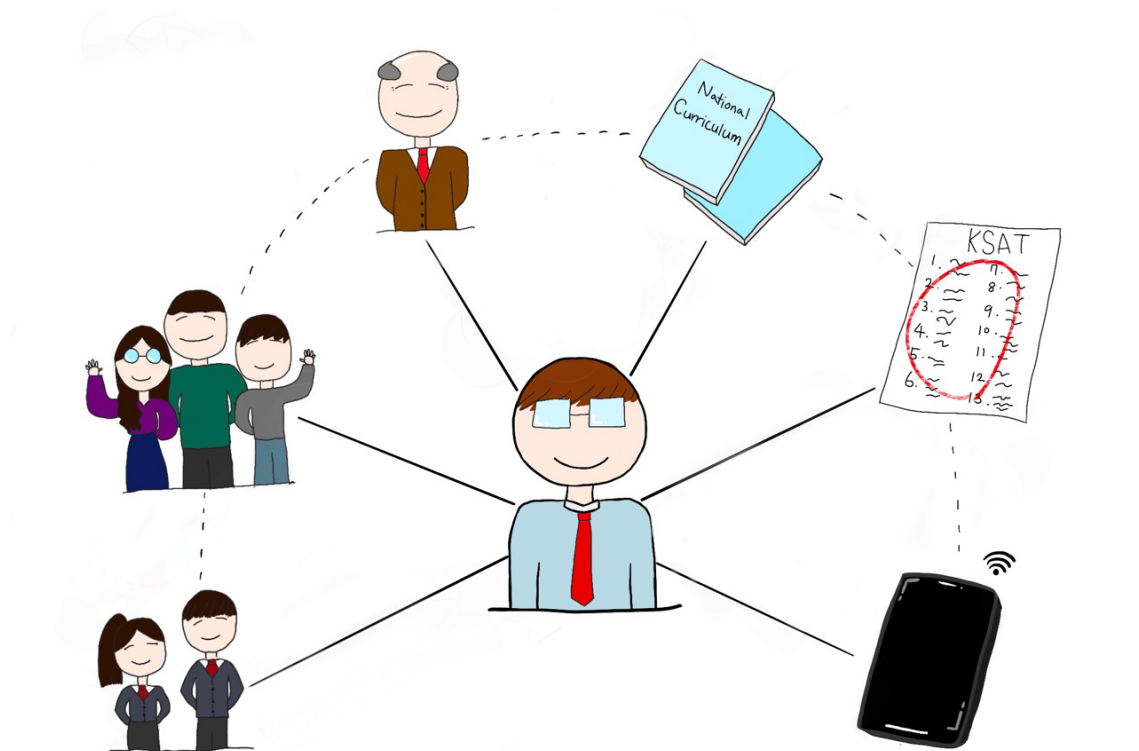


Wook Namgung

An Ecological Approach to Teacher Agency in the Korean Context

Teacher Legitimation in Synchronic and Diachronic Environments



JYU DISSERTATIONS 746

Wook Namgung

**An Ecological Approach to Teacher
Agency in the Korean Context**

**Teacher Legitimation in Synchronic
and Diachronic Environments**

Esitetään Jyväskylän yliopiston kasvatustieteiden ja psykologian tiedekunnan suostumuksella
julkisesti tarkastettavaksi Historica-rakennuksen salissa H320
helmikuun 2. päivänä 2024 kello 12.

Academic dissertation to be publicly discussed, by permission of
the Faculty of Education and Psychology of the University of Jyväskylä,
in building Historica, lecture hall H320, on February 2, 2024, at 12 o'clock.



JYVÄSKYLÄN YLIOPISTO
UNIVERSITY OF JYVÄSKYLÄ

JYVÄSKYLÄ 2024

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Cover illustration by Haeun Namgung

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ISBN 978-951-39-9913-1 (PDF)

URN:ISBN:978-951-39-9913-1

ISSN 2489-9003

Permanent link to this publication: <http://urn.fi/URN:ISBN:978-951-39-9913-1>

With your help I can advance against a troop; with my God I can scale a wall.

