autonomy has become one of the main focuses of online translation education research.

Taking all these into consideration, the concern, in this research, is that students differ in the degree to which the responsibility for their online translation learning and for becoming autonomous translation learners. Part of this attention arises from the consciousness that the abrupt pandemic has changed the pattern of our higher education.

1.2 Aims and Significance

From the perspective of the learners, this research takes learner autonomy as the theoretical support, through the questionnaire and the interview from EFL majors in a university in Shaanxi Province who were enrolled in an online translation course during the Covid-19 (the second semester in 2019-2020 academic year), to explore EFL majors' learner autonomy in online translation courses and analyze the influencing factors, aiming to engage learners in fully understanding learner autonomy, provide some materials for online translation curriculum design, furnish effective ways for online translation learners to improve their translation ability and create a space for teachers to promote teaching efficiency in the online environment.

It begins by exploring EFL majors' learner autonomy in an online translation course through the questionnaire. This phase of the research seeks the extent to which learners prepare for online autonomous learning and their performances in the online translation course. Interview as a supplementary medium is conducted next. By doing so, it is hoped to uncover factors that can support and hinder the development of learner autonomy during the post epidemic era.

Although the online education triggered by the Covid-19 is a short-term emergency in the special period, its impact on education will be long-term. Hence, it is needed to explore EFL majors' learner autonomy in online translation course during the Covid-19, so as to provide references for the implementation of stable, regular and efficient online education in the future.

Holec (1979) first proposes learner autonomy in his work, which defines as: "the ability to take charge of one's own learning." Subsequently, foreign language researchers have carried out in-depth exploration and studies on this concept. Although this topic has been widely discussed in the literature, few studies use the combination of quantitative and qualitative research methods to explore the possibilities and challenges of learner autonomy in online translation courses. In the meanwhile, the questionnaire and the interview guideline compiled in this research can provide a research instrument for comprehension and evaluation of EFL majors' learner autonomy in online translation courses to some extent. What's more, the data collected through the questionnaire and the interview can enrich and supplement the research database for online translation learners.

The outbreak of the Covid-19 caused an acute revolution in online education and it is imperative for us to rethink this reform when entering the "post epidemic era". Therefore, there is an urgent need to improve students' interest and enthusiasm in online learning, so as to improve learner autonomy.

1.3 The Organization of the Thesis

This thesis consists of five chapters.

Chapter one is a brief introduction, including background, aims and significance, and the organization of the thesis.

Chapter two reviews related research literature that describes the current study, which clarifies the definition and misconceptions of learner autonomy, expounds the practical aspects of learner autonomy and its development in the context of online education as well as considers key findings of learner autonomy research in both the online learning environment and online learning environment during the Covid-19. Then it identifies the gaps in the research literature.

Chapter three frames the research questions and elaborates research approaches for data collection and analysis. It also provides detailed descriptions of the research instruments, participants and procedures for ensuring the research reliability and validity.

Chapter four presents and discusses EFL majors' learner autonomy in the online translation course and analyzes the influencing factors through Descriptive Statistical Analysis, Correlation Analysis, Regression Analysis and Interview Analysis.

Chapter five begins by considering the major findings and concludes the research by presenting the theoretical, methodological and practical contributions of the research to the field of online education. This chapter also addresses research limitations and provides suggestions for future studies.

Chapter Two Literature Review

Affected by the Covid-19, education in colleges and universities in China was shifted from offline to online in the spring semester of 2020. This large-scale transformation in a short time is a great challenge to teaching administrators, front-line teachers and students. In order to cope with this challenge, it is needed to trace back to the research and prompt critical reflection on active and significant practices alike and discuss the theoretical and practical issues concerning learner autonomy in the online environment. In view of this, this chapter begins by probing the conceptualization of learner autonomy, including the definition of learner autonomy and the misconceptions about learner autonomy and concludes with the operationalized definition of learner autonomy in this research. The chapter then turns to practical aspects of learner autonomy which concern its measurements and influencing factors. The next sections present an overview of research associated with learner autonomy in the online educational context.

2.1 Conceptualization of Learner Autonomy

2.1.1 Definition

The concept of learner autonomy is often considered to have originated and developed in the West. In fact, in China, the ideology of learner autonomy is time-honored, which can be manifested in Confucius' teaching ideas of "Heuristic", Mencius' ideology and Wang Fuzhi's theory of "self-consciousness" (Xu, 2020). Although learner autonomy is widely perceived as a pivotal component for successful language learning and has received much attention from L2 experts over the years (Holec, 1979; Little, 1991; Littlewood, 1999; Xu, 2004), there is no consensus on its definition and it takes on a variety of forms, such as "self-instruction" (Dickinson, 1987), "self-led learning" (Jones, 2003) and "independent learning" (MG Moore, 1973). In China, the term "autonomous learning" and "ability of autonomous learning" are in common use. In this research, it is taken as "learner autonomy" (Holec, 1979;

Brookfield, 1986; Benson, 2001). Due to the different theoretical background, researchers have various comprehension of this concept. According to the theoretical interpretation, the definition of learner autonomy can be generalized in the following descriptions.

Some scholars are firm advocates of "Ability Theory", the following are the representative studies. Holec (1979) first defines learner autonomy in his monograph and introduces the concept in the foreign language teaching field, which is quoted with the highest frequency. Little (1991) also interprets this concept as "capability", that is, the capacity of being responsible for the learning process. Specifically, it is the ability of learners to determine learning objectives, learning contents, learning methods and evaluation system independently, which is similar to Benson & Voller's (1997), viewing learner autonomy as: "learners' capacity to take control over their learning." They also note that learner autonomy has different effects on distinct learners in various learning environment.

Learner autonomy is a process to be considered as taking control of one's own learning and many scholars (Zimmerman, Bonner & Kovach, 1996) define it as a self-regulated learning process. In this backdrop, learning is regarded as the product of learners' active interaction with the outside. Learning is not rote memorization, but a "creative process of actively searching sense from what happened" (Candy, 1991). Wenden (1991) also summarizes the characteristics of learner autonomy from six aspects, mainly emphasizing that learner autonomy is a process, not a result. Benson (2012) argues that learner autonomy is not a sole learning approach, but the property of the learner's method to the learning procedures. In the view of regarding learner autonomy as a process, it can be drawn that autonomous learners determine learning goals, select learning methods, develop learning activities and evaluate learning performance in such a specific process (Holec, 1979; Little, 1991).