2 Samuel 22:30, NIV

ABSTRACT

Namgung, Wook

An ecological approach to teacher agency in the Korean context: teacher legitimation in synchronic and diachronic environments

Jyväskylä: University of Jyväskylä, 2024, 80 p. + original articles

(JYU Dissertations

ISSN 2489-9003: 746)

ISBN 978-951-39-9913-1 (PDF)

This dissertation investigates how Korean secondary English teachers (KSETs) perceive and enact their own teacher agency within the Korean education ecosystem. Drawing on an ecological approach to agency, this empirical study explores the dynamic interplay between teachers and the environment as they enact teacher agency. The dataset for the study comprises semi-structured interviews with 15 KSETs and has been thematized according to what mediates teacher agency and how teachers interact with different ecosystems and temporal environments.

Exploring the complex interplay between teachers and the environment, this research project suggests three levels of legitimation that teachers employ to mediate teacher agency: individual, collegial, and sociocultural. In addition, this dissertation argues that teacher agency is achieved through a dynamic interplay between teachers and different ecosystems. The different ecosystems with which teachers interact encompass *microsystems*, *mesosystems*, *exosystems*, *macrosystems*, and *chronosystems*. Each ecosystem informs teacher agency directly or has an indirect impact on teacher agency through inter-ecosystem interactions. This dissertation also underlines teachers' interactions with temporal environments for the exercise of teacher agency.

Acknowledging the basic principle of an ecological approach to highlight the relationality and temporality of teacher agency, this dissertation elaborates the ecological approach by spotlighting teacher intentionality as well. When interacting with synchronic and diachronic environments, teachers mediate their agency through different levels of legitimation. Meanwhile, they transform the quality of existing ecosystems to facilitate the exercise of teacher agency. In this study, the transformative agency emerging through the interplay between teachers and the environment strengthens an ecological approach by elaborating the transactional relationship between organisms and the environment. This dissertation concludes with practical and theoretical implications for an ecological perspective and suggestions for future research.

Keywords: teacher agency, ecological approach, legitimation, synchronic environments, diachronic environments

TIIVISTELMÄ (ABSTRACT IN FINNISH)

Namgung, Wook

Ekologinen lähestymistapa opettajan toimijuuteen korealaisessa kontekstissa: Opettajan legitimaatio synkronisissa ja diakronisissa ympäristöissä.

Jyväskylä: Jyväskylän yliopisto, 2024, 80 s. + alkuperäiset julkaisut

(JYU Dissertations

ISSN 2489-9003; 746)

ISBN 978-951-39-9913-1 (PDF)

Tässä väitöskirjassa tutkitaan, miten korealaiset perusasteen ja toisen asteen englanninopettajat (KSET) hahmottavat ja toteuttavat omaa toimijuuttaan korealaisen koulutuksen ekosysteemissä. Tutkimuksessa hyödynnetään ekologista lähestymistapaa toimijuuteen, ja keskitytään opettajien ja ympäristön välisen dynaamisen vuorovaikutuksen merkitykseen toimijuudelle. Tutkimuksen aineisto koostuu 15 korealaisen englanninopettajan puolistrukturoiduista haastatteluista. Aineistoa on tematisoitu opettajan toimijuuden välittymisen ja eri ekosysteemien ja ajallisten ympäristöjen kanssa tapahtuvan vuorovaikutuksen näkökulmasta.

Opettajien ja ympäristön monimutkaista vuorovaikutuksen ja toimijuuden välittymisen tarkastelemiseksi työssä käytetään legitimaation käsitettä. Opettajat tarkastelevat ja säätelevät toimijuuttaan suhteessa kolmeen eri legitimaation tasoon: yksilölliseen, kollegiaaliseen ja sosiokulttuuriseen. Lisäksi väitöskirja tuo esille sen, miten opettajien toimijuus saavutetaan opettajien ja erilaisten ekosysteemien välisessä dynaamisessa vuorovaikutuksessa. Erilaiset ekosysteemit, joiden kanssa opettajat ovat vuorovaikutuksessa, käsittävät mikrosysteemit, mesosysteemit, eksosysteemit, makrosysteemit ja kronosysteemit. Kukin ekosysteemi vaikuttaa opettajan toimijuuteen joko suoraan tai epäsuorasti ekosysteemien välisen vuorovaikutuksen kautta. Väitöskirja tuo esille myös opettajien vuorovaikutuksen ajallisten ympäristöjen kanssa.

Väitöskirjan lähtökohtana on ekologisen lähestymistavan peruseriaate, jonka mukaan opettajan toimijuudessa relationaalisuus ja ajallisuus ovat keskeisessä roolissa. Tätä ekologista näkökulmaa rikastetaan tuomalla esille myös toiminnan intentionaalisuuden merkitys. Ollessaan vuorovaikutuksessa synkronisten ja diakronisten ympäristöjen kanssa, opettajat säätelevät omaa toimijuuttaan legitimaation eri tasojen kautta. Samalla he muokkaavat olemassa olevien ekosysteemien laatua mahdollistaakseen oman toimijuutensa. Tämä opettajien ja ympäristön vuorovaikutuksen kautta syntyvä transformatiivinen toimijuus täydentää ekologista viitekehystä ja auttaa ymmärtämään organismien ja ympäristön välistä transaktionaalista suhdetta. Väitöskirjan lopuksi tuodaan esille tutkimuksen käytännöllistä ja teoreettista antia ja sen merkitystä ekologisen viitekehksen kehittämisessä sekä tuodaan esille tulevia tutkimustarpeita.

Asiasanat: opettajien toimijuus, ekologinen lähestymistapa, legitimaatio, synkroniset ympäristöt, diakroniset ympäristöt.

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PREFACE

This dissertation would not have been realised without the support of many others. Above all, I acknowledge the facilitation and encouragement of Dr. Josephine Moate and Dr. Maria Ruohotie-Lyhty with grateful thanks. Being my supervisors from an international Master's programme, they have provided timely comments and insightful advices throughout my entire academic journey. Although I was a distant researcher in the opposite side of the globe, I have never felt isolated or unsupported by my supervisors.

In addition to my supervisors, I would like to thank Professor Auli Toom and Dr. Aisling O'Boyle for reviewing and commenting on my dissertation. They provided me with very constructive and encouraging feedback. My gratitude is extended to Dr. Aisling O'Boyle who gladly agreed to be the opponent of the defense. Moreover, my special thanks go to my fellow Korean secondary English teachers who participated in interviews. They shared their precious experiences and insights with me for this dissertation.

I also thank Finnish higher education system for allowing me the precious opportunity to conduct an educational research in my context. I still remember my supervisors' comment in the application period of this PhD programme as follows. "It does not matter where you are. It does matter that you actually do the research." This dissertation would not have been complete without the flexible and competence-oriented Finnish education system. It has fully supported my aspiration to live as a researcher as well as a Korean secondary English teacher.

Finally, to my family, thank you for your patience and emotional support to continue this research. My wife, Yuri, has always provided me with encouragement and fruitful feedback as a fellow Korean secondary English teacher and a researcher. My lovely children, Haeun, Hajun, Hayeong and Harang have been my energy and motivation for completing the dissertation. Lastly, this dissertation has begun and come to an end thanks to God who has provided me with patience and power whenever I encountered intellectual and emotional obstacles on this academic journey.

Jyväskylä, 2nd February 2024
Wook Namgung

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INTRODUCTION

This dissertation uses an ecological perspective that highlights the interplay between the individual and the environment to examine teacher agency. The motivation for this research partly stems from my personal interest as a Korean secondary English teacher (KSET) in understanding teacher agency and its practice in response to curricular demands highlighting teacher agency (Korean Ministry of Education, 2021a; OECD¹, 2019; UNESCO², 2022). In addition to my personal interest, several other teachers are also aware of the importance of teacher agency; however, they find it difficult to implement it in their practice because teacher agency is enacted in teachers' complex and dynamic contexts on the individual, professional, and sociocultural levels (Lasky, 2005; Pappa et al., 2017; Vähäsantanen, 2013). This study provides teachers with significant points to cope with the dilemmas they face in enacting teacher agency by untangling several significant knots pertaining to teacher agency from an ecological perspective. The three studies included in this dissertation draw attention to what mediates teacher agency during teachers' interplay with the environment, how teachers interact with a multidimensional environment, and how they tackle temporal environments to enact teacher agency. Additionally, these studies provide a multi-level perspective on teachers' interplay with the environment to enact teacher agency. Furthermore, this dissertation connects with the long-standing studies to better understand the relationship between individuals and their environment (Argyris & Schon, 1974; Biesta & Tedder, 2007; Priestley et al., 2015; van Lier, 2000).