Learner autonomy is generally described in terms of its potential components. For example, Wenden (1991) defines learner autonomy as a construct that involves metacognitive knowledge, learning attitudes and learning strategies. Winne & Hadwin (2000) assume that learner autonomy occurs in four basic steps: defining schoolwork,

setting learning goals and plans, selecting learning methods and regulating metacognition. Pang (2001) advocates defining learner autonomy from vertical and horizontal dimensions separately. In practical terms, from the horizontal, that is, dimensions of learner autonomy. In particular, the learning motivation should be self-driven, the learning content should be self-selected, the learning strategies should be self-regulated and the learning time should be self-management. In the meantime, self-judgment, evaluation of learning results and the decent learning environment are also important conditions. From the vertical, that is, the whole process of learning. Specifically speaking, learner autonomy ought to be the process in which learners can set learning goals, make learning plans, monitor learning process and select learning methods, as well as in self-feedback, self-regulate, self-inspect, self-summarize, self-evaluate and self-remedy.

There are also scholars that issue comprehensive analyses of this theory. For instance, Cheng (1999) defines learner autonomy from three aspects: First, learner autonomy is an internal mechanism that guides learning, which is the capacity of learners to dominate their own learning, coinciding with the "Ability Theory"; Second, learner autonomy refers to learners' control over their learning goals, learning contents, learning approaches and the use of learning materials, paralleling with Zimmerman's (1989); Third, learner autonomy is a model, that is, learners formulate specific learning goals according to their own conditions under the macro-control of the overall educational objectives, containing the overall dimensions of learner autonomy. In a word, this explanation of learner autonomy combines the above three views.

With the rapid development of the Internet and information technology, the connotation of learner autonomy continues to expand and enrich over the years. The ability to access the internet, distinguish true information from sham, communicate and cooperate in the context of the online environment can be termed as digital literacies, which is the new form of learner autonomy in the new era. Therefore, there is a need to redefine the meaning of learner autonomy for language majors under the new conditions. Based on the characteristics of language majors, Xu (2020) proposes

that learner autonomy of language majors covers four aspects: the ability of self-planning, self-exploration of effective learning strategies, self-emotion management and multiple interactions.

Although the definition of learner autonomy still remains a continued discussion, different views on what learner autonomy details can be complementary. The above discussions review the theoretical interpretation of learner autonomy which, to a great extent, have helped build a stronger foundation of learner autonomy in the field of online instruction.

2.1.2 Misconceptions

In educational practice, learner autonomy is often confused with independent learning, active learning and other similar concepts. In this case, Broady & Kenning (1996) distinguish learner autonomy and independent learning. Benson (2001) indicates: "There is no inevitable connection between self-directed learning and learner autonomy. What's more, self-directed learning may even inhibit learner autonomy under some conditions. " Thus it can be seen that there is a need to make a distinction between learner autonomy and its misconceptions.

Different definitions put forward by different linguists emphasize different aspects. For example, learner autonomy embodies a broader connotation, which focuses on the degree of autonomy and emphasizes the 'self-management'; Independent learning focuses on learning without teachers' guidance. To sum up, on the one hand, learner autonomy is not equal to absolutely independent learning. Being characterized by learner autonomy does not exclude from seeking help from others in the learning process, which shows that the improvement of learner autonomy is indispensable from teachers' effective instruction, while the former stresses learning without teachers' assistance, which is consistent with Boud's (1981), pinpointing that "learner autonomy cannot exist in a vacuum environment", indicating that learner autonomy cannot be separated from the thoughts and experiences of others, thus, interdependence is the basic element of learner autonomy. On the other hand, learner

autonomy is a relative concept, which is difficult to strictly define complete autonomy or complete non-autonomy.

It is proved that although many studies exploring the interpretation of learner autonomy, the definition as to how this concept is described is not clear throughout the literature, which is a limitation in the current research field. Therefore, drawing upon the above definition of learner autonomy for language majors, combined with the Covid-19, this research examines learner autonomy in the online context and presents the operationalized definition of learner autonomy, that is, guided by Wenden's (1991) and Pang's (2001) conceptualization of learner autonomy, viewing learner autonomy in terms of learners' capacity to control their own learning. To be specific, learner autonomy in this research involves five key components: learning intention (learning motivation and learning attitude), learning plan (learning goal and learning plan), time and environment arrangement (time arrangement and environment arrangement), learning strategy and metacognitive ability. In a word, the operationalized definition of learner autonomy in this research can be interpreted as: students who can make clear intrinsic learning motivation, have good learning attitude, formulate the mastery learning goal and learning plan, arrange learning time and environment reasonably, choose learning strategies exactly, monitor learning effects and adjust learning activities are considered as autonomous learners.

2.2 Practical Aspects of Learner Autonomy

2.2.1 Measurements

As Sinclair (2008) pinpoints, learner autonomy is not easy to observe or describe but can be transformed into 'ability' or 'potential' that is easy-to-measure. The measurement of learner autonomy will be discussed from the quantitative and qualitative perspectives.

Questionnaires and scales are the primary measuring tools for their features of ease to design, measure and score. Among them, the most representative and commonly used measuring methods for learner autonomy are reflected in the

following research.

Zhu, Wang, Zhang & Ye (2005) compile learner autonomy scale for college students based on Zimmerman's (1986), considering the actual learning situation of college students in China. Through factor analysis, it is found that learning motivation subscale can extract six factors: self-efficacy, internal goal, sense of learning control, external goal, sense of learning significance and learning anxiety; Learning strategy subscale can also extract six factors: learning method, learning help-seeking, learning plan, learning reflection, learning evaluation and learning management. The statistical analyses in this research prove that these rating scales are the valid and reliable instruments to evaluate learner autonomy. Macaskill & Taylor (2010) create a five-point Likert scale as a tool to measure first-year psychology students' learner autonomy and the statistical analyses in this study lead to claim that the scale is valid and reliable. The operational definition of Macaskill & Taylor's suggests that autonomous learners are able to take responsibility for their own learning. Guo & Dai (2011) construct a learner autonomy evaluation index system including 15 evaluations and recognize that college students have the potential of learner autonomy in the aspects of learning concept, learning strategy, learning content, learning goal, learning motivation, learning evaluation, learning control, learning reflection and learning improvement, in which teachers and environment play a certain role in promoting learners' learner autonomy. He (2011) develops a foreign language learner autonomy questionnaire containing two dimensions of subjective will and objective ability to explore the quantitative evaluation of foreign language learner autonomy. This scale with high reliability and validity realizes the goal of concretizing learner autonomy and provides a meaningful basis for the quantitative evaluation of Chinese college students' foreign language learner autonomy. Furthermore, Pang's (2003) and Yuan's (2005) are also the representative instruments to measure learner autonomy.