Valuing human individuality, this dissertation tackles the relationship between individuals and the environment in relation to how human individuality is realized in life, particularly how individual teachers invest in and realize their own development in their professional practice. The realization of human individuality is deeply connected to the concept of human agency. Human agency, roughly defined as the capacity of people to act purposefully and reflectively on the world (Rogers & Wetzel, 2013), has usually been understood from dichotomous perspectives, namely, on an individual-action level (Giddens, 1984) or a societal level (Leontiev, 1978). This dichotomy, however, has been criticized for being oversimplified and for providing an inadequate understanding of human agency (Archer, 2000, 2004). Neither an individual-inclined understanding that agency is exercised out of only human independent action within the condition of minimal social intervention nor a structure-inclined agency exclusively determined by social structure adequately acknowledges the reciprocal and relational attributes of agency between individuals and the environment. Rather, human beings enact their agency through the mutual relationship between individuals and the environment (Biesta & Tedder, 2007; Priestley et al., 2015).

¹ Organization for Economic Cooperation and Development

² United Nations Educational, Scientific and Cultural Organization

The notion of human agency has also been present in the discussion on education. In particular, the notion of both student agency and teacher agency as a crucial co-agency was highlighted significantly in some international publications on future education (OECD, 2019; UNESCO, 2022). Following the international educational trend, both student agency and teacher agency have been considered one of the key emphases of recent national curricula across the world (Korean Ministry of Education, 2021a; Finnish National Agency of Education, 2019; Manyukhina & Wyse, 2019; Wei & Chen, 2019; Xiaomin & Auld, 2020). Acknowledging the significance of teacher agency even before international reports highlighted the notion of agency, national curricula around the world have encouraged teachers to exert a high degree of their teacher agency and facilitate students in developing their agentic learning. (Korean Ministry of Education, 2021a; Liyanage et al., 2015; Philpott & Oates, 2017; Priestley & Drew, 2019). Although the recent international revision of national curricula and assessment guidelines emphasizes the agentic roles of teachers in curriculum design and assessment implementation, the existing literature suggests that educational reforms can challenge teachers to exercise teacher agency but do not necessarily guarantee the achievement of teacher agency (Lee, 2019; Lee & Chun, 2017; Liyanage et al., 2015; Priestley et al., 2015). The failure to achieve teacher agency through educational reforms demonstrates that besides structural changes, teacher agency is achieved through a more complex interplay between teachers and various environmental conditions. This complex interplay is the focus of this dissertation.

The current educational literature has investigated the dynamic relationship between teachers and the environment from an ecological perspective (Biesta & Tedder, 2007; Drew et al., 2016; Priestley & Drew, 2019; Priestley et al., 2012, 2015); however, the factors that mediate teacher agency in this complex relationship need further exploration. More research and theory development are required to elaborate teachers' intentional and transformative characteristics in an ecological approach to teacher agency (Molla & Nolan, 2020; Namgung et al., 2020; Stetsenko, 2019). This dissertation draws attention to the compatibility of the intentional and transformative characteristics of agency alongside emergent and relational characteristics from an ecological perspective by embracing both characteristics dialectically. Furthermore, if the interplay between teachers and the environment is the heart of teacher agency, as the ecological perspective suggests, which types of environments surround teachers in their workplaces? In addition, how do teachers interact with different types of environments to achieve teacher agency? Although some studies have already investigated the different types of environments surrounding teachers, such as curricular change (Drew et al., 2016; Liyanage et al., 2015; Priestley et al., 2012), collegial environments (Hökkä et al., 2017; Lieberman, 2009; Vähäsantanen et al., 2020), and sociocultural environments (Davison, 2004, 2007), comprehensive research that seeks to encompass various types of environments and takes both teachers' temporal dimensions and different environmental conditions into account is still needed. This dissertation seeks to systematically examine the

complex environment with which teachers interact and to investigate the complex interplay between teachers and the environment to evaluate teacher agency within Korean English language education.