Applying quantitative methods to measure learner autonomy seems to be the trend for most researchers. However, there are also deficiencies in evaluating learner autonomy through questionnaires. For example, participants cannot fully explain their views or attitudes due to the inflexible and the structured form. At the same time, the

effect of the questionnaire may be affected by the participants' comprehension. Consequently, the results may have some deviations.

Qualitative methods that measure learner autonomy focus on identifying, describing and discussing evidence of learner autonomy in specific research contexts. These approaches measuring learner autonomy consist of research instruments such as observations, learning journals, interviews and portfolios. For instance, Abdel (2018) examines the levels of learner autonomy of non-native English majors by semi-structured interviews. The interviews with the participants focus on their autonomous learning activities. The results of the study show that non-native English majors generally enjoy a high level of learner autonomy in some activities ranging from the beginning to intermediate level.

In the meantime, the combination of the quantitative and qualitative methods is an effective instrument to measure learner autonomy. Specifically, Ariebowo (2021) explores the students' learner autonomy with an initial interview from students in one of his classes as the study's preliminary data to develop a questionnaire to explore further.

Generally, based on the long-term observation of students' learning, teachers have the ability to evaluate the degree of students' learner autonomy. Therefore, Pang (2003) points out that teachers' evaluation of students' learner autonomy can also reflect the level of students' learner autonomy to a certain extent.

2.2.2 Influencing Factors

Before measuring learner autonomy, it is necessary to identify factors that may influence research results. The first one can be the multidimensional nature of learner autonomy in terms of its multiple observable and unobservable interrelated subcomponents. Scholars have paid efforts to discover the influencing factors of learner autonomy, especially physical and psychological elements. There is an apparent trend that rather than investigate the effect of one single factor upon learner autonomy, more researchers try to discover the relationship between learner autonomy

and other multiple factors. It can be seen in detail.

Learning motivation signifies that learners take responsibility for achieving the goals and making efforts to attain the objectives, which is viewed as an important basis for judging whether learning is autonomous or not. For example, Spratt et al. (2002) point out that learning motivation is a key factor in promoting learner autonomy. Wenden (1991) holds that there are two important attitudes in learner autonomy. One is learners' attitude towards their role in the learning process, and the other is their attitude towards their abilities as learners. Cotterall (1995) also deems that learners' beliefs are the crucial factors of learner autonomy. Corresponding with these views, many scholars believe that learners' attitude towards learning as well as their understanding of learner autonomy have influence on learner autonomy. For instance, Rodriguez-Brown & Ruesta (1987) define learning attitude as "learners' views on themselves, others and their own culture (or target language culture)", in which positive attitude helps to enhance learning motivation, while negative weakens. Similarly, Albelbisi & Yasop (2019) stress that autonomous learners reveal positive motivation towards their learning process through identifying learning goals, selecting learning strategies and monitoring learning process. It has also shown that learners who lack motivation in learning may result in individuals spending extra time completing assignments, turning in late assignments or poor-quality tasks. In this research, learning intention refers to learning attitude towards the role that learners play in the learning process as well as learning motivation that drives them to learn.

Learning plan refers to the measures that learners adopt to prepare for their learning, containing determining learning goals, selecting how to achieve the goals, which is seen as a significant indicator of learner autonomy by many scholars (Zimmerman, 1986; Pang, 2001). What's more, the characteristics of learning plan manifest in helping the students understand the teaching objective, make painstaking learning program, select learning strategies and supervise learning process, which can be considered as an essential prerequisite of being a successful autonomous learner among other dimensions.

Learner autonomy must be guaranteed by mastering certain learning strategies

and it is believed that autonomous learners are those who can flexibly and effectively control their use of strategies in learning (Zimmerman, 1986; Pang, 2001). A large number of studies have provided evidence for the close association between learning strategies and learner autonomy (Dianyu, 2005; Zaker, 2015; Marantika, 2021). To be specific, it is commonly agreed that the training of applying learning strategies is helpful in enabling students to master learning skills and methods, especially skills of planning, supervising and evaluating. For example, Kormos & Csizer (2014) investigate the influence of motivational factors and learning strategies on learner autonomy by developing a new questionnaire, stressing that learner autonomy and effective learning strategies are increasingly significant in foreign language learning.

In Zimmerman's (1986) interpretation of learner autonomy, he believes that autonomous learners should arrange learning time regularly and effectively, which is particularly important in students' abruptly transitioning from a classroom to an online learning environment. At the same time, Pang (2001) defines that time arrangement in learner autonomy should be self-planned from the dimension of learner autonomy.

Research on language majors in the online context identifies learning environment as an important component of learner autonomy. For instance, learning environment can be a factor that influences students to learn independently and effectively (Higgs, 1988). Pan (1997) holds that an instructive learning environment is needed to facilitate learner autonomy. In addition, Garrison (2004) stresses that in the online context, student's physical learning space shifts from the classroom environment to the one that is more aligned with the home environment, in which family members or friends' intrusion can be the unexpected interference or interruption that may cause disruption or diversion of online learners' attention during the online learning process (Jayalath et al., 2020). Furthermore, sound issues, independent space and other physical conditions should also be considered. Investigators also emphasize that student engagement is weakened by times due to the interruptions from these environmental factors that existed in the home environment (King & Boyatt, 2015; Yang et al., 2018; Nortvig, Petersen, & Balle, 2018). Therefore,

in the online environment, choosing a relatively quiet and suitable learning environment can be the wise choice for improving learner autonomy.

Many scholars consider metacognitive ability as one of the dimensions of learner autonomy (He, 2003), which refers to learners' abilities to monitor and evaluate their learning with metacognition. Monitoring is understood as the process in which learners track learning progress when conducting learning (Pressley & Ghatala, 1990). During this stage, learners can test learning methods, identify learning difficulties and make adjustments to improve learning achievements. While, evaluation manifests as learners' reflection on their learning strategies and learning achievements (Kraiger, Ford & Salas, 1993). For example, when evaluating learning, learners may appraise how much they have learned and whether the strategies they used are appropriate to attain learning objectives. In other words, evaluation is a process in which learners assess the results of their learning based on externally-defined or self-determined standards (Chinpakdee, 2020).