Research on teacher agency has primarily been conducted in the context of Western countries (Cong-Lem, 2021). The studies included in this dissertation, however, focus on South Korea, whose educational system is internationally recognized as not only being successful but also being significantly different from European educational systems. This provides a different environment for international empirical investigation into teacher agency and a more comprehensive picture of teacher agency around the world by filling the research gap pertaining to teacher agency in the Asian context, including South Korea (Cong-Lem, 2021). Furthermore, in Korean context, teacher agency has received little attention compared with student agency (Kim, 2013; Nam et al., 2021; Yoo, 2015) and has been investigated in only a few empirical studies (Min, 2019; Sung, 2021; Williams, 2016). However, as Nam et al. (2021) highlighted that teacher agency can be a crucial environment for student agency to flourish, this empirical study on teacher agency can also provide significant insights for the research on student agency.

As an investigation into the interplay between teachers and the environment to enact teacher agency, the following chapter explicates the theoretical framework of the dissertation. Chapter 3 explains the research task and the overarching research questions guiding it, and Chapter 4 presents the ontological and epistemological orientation of this study, the participants, the methodological approach to conducting the empirical studies, and the ethical considerations. An overview of the findings of the three sub-studies is provided in Chapter 5. The next chapter discusses these findings in light of the overarching research questions. The dissertation concludes with practical and theoretical implications, identifies the limitations of this study, and suggests directions for future research on teacher agency.

1 THEORETICAL FRAMEWORK

1.1 Various theoretical perspectives and discussions on agency

Before presenting the theoretical framework employed in this dissertation, this chapter provides an overview of various theoretical perspectives on agency that have been examined in the scholarly literature. Agency has been a popular research topic across disciplines, such as the social sciences (Archer, 2003; Emirbayer & Mische, 1998; Giddens, 1984), anthropology (Ahearn, 2001), and education (Moate & Ruohotie-Lyhty, 2020; Priestley et al., 2015; Tao & Gao, 2017). Although agency has become a very popular topic, a unanimously shared definition of agency does not exist (Eteläpelto et al., 2013). This lack of a shared definition is arguably in part due to the different theoretical lenses that have been used to examine and develop the notion of agency. One particularly challenging consideration is the relationship between individuals and their environment (Fuchs, 2001; Giddens, 1984; Rogers & Wetzell, 2013). Over time, however, studies on agency have increasingly recognized the relationship between the individual and the environment (Archer, 2000, 2003, 2007; Bhaskar, 1975; Biesta & Tedder, 2007; Bourdieu, 1977; Emirbayer & Mische, 1998; Priestley et al., 2015; Sztompka, 2014). This chapter presents and examines the key features of different approaches to agency and pays particular attention to individual intentionality, temporality, and environmental influence, as these are crucial elements of agency when seeking to understand the individual–environment interrelationship, as explained in more detail in the following sub-section (Section 1.2).

First, the social science approach to agency has a long tradition of discussions of agency and structural factors (Eteläpelto et al., 2013). Although most sociological scholars agree that social structures influence individual agency and agency is shaped (resourced or constrained) by the structures, there are some debates on the emphasis given to the influence of social structure on human action and the degree of individual agency within the structures. Some

extremely divergent sociological views advocate that structures and conditions are completely regressive over agency, so agency does not exist or operates very minimally (Fuchs, 2001; Eteläpelto et al., 2013). Highlighting the relationships between social structures and human action, Giddens (1984), however, spotlights human intentionality regarding agency and their capability of doing their actions in the first place. Giddens regards human intentionality and consciousness as critical elements of agency. His theory of structuration underlines that agents take reflexive monitoring from the rules and resources in a social structure, but they can also form a new social structure by drawing upon existing rules and resources. According to this perspective, agency as human intentional acts is analytically separated from non-conscious acts, such as automatic or habitual actions (Giddens, 1984). However, by subordinating automatic or habitual actions to intentional actions as the power to evoke an event, Giddens's approach to agency does not pay sufficient attention to individual temporality and the complex influence of the environment on agency despite the strong emphasis on individual intentionality. In this sense, this theory of agency has been increasingly criticized for its insufficiency to analytically explain the relationship between the social structure and the individual due to the lack of separation between the social and the individual (Archer, 2000, 2003).