The internal and external factors of learner autonomy are the most frequently discussed topics. Zimmerman (1986) identifies internality, behavior and environment as the main factors underpinning successful and autonomous language learning. The finding from Pang (2001) also investigates the factors that influence learner autonomy from a broader perspective, integrating the views of many scholars. That is, self-efficacy, goal-setting, cognitive strategy, metacognitive development and gender are all the factors on the internal side; While, social and physical environments exert the influence on the external side. In the context of the online environment, technological devices and the internet can be the key elements of the external factors due to the strong dependence of online learning on it. Poor network connections may weaken students' learning motivation, thus denying access to online learning. What's more, the requirement for technological knowledge, difficulty in teaching hands-on skills, students' lack of attentiveness and academic plagiarism are also the influencing factors in online learning during the Covid-19 (Mukhtar, et al., 2020).

It can be noted from the above research that each study aims at multiple aspects of learner autonomy and the varieties of factors suggest that researchers have become

more aware of the complexity of learner autonomy. Hence, it is necessary to take the impact of various elements into consideration when trying to develop learner autonomy. In this case, achieving learner autonomy is conditioned by various factors like learning intention, learning plan, time and environment arrangement, learning strategy, metacognitive ability as well as the internal and external factors, etc. Among these variables, some factors such as intelligence and the educational system are relatively stable and uncontrollable. Here we only discuss the above factors for the reason that they exert direct influence on learning achievements and autonomous language learners can control these elements to achieve successful language learning.

2.3 Research Associated with Online Learning

2.3.1 Definition of Online Learning

Life, work and research have been tied to information technology due to its rapid development. "Online learning" is generally defined as various terms, such as "online education" (Harasim, 1989), "E-learning" (Charp, 2001) and "web-based education" (Khan, 1997). Experts unscramble the interpretation of the concept of online learning completely and systematically, in which it can also be interpreted in numerous ways, for example, "Online learning can be defined as the application of the internet in several ways to establish the interaction between teachers and students" (Curtain, 2002); It can also be regarded as "learning experiences in synchronous or asynchronous conditions with the help of different mediums to access, in which learners can learn from anywhere, anytime, in any rhythm" (Singh & Thurman, 2019).

Together with the Covid-19, online learning has become a hot issue of common concern and recent studies have researched its various aspects. Therefore, this study determines online learning as the complementary method to face-to-face learning, which typically includes online lectures, forums, and interaction after class with the function of interactive software to connect students for synchronous learning activities.

2.3.2 Online Learning during the Covid-19

Since January 2020, the Ministry of Education guaranteed education in colleges and universities during the epidemic to achieve "classes suspended but learning continues" and organized 22 online platforms to develop diversified online education and opened 1291 national high-quality online open courses as well as 401 national virtual experiment courses free of charge, which covered 12 disciplines of colleges and universities and 18 majors of junior college and vocational academy (Wu & Li, 2020). As a dispensable part of higher education, translation education must also keep pace with the times and meet the innovation of teaching ideas and methods in the era of big data.

Although online learning was soon carried out orderly and effectively during such emergency, some problems have also appeared, such as serious network congestion, teachers' unskilled operation and students' inadaptability. Under such circumstances, in order to achieve the goal of cultivating high-level translation talents, teachers must change the traditional teaching ideas, abandon the teaching methods of mechanically instilling translation theories and build a teaching model suitable for online translation courses.

Since there is a growing trend amongst online education in colleges and universities during and after the Covid-19, researchers are attempting to give advice to adapt to the new conditions. In the meantime, opportunities and challenges related to online education during the Covid-19 are also discussed. For example, the study conducted by Dhawan (2020), emphasizes the importance of online learning as well as analyzes the strengths, weaknesses, opportunities and challenges of online education modes in the time of crisis, stressing that it is urgent for us to focus on the use of technology more efficiently. Adnan & Anwar (2020) examine the attitude of higher education students towards compulsory digital and distance learning university courses during the Covid-19, in which online learning in underdeveloped countries like Pakistan is unsatisfactory due to its low access to the Internet and poor interaction with the instructor. Aguilera-Hermida (2020) explores college students' acceptance of

online learning as well as perceives their behavioral control and cognitive engagement by collecting quantitative and qualitative data and concludes that motivation, self-efficacy, and the use of technology play a significant role in online learning. What's more, participants prefer face-to-face learning between the two teaching patterns. At the same time, some suggestions are also provided for how to improve the acceptance of online learning in an emergency. Adedoyin & Soykan (2020) discuss the opportunities and challenges concerning the Covid-19 and add value to the existing body of literature on online learning by providing comprehensive awareness on the methods of instructional delivery, arguing to develop emergency remote teaching evaluation instruments. Jokey & Abid (2020) investigate the strengths and challenges associated with online learning among undergraduate and postgraduate students during the Covid-19 by using a 10-item questionnaire. They conclude that the strengths of online courses include flexibility, enough personal time and various learning modalities, while, challenges contain less engagement, inattention and randomness.

Many Chinese studies also discuss the current situation of online learning during the Covid-19. For example, under such international background, *Language Teaching and Linguistic Studies* invites academic colleagues and solicit contributions to bring forward excellent advice for the "Chinese International Education during the Covid-19". More than 130 articles are received from the academic circles with strong pertinence, new perspectives and critical thinking to form a column. Meanwhile, *China Educational Technology* collects relevant online learning cases from different segments and regions during the Covid-19 to share and exchange initial practical experience, so as to provide reference in the aspects of technology application, teaching guidance, online education system implementation and assurance. For example, Wu (2020) traces back the evolution path of educational technology in colleges and universities in China for 40 years and discusses the dilemma of promoting educational technology in China, that is, online platforms are scattered; student-centered cannot be achieved and learning effects seem to be tested, thus it can be seen that online learning is still a process that needs to be further perfection; Hu &

Xie (2020) analyze the advantages and challenges of online education in colleges and universities during the Covid-19 based on the online teaching quality reports of 57 colleges and universities in China and the statistical reports of curriculum platform data in Fujian and Shandong provinces, arguing that poor fluency of online platforms, teachers' unfamiliar operation, low interaction between teachers and students, the lack of sophisticated teaching design and learners' insufficient self-management ability are the major problems of online education during the epidemic; Jia et al. (2020) summarize the current situation of college students' online learning experience before class, in class and after class by using the methods of word frequency statistics and cluster analysis of the comments on college students' online classes on the microblog platform in order to provide some reference and enlightenment for online teaching; Zhang (2020) analyzes the challenges specific to online education, and puts forward measures from thoughts of big data, innovation, technology and strategy to improve the quality of online education from five aspects through conducting research on teachers, students and parents. In addition, some researchers have also discussed the online teaching mode, online teaching cases and teaching effects in colleges and universities.

From the above research on online learning during the Covid-19, it can be seen that the scholars mainly analyze the current situation of online education and put forward corresponding suggestions. Therefore, driving students to adapt and control online learning is the focus of continued research in the future and there is a need to pay more attention to learner autonomy in the online environment after the pandemic.

2.4 Research Associated with Learner Autonomy

2.4.1 Online Learning Environment

Learner autonomy has been defined as a significant topic in online learning (Kearsley, 2000) due to online courses' being less-structured compared with traditional classes, which makes this concept become the focus of research. To be specific, online learning is specially fitted with the cultivation of learner autonomy,

lying in the flexibility develops more interactive opportunities that are significant to learners as translation learners and will allow them to maximize the preponderance of this experience. The following research also emphasizes the important academic value of considering learner autonomy in online learning.

He (2012) explores the correlation between learner autonomy and English academic achievements in the online environment through questionnaire and experimental research in her PhD dissertation, concluding that active and appropriate learning monitoring is helpful to improve learners' learning achievements. Ribbe (2013) defines three principles of learner autonomy and discusses them concerning the specific challenges in the context of online settings, in which teachers can support the development of learner autonomy among online college students. In order to develop vocational college students' learner autonomy, Yang (2016) integrates on-site workshops with an online learning community through self-directed learning English for specific purposes (ESP). In view of the current lack of authoritative survey data on online learning of higher vocational students, in order to obtain first-hand information on learner autonomy, Lee (2016) investigates the extent of learner autonomy in the online learning environment involving the implementation of task-based instruction and concludes that personal commitment to the coursework and cognitive engagement with the learning material contribute to the degree of learner autonomy. Liu (2016) analyzes how online learning platforms influence college English learning and indicates that the majority of students agree that online learning plays a positive role in College English learning as well as defines external monitoring of learner autonomy as the important factor to guarantee the quality of online learning. Mısır, Koban Koç & Engin Koç (2018) investigate the perception of learner autonomy and pinpoint that the participants are highly autonomous and willing to be more responsible for their own learning.

From the above research, the emerging standpoints and aspects of learner autonomy in the online environment are underscored by scholars. In addition, under such circumstances, it is worth researching and pursuing the sense of learner autonomy in the online environment during the Covid-19.

2.4.2 Online Learning Environment during the Covid-19.

While online learning is certainly not a new topic, the circumstances under such a rapid and abrupt transition are out of the ordinary. In view of the present situation, a gap currently exists in the literature regarding the impact of this rapid transition upon learners. Furthermore, due to the chaos and tensions created by the Covid-19, there is a stronger need for academic organizations to balance these fears and tensions amidst such crisis, which results in the need for learner autonomy in online learning. The abrupt explosion of the Covid-19 adds one more argument in terms of online learning, that is, autonomy plays an important role in online learning in the time of crisis and more could also be discussed about how learners have adapted to or been affected by the online environment.

Adnan & Anwar (2020) conduct a case study, aiming to depict how to promote learner autonomy in learning English as a foreign language in discourse analysis course and mention that learner autonomy is promoted successfully by considering some facts such as students' control on deciding learning modes as well as students' enthusiasm to confront the lecturers' challenges. Zhu, He & MA (2020) conduct a survey on students' learner autonomy during the Covid-19 by developing a questionnaire from college students in colleges and universities in Anhui Province and indicate that there are some problems in students' learner autonomy, including students' weak awareness of learner autonomy; low utilization of online learning resources and the lack of evaluation and feedback system. In this circumstance, they construct a "four in one" cultivation model of students' learner autonomy and provide effective learning strategies to cultivate students' learner autonomy in teaching practice. He (2020) studies the autonomous learning mode of College English and puts forward the constructive strategy, which will serve to cultivate excellent talents for the country under the new challenge. Ariebowo (2021) explores the students' objectives and preferences in learning English during the Covid-19 and shows that students' learner autonomy is relatively fine, which exceeds expectations.

This section probes the existing system of research concerning learner autonomy

by investigating subjects, methodologies, conclusions, limitations and possible implications for further study. All the research selected to be reviewed here has clear and all-around description of the methodology that researchers used in learner autonomy, which is likely to make the research more persuasive. However, the limited space of the above research should also be considered. Despite the fact that existing research strengthens our understanding of the effect of the Covid-19 on online learning and its affordances of learner autonomy, most findings are drawn from non-English majors or primary and secondary school students. Furthermore, a great deal of online education research ranging from qualitative studies to quantitative research separately has demonstrated the limitation in this field. In addition, there is antithetical evidence suggesting that learners are keen to engage in learner autonomy practices or learners hold an inactive attitude to it. Therefore, this research finally decides to conduct a case study, through the questionnaire and interview of EFL majors in a university in Shaanxi Province, targeting at understanding EFL majors' learner autonomy in online translation course and its influencing factors during the Covid-19.

Chapter Three Methodology

This research is a case study, through the questionnaire and interview from EFL majors in a university in Shaanxi Province, targeting at understanding their learner autonomy in online translation course and its influencing factors during the Covid-19. Specifically speaking, this chapter provides details concerning research questions, research methods, research instruments, research participants and research procedures. It also describes the reliability and validity of the questionnaire as well as data collection and analysis.

3.1 Approaches

3.1.1 Research Questions

EFL majors' learner autonomy in online translation course during the Covid-19 is investigated in this research to identify the factors affecting their learner autonomy and it is guided by the following two research questions:

(1) How was EFL majors' learner autonomy in online translation course during the Covid-19?

(2) What were the factors that affected EFL majors' learner autonomy in online translation course during the Covid-19?