Unlike Giddens's perspective, which does not analytically explain the relationship between the individual and the structure, Archer (2000, 2003, 2007) advocates a dualistic concept of agency that recognizes the way in which humans shape society through their activities, as they are also shaped by society. Archer points out that there is always an interplay between structure and agency as distinctive sets of causal powers in reality. The critical realist perspective of Archer, in contrast with Giddens's view, acknowledges that the social and the individual are analytically separated and that the social structure temporally pre-exists in the individual's intentional action (Archer, 2007; Archer et al., 2013; Bhaskar, 1975). This approach provides a more advanced framework to explicate agency, in that it analytically tackles the mutual relationship between individuals and the social structure. Despite paying balanced attention to both individuals and the social structure, this approach still bears limitations in explaining the complex environmental influence and individual temporality. Such a drawback of the critical realist approach to agency is found in the following criticisms: human reflexivity that mediates the structure-agency dialectic gives more dignity to agency (Akram, 2012), and it does not explicate the unconscious and irrational human desire and action (Lockett, 2008). Despite these limitations, the critical realist approach still has the philosophical value for understanding the exercise of agency, which contributes to the ontological and epistemological basis of this dissertation. This will be revisited from a methodological point of view in Chapter 3.

The post-structural approach to agency has diverse perspectives within itself (Eteläpelto et al., 2013). "Strong" post-structuralism understands agency as a discursive and social phenomenon and interrogates its construction as a pre-given or foundationalist premise outside the text (Butler, 1992; St. Pierre,

2000). It underlines agency as something not autogenerated transcendentally but constituted socially through the rewriting of hegemonic power discourses. It makes a crucial contribution to the discourse on agency in that it reveals a macroscopic environmental influence on agency. However, criticizing the overemphasis on the abstract social structure and the reduction of individuals to discourses of strong post-structuralism, the intermediate post-structural approach to agency highlights people's lived experience of their social relations and their capacity for self-reflection (McNay, 2004). The intermediate post-structural approach points out the significance of selfhood, human embodiments, and individual experiences for understanding agency. Indeed, it provides a positive implication to the discourse of agency in that individuals are placed as socially and culturally relational subjects rather than those determined by social and cultural structures. However, an intermediate post-structural approach still insufficiently explains the complex interaction between individuals and the social structure and hardly considers aspects of individual life history. Furthermore, the post-structural approach to agency is inclined to risk creating an ontological fallacy by predominantly highlighting the relativism and subjectivity of reality.

Another crucial line of research on agency is the sociocultural approach (Eteläpelto et al., 2013; Kalaja & Ruohotie-Lyhty, 2021). The object-oriented sociocultural perspective, however, reduces individuals to social processes and focuses on material and concrete object-oriented activities based on a Marxist conception of work (Leontiev, 1978). The early works of the object-oriented sociocultural perspective regarded human activities in industrial contexts; freedom was seen as limited, and there was no need for individual and collective agency. Therefore, individual intentionality and temporality were significantly overlooked in this approach. Conversely, a contrasting sociocultural approach recognized the importance of individual agency without denying the role of the social and cultural contexts (Billett, 2006; Hodgkinson et al., 2008). This so-called developmental subject-oriented sociocultural approach views individuals as agentic actors in relation to the social world. It pays more attention to the roles of intentionality, subjectivity, and identity compared with the object-oriented sociocultural approach. However, highlighting individuals' negotiation with sociocultural settings and recognizing environmental influence for exercising the agency, this approach still does not provide an adequate explanation of objective environmental influence and the complex individual temporality beyond the individuals' subjective epistemological range including their conscious and unconscious engagement with sociocultural settings. However, environmental influence is crucially addressed in complex dynamic systems theory. It suggests that agency is a complex and dynamic system composed of a multitude of interrelated components (Kalaja & Ruohotie-Lyhty, 2021; Larsen-Freeman, 2019; Mercer, 2012). This perspective highlights relationality and the emergence of agency; in addition, it recognizes that agency is contextually and temporally situated (Larsen-Freeman, 2019; Mercer, 2012). However, individual life history does not draw enough attention in the complex dynamic systems approach.