3.1.2 Research Methods

Quantitative and qualitative methods are the common analysis approaches in most research. Surprisingly, qualitative and quantitative data are almost rarely combined or mixed by the researchers (Frels & Onwuegbuzie, 2013). Nevertheless, a considerable number of studies have proved the effectiveness of conducting mixed research. For example, Frels & Onwuegbuzie (2013) reveal how accumulating quantitative data enhance comprehensibility by integrating with qualitative findings. They provide an instance of this approach, whereby a baseline is set up by developing a quantitative scale to aid to comprehend qualitative information, resulting in what

they call 'mixed approach'. In addition, although quantitative approach is especially instrumental for tackling the issues, such as who, where, how many, how much, and what is the relationship between specific variables, it is not the best way to explain the problem of "why and how", which is contrary to qualitative approach. In such a situation, the mixed approach can be the most appropriate method to address sets of questions within a study.

Therefore, the appeal for combining qualitative techniques with quantitative instruments is advocated by most research. In addition, case study is seen as applicative for this research since it deals with the specific phenomenon of learner autonomy in online translation course and considers it as a single case that will be analyzed and described in detail. Consequently, based on the operationalization definition of learner autonomy, this research conducts a mixed approach to explore EFL majors' learner autonomy in online translation course and analyzes the factors affecting the development of learner autonomy. Specifically, qualitative approach seems to be a supplement of quantitative method to further analyze the actual condition and assist to generate contextualized and systematic understandings of learner autonomy in online translation course and its complex influencing factors.

3.2 Instruments

3.2.1 Design of Questionnaire

The results of the survey depend on questionnaire design to a great extent. Therefore, it is necessary to elaborate questionnaire in the light of the best principles when designing. The practice of questionnaire design in this research follows the design standard of high-quality questionnaires, that is, high internal validity and formal format.

Validity generally refers to measure what is intended to be measured. In addition, it describes how well the accumulated data overlap the actual investigation field. To be specific, the dependent variable of this research is learner autonomy in online translation course, and the independent variable is the five dimensions of learner

autonomy and the two influencing factors. Meanwhile, the same grade of EFL majors who were enrolled in an online translation course during the Covid-19 (the second semester in 2019-2020 academic year) is selected as the control variable in this research. In addition, the level of participants' English competence may also affect the relationship between the dependent variable and the independent variable, so this research takes it as the moderating variable. In the following section, its analysis and verification will be discussed in detail.

The format of the questionnaire will affect the participants' attitude to the questionnaire, thus affecting the quality of their answers. Therefore, the design of the questionnaire in this research is formal and professional in strict accordance with the principle of questionnaire design, which can not only reduce the fatigue and boredom of the participants, but also improve the answer rate.

Next, the design of the scales will be discussed. It is advisable to review the literature to determine the optimal number of scale points, consider whether some or all scale points should be marked with words and/or numbers and check the default response deviation and methods to avoid bias before designing. Then the investigator turns to the influence of the order of response options and outlines how it changes according to whether the categories are nominal or sequential and whether they are presented visually or orally.

According to the aims of this research, through tracking the literature related to learner autonomy, this research determines which types of data need to be collected. The questionnaire is divided into three parts. The first part includes participants' gender, English competence and the severity of their location during the Covid-19 as well as the translation teaching modes during and after the epidemic.

The second part is the core of the questionnaire. Through carding the relevant literature on learner autonomy, the investigation directions of learner autonomy in this research are divided into: learning motivation, learning attitude, learning goal, learning plan, time arrangement, environment arrangement, learning strategies and metacognitive ability. These eight investigation directions can be further combined into five directions: learning intention (learning motivation and learning attitude),

learning plan (learning goal and learning plan), time and environment arrangement (time arrangement and environment arrangement), learning strategy and metacognitive ability. Specifically, learning motivation refers to the desire to achieve a goal, the efforts to attain a target and the satisfaction with the completion of the task (Pan & Gauvain, 2012; Li & Park, 2021). Learning motivation can be divided into instrumental learning motivation and comprehensive learning motivation (He, 2003), implying that learners with instrumental motivation regard language learning as a mean to find an ideal job, while learners with comprehensive motivation are interested in the target language culture; intrinsic motivation and extrinsic motivation are also the components of learning motivation (Pan & Gauvain, 2012), indicating that intrinsic motivation describes learners' learning as "originated from their own inner thoughts", while extrinsic motivation refers to learners' learning is subject to external factors. According to the classification of learning motivation, this research sets questions according to the intrinsic learning motivation and the extrinsic learning motivation, namely, question (1) and (2) in the questionnaire. Wenden (1991) affirms that two kinds of learning attitude are particularly important in learner autonomy. One is learners' attitude towards their roles in the learning process, and the other is their attitude towards their ability as learners. Based on this classification, the questions about this two learning attitude in this research namely question (3) and (4) in the questionnaire. Meanwhile, learning motivation and learning attitude are defined as learning intention in this research for the boundary between these two fields is not strong and learners who are intrinsically motivated with good attitude show more autonomous. Through literature review, it is found that different learning goals have different interpretations of the dimensions of learner autonomy. For example, Pintrich (2000) stresses that the effect of goal orientation on learner autonomy is as follows: the mastery goal for the purpose of mastering knowledge and skills has a greater role in promoting learner autonomy; while, the expressive goal, aiming at showing ability, surpassing others and gaining praise, has relatively small effect on developing learner autonomy. In view of the interpretation of learning goals, question (5) and (6) in the questionnaire involve these two goal orientations respectively. In this research,

learning goals and learning plans are integrated into learning plan, since scholars have already mentioned that learning plan contains learning objectives (Rice, OConnor, & Pierantozzi, 2008), which are question (5), (6), (7), (8) and (9) in the questionnaire. Zimmerman, one of the most representative scholars in self-regulated learning, pinpoints: "the arrangement of time for autonomous learners is regular and effective, and they can be aware of the results of learning. Moreover, they are highly sensitive and adaptable to the learning environment." Therefore, this research amalgamates time arrangement and environment arrangement into one category, which is called time and environment arrangement in question (10), (11), (12), (13) and (14) in the questionnaire. As an important indicator of learner autonomy (Medina Coronado & Nagamine Miyashiro, 2019; Marantika, 2021), learning strategy is reflected in the questionnaire. The questionnaire not only investigates participants' learner autonomy from the cross-sectional angle (dimensions of learner autonomy), but also carries out the longitudinal investigation, which is mainly reflected in the use of learning strategy before, during and after the learning activities, which can be seen in question (15), (16), (17) and (18) of the questionnaire. In the meantime, Zimmerman (2002) also explains the characteristics of autonomous learners. That is, autonomous learners show higher metacognitive ability, monitor learning effects and adjust learning activities. Therefore, this research investigates the participants' metacognitive ability in question (19), (20), (21) and (22) of the questionnaire. At last, the investigator sets a question by asking participants about their satisfaction about online translation autonomous learning to understand EFL majors' learner autonomy in online translation course during the Covid-19.

The third part is to investigate the factors that affected EFL majors' learner autonomy in online translation course during the Covid-19. The main factors can be categorized into two types, internal factors and external factors. In terms of the internal factors, this research first takes the self-esteem of the participants into account, that is, the first question in the questionnaire. In particular, learners with high self-esteem will not be discouraged by teachers' negative evaluation, while learners with low self-esteem tend to have negative attitude towards his learning ability (He,

2003). Hill & Wigfield (1984) confirm that students with high anxiety hardly apply learning strategies and lack task persistence than students with low anxiety. Due to the influence of the Covid-19, school curriculum shifted from offline to online all of a sudden, inevitably creating psychological anxiety of the students. Therefore, the second question in the questionnaire is available for consulting this factor, which also tallies with the research objective. As far as the internal factors are concerned, participants' self-discipline, the degree of concentration and the priority of learning can also affect learner autonomy. Question (3), (4) and (5) of the questionnaire well measure these dimensions. In terms of the external factors, since the online education is the first large-scale online curriculum in China, it is not perfect in some aspects. In this research, the condition of the internet, the level of difficulty and the content of the online courses as well as the operation of the online platforms are taken as the external factors that may affect the learner autonomy, which can be reflected in question (6), (7), (8) and (9). At the same time, the online learning atmosphere, the time for students to study independently and the frequency of communication between students and teachers should also be considered in the external factors. These dimensions are reflected in question (10), (11) and (12) in the questionnaire. Finally, this research sets a question, aiming to understand the attitude of the participants towards online translation autonomous learning and offline translation autonomous learning, so as to provide references for improving EFL majors' learner autonomy in online translation courses in the future.

The Likert Scale in this research uses five levels of options, each of which has a text description and the distance between the two adjacent options is equal. Specifically, the participants are asked to evaluate their learner autonomy on the five subscales: 1=extremely inconsistent; 2=basically inconsistent; 3=neutral; 4=basically consistent; 5=extremely consistent. For analysis, each answer is given a corresponding score. The higher the scores are, the better the learner autonomy is. When using this method to determine the total score of each participant's answer, it is sure to use consistent grading standards. For example, for a negative sentence, consent means negative, while for an affirmative sentence, consent means positive.

Therefore, the answer to "extremely consistent" in an affirmative sentence should get the same score as the answer to "extremely inconsistent" in a negative sentence.

3.2.2 Design of Interview

Individual interviews are conducted among the five selected subjects to supplement the results of the quantitative data. Clarifying the meaning of the interview is of great significance for using this method correctly and reducing blindness in practical research. The choice of interview form should be in the light of the research questions, approaches and participants, etc. When necessary, different methods should be combined with the interview (This research employed questionnaire with the interview to collect information.). The preparation before the interview is of extreme importance to ensure the smooth progress of the interview and improve the quality of the interview, which includes: interviewee selection, time and place determination, relationship establishment, interview outline designing, etc. Below, the steps of the interview will be described in detail.

The classification criteria of interview generally include: the structure of the interview, the degree of formality of the interview, the contact mode of interview, the number of the interviewees and the times of the interview. Based on the structure, the interview can be divided into "structured", "semi-structured", and "unstructured" and the semi-structured interview is adopted in this research. Semi-structured interviews specify certain topics and introductory questions but allow more flexibility in determining the way that the interview is conducted. Attention should be drawn to certain ideas and issues in order to monitor the participants' reactions or sensitivity to internal and external stimuli. In the semi-structured interview, the investigator prepares an interview outline in advance and asks the respondents questions correspondingly, which seems to have certain control over the structure of the interview and allows the respondents to actively participate. In addition, this research adopts the method of one-time interview, mainly to collect factual information. According to the formal degree of the interview, the interview can be divided into formal interview and informal interview. Meanwhile, the formal interview is subdivided into direct interview and indirect interview. The interview in this research

adopts formal interview and direct interview, which refers to a formal conversation in a face-to-face way between researchers and participants on a certain issue at a predetermined time and place.

The interview outline is closely based on the research questions and the results of the questionnaire data analysis. The questions in the interview outline are derived from the principle of questionnaire design and the main content of the question is also about the five dimensions of learner autonomy and the two influencing factors. However, not all types of information proposed in the questionnaire are used to make questions in the interview outline since some of the information has existed or is not applicable, such as whom the learners are and the learners' English competence levels, etc. Specifically speaking, the online translation course situation is represented in the first question of the interview outline, including online translation teaching methods, online translation teaching platforms and online translation teaching links. Furthermore, learning intention and the anxiety of the internal factors are embodied in the second question, by asking participants' attitude towards learning's shift from offline to online. The preparation of participants for online courses is another way of an inquiring learning plan, which is reflected in the third question. Time and environment arrangement of the participants is learned through the fourth question. Meanwhile, learning methods, learning techniques and learning regulations taken by the participants are asked to understand their learning strategies in question (5) and (6). In the learning process, whether the participants will reflect or re-position themselves that gives expression to metacognitive ability is incarnated in question (7) and (8). The following questions are to enquire about the two outside factors, of which question (9) is to inspect participants' dealings with exoteric temptations and question (10) with the intent to understand what effect the Covid-19 has on EFL majors' learner autonomy in online course. Ultimately, in order to understand what aspects of online translation courses need to be improved, question 11 is set.

3.3 Participants

The participants of this research are 37 EFL majors in a university in Shaanxi Province, who were enrolled in an online translation course during the Covid-19 (the second semester in 2019-2020 academic year). Among them, 2 are male students and 35 are female students. From the perspective of the gender distribution of the participants, females account for 94.3% of the total, while male students account for 5.7%. The proportion of females is significantly higher than that of males, which is consistent with the actual proportion of males and females in EFL major in this university.

In selecting the participants, this research follows two important factors: the characteristics of the participants and the attitude of the participants. In terms of the characteristics of the participants, the participants in this research were all enrolled in online translation course during the Covid-19 (the second semester in 2019-2020 academic year) and the teaching links in the course are the same. In addition, due to the small number of participants in the case study, those who participate in the research must be willing to cooperate and have a serious attitude. In the questionnaires distributed, 35 questionnaires are collected, of which 35 are valid, and the effective questionnaire recovery rate is 94.6%.