Furthermore, this perspective dwarfs the intentionality of agency or emphasizes agency as a reactive rather than proactive form of action, as it emphasizes the unpredictable nature of agency due to the inherent instability of any system.

Finally, the life-course approach to agency has many attributes in common with complex dynamic systems theory, in that both emphasize relationality and the emergence of agency. However, this approach to agency has a stronger temporal orientation in referring to the individual’s life course. It highlights the subject’s attempt to exert influence to shape his or her life trajectory in the long term within the temporal continuum manifested as iterational (past), projective (future), and practical-evaluative (present) aspects (Biesta & Tedder, 2007; Emirbayer & Mische, 1998). An ecological approach to agency is deeply connected with the life-course perspective, as it draws explicitly on Emirbayer and Mische’s (1998) framework foregrounding individual temporality (Priestley & Drew, 2019; Priestley et al., 2012, 2015). Environmental influence is also significantly considered in this approach to agency because it highlights the interplay between individuals and the environment (Biesta & Tedder, 2007; Drew et al., 2016; Priestley & Drew, 2019; Priestley et al., 2012, 2015). The ecological perspective is introduced in detail in Section 1.2. Table 1 provides a summary of how the different approaches to agency mentioned above tackle individual intentionality and temporality as well as environmental influence.

Table 1 The degree of individual intentionality, individual temporality, and environmental influence found in different approaches to agency (++: strong, +: intermediate, -: weak or not addressed)

Approaches		Individual intentionality	Individual temporality	Environmental influence
Social science	Giddens	++	-	+
	Archer	++	+	+
Post-structural	Strong	-	-	++
	Intermediate	++	-	+
Sociocultural	Object-oriented	-	-	++
	Subject-oriented	+	+	+
Complex dynamic systems		-	+	++
Life-course, Ecological		+	++	++

This research draws heavily on an ecological approach to agency that highlights the complexity of the individual–environment relationship and employs the term “environment” rather than “structure,” as it can explain the more inclusive and dynamic attributes of agency while taking both contextual and temporal dimensions into account (Priestley et al., 2015; van Lier, 2004). Nevertheless, it is required to elaborate individual intentionality further compared with the emphasis on the emergence and relationality of agency although an ecological perspective recognizes individual intentionality through the transaction between organisms and the environment and the emphasis on the individual ability to draw on iterational experiences and projective aspirations (Biesta & Tedder, 2007;

Emirbayer & Mische, 1998). This study, therefore, necessitates drawing on a more dialectic form of an ecological approach to agency in order to provide a more elaborate and nuanced explanation of agency. The theoretical underpinnings of the ecological approach are explained in the following sub-section.

1.2 Toward an inclusive ecological approach to agency

1.2.1 Key terms underpinning an ecological approach

Before specifying an ecological approach to agency, it is necessary to present definitions of some terms related to this approach. First, *ecology* refers to the study of the relationship between organisms and the environment; it highlights the interaction between living entities and their surroundings (Heikkinen, 2020; Wals, 2019). In this regard, humans are also specific living entities that interact with their surroundings within the whole environment. In other words, individuals and environments are not ontologically independent or separate; rather, they are intertwined with one another in complex ways. The combination of systemic thinking and ecology brought about the concept of *ecosystem* (Heikkinen, 2020). An ecosystem indicates a community of organisms that makes up its environment (Willis, 1997). The ecosystem can be formulated at a variety of levels depending on living entities' social, political, and educational practices by means of their environment.

The concept of “ecosystem” was first introduced in educational research by the developmental psychologist Urie Bronfenbrenner (1979). In terms of human development and socialization, he classified the multidimensional environment into five ecosystems and analyzed them specifically in his ecological theory. Among the ecosystems he presented, the *microsystem* is the immediate environment in which humans participate and interact. The *mesosystem* forms through linkages between different microsystems. The *exosystem* is constituted through events that affect what happens in a person's immediate environment, whereas the *macrosystem* is formed through the social and cultural values that affect human development. The *chronosystem* entails temporal changes over time. According to Bronfenbrenner's ecological theory, the entire ecosystem is formed through the complex interplay between individuals and various sub-ecosystems. The different sub-ecosystems are deeply interconnected and influence each other in a complex way to have an indirect impact on human development. This theory provides a practical and elaborate conceptual tool for investigating multiple environmental influences on human agency and the complex interplay between individuals and the environment, which have been variously explored in previous studies on agency (Hökkä et al., 2017; Lieberman, 2009; Priestley et al., 2012; Vähäsantanen et al., 2020). Sub-study II of this research project draws on Bronfenbrenner's ecological theory as a lens to empirically explore how different ecosystems interrelate with each other and inform teacher agency. Based on this understanding of the key terms underpinning an ecological approach, the

following sub-section explicates the key characteristics of an ecological approach to agency.

1.2.2 Key characteristics of an ecological approach to agency

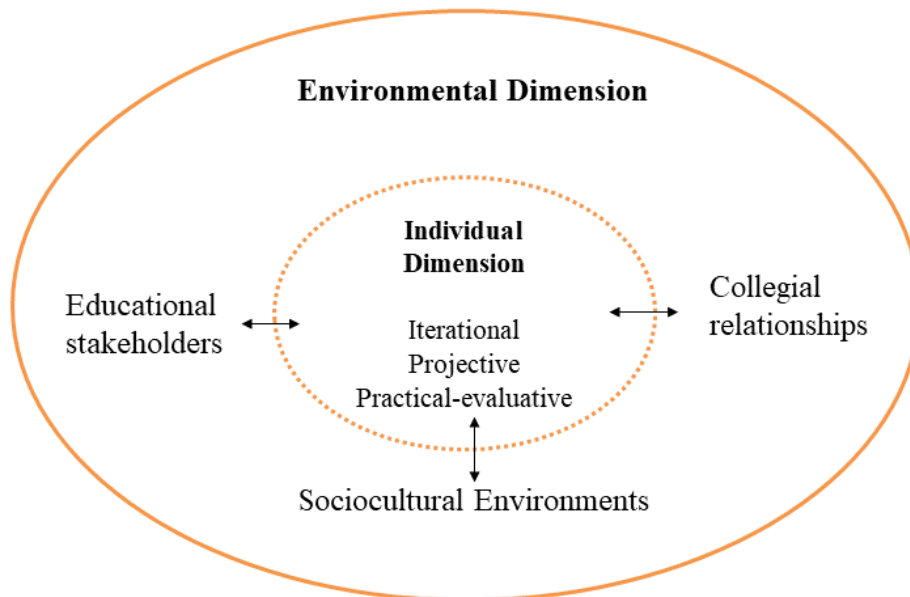
An ecological approach to agency highlights the totality of relationships between individuals and the environment, underlining the temporal and relational attributes of agency (Biesta & Tedder, 2007; Larsen-Freeman, 2019; van Lier, 2004). The ecological perspective presupposes that agency is not enacted in a vacuum (Priestley & Drew, 2019) and argues that agency is achieved through the interplay between individuals and the environment while foregrounding the notions of affordance and context (van Lier, 2000, 2004, 2008). *Affordance* acknowledges the properties of the environment and the active responsiveness of the learner, suggesting that an individual can be agentic when choosing or refusing to use a resource that is available within the environment. From this perspective, context does not surround the matter of investigation but is the heart of the ecosystem (van Lier, 2004). The significance of context is also highlighted in the literature, which demonstrates how agency can be achieved at collective levels through collegiality as a crucial relational environment as well as at an individual level. (Hökkä et al., 2017; Lieberman, 2009; Pyhältö et al., 2015; Vähäsantanen et al., 2020). Previous studies imply that agency can be formed through togetherness and relationships in individuals' collegial context rather