The interviewees are selected based on the sampling principle of typical cases. Specifically, this research selects those who belong to the representative cases in order to understand EFL majors' learner autonomy in online translation course. In the case study, the study of typical cases is not to infer the results to the population sampled, but to explain what a typical case looks like in this kind of phenomenon. Therefore, the participants chosen in this research are the monitor, a student with good grades, a student with bad grades and two male students. There is a reason why the monitor is chosen in the interview. The monitor works as an aide of sorts to the teacher, having some information at her disposal, thus being a typical sample in the interview. Achievement discrepancy of the participants is considered to compare the opinions of the participants at different achievement levels. In addition, since the number of male

students in this research is small, in order to gain more information about the perspective of the male students, the two male students are selected in the interview.

3.4 Procedures

Before distributing the questionnaire, the investigator made a brief introduction of the research to the participants, in order to win their cooperation. Firstly, the background of the research expressed by the investigator is the Covid-19 and the purpose of the research is explained in brief. Secondly, the investigator illustrated the specific writing requirements and the matters that need to pay attention to. At the same time, it was promised that participants' answers would not be used for other purposes except for research. Finally, the investigator prepared small gifts for the participants to express gratitude.

The time of issuing the questionnaire is July 12, 2021 to ensure that the participants can cooperate and take the questionnaire seriously, conveniently and flexibly. To be specific, in this research, the questionnaire is distributed through 'questionnaire star', which is an online questionnaire survey platform. In this way, the participants can answer the same questionnaire at the same time; the investigator can also check the completeness of each answer sheet in time. The quality of the answer will be improved and the data defect rate will be significantly reduced through this investigation way.

The semi-structured interview is employed to gather information from the five participants based on the different properties of case samples in order to obtain in-depth and available data in a time-effective manner. The interview was conducted through WeChat in summer vacation at participants' convenience to ensure the smooth running of the interview and the contents of the interview were also recorded to be researched. Chinese was once again used as the medium of communication during the interview in order to better facilitate the discussion and gain more valid and in-depth insights that the participants answered in the interview and their opinions towards the general trend were found in the interview data. In a word, the interview

follows the following steps to the letter: selecting the samples, training the interviewers, programming scale items and other preparations all serve for the conversation that took place between the investigators and the participants.

After collecting the data of the questionnaire, SPSS 26.0 is used to analyze the data. The data analysis is carried out in three steps: 1) the mean (μ) and the standard deviation (θ) of each variable are listed by descriptive statistics; 2) Correlation Analysis is used to test the correlation between the dimensions of learner autonomy, influencing factors and learner autonomy in online translation course; 3) Regression Analysis is used to explore the extent of influence of influencing factors on learner autonomy in online translation course.

For the interview data, the interview is analyzed by using content analysis in order to find key information related to the research objectives mentioned by the participants. This is done by generalizing and summarizing primarily through organizing field notes and categorizing recurring patterns in the participants' answers.

3.5 Reliability and Validity

3.5.1 Reliability of the Questionnaire

To test the preciseness of the research procedure and the authenticity of the research results, reliability and validity can be the effective ways (Roberts & Priest, 2006). Therefore, when designing the research, the author takes issues of reliability and validity into consideration from the outset.

It is reliability that represents how far the questionnaire will produce similar results in different conditions, supposing nothing else has changed (Roberts & Priest, 2006). Measuring the reliability of the research equals to assessing the internal consistency of the research tools (questionnaire in this research). Cronbach's alpha coefficient is one of the statistical procedures to measure the internal consistency of variables (Cronbach, 1951), which is also the method used in this research to measure reliability.

The reliability of the two scales is analyzed by SPSS 26.0, and the detailed data

are shown in Table 3.1 and 3.2. Taking a look at the first scale that aims at understanding EFL majors' learner autonomy in online translation course, it can be seen that the coefficient of the Cronbach's Alpha of the whole questionnaire is 0.968. In addition, the coefficients of reliability of all dimensions of learner autonomy are from 0.80 to 0.90. According to Hinton et al.'s (2004), excellent reliability is set at 0.90 and above, high reliability is from 0.70 to 0.90, moderate reliability ranges from 0.50 to 0.70 and low reliability is in 0.50 and below.

The second scale can be explained in the same way. It can be seen from Table 3.2 that the coefficient of the Cronbach's Alpha of the whole questionnaire is 0.854. And the coefficients of reliability of the internal factors and the external factors are 0.787 and 0.876. According to Kline (2000), the coefficient alpha for the scale should be greater than the recommended 0.70.

Table 3.1 Reliability of the Second Part of the Questionnaire

Dimensions of Learner Autonomy	Learning Intention	Learning Plan	Time and Environment Arrangement	Learning Strategy	Metacognitive Ability	The Whole Questionnaire
Cronbach's Alpha	0.834	0.909	0.846	0.885	0.911	0.968

Table 3.2 Reliability of the Third Part of the Questionnaire

Dimensions of Influencing Factors	Internal Factors	External Factors	The Whole Questionnaire
Cronbach's Alpha	0.787	0.876	0.854

3.5.2 Validity of the Questionnaire

"Reliability is a necessary but insufficient condition for validity", that is to say, the questionnaire with high reliability does not mean it has high validity. As a result, this research not only measures the reliability of the questionnaire, but also examines its validity.

As is stated above, validity refers to the extent to which a measure accurately describes the concept of what the research intended to measure. Validity is generally divided into four types: face, content, criterion, and construct validity. In the light of Oluwatayo's (2012), face validity refers to researchers' subjective judgment on whether the research instrument is reasonable nor not, which is inaccurate; content validity refers to "the degree to which items in a tool reflect the content universe to which the instrument will be generalized"; criterion validity is widely used in predicting performance or behavior in another situation and construct validity refers to the operationalization of a certain concept. Integrating the main characteristics of the four forms, it is found that content validity works best for this research since it guarantees to contain all the indispensable items and eliminates unnecessary items to a specific construct field. The determination methods to check content validity consist of reviewing of literature and consulting experts.

In order to apply content validity, this research follows the above steps strictly. First, an exhaustive review of relevant literature to extract the related items was done when developing the questionnaire. Second, the questionnaire was sent to the experts in a similar field of this research to amend. Third, items that are not significant at the critical level were eliminated based on experts' recommendations.

In brief, when defining the reliability and validity of the research, reducing error is the foremost concern. Being able to report on these procedures and their outcomes can help to demonstrate the preciseness, accuracy and usefulness of such work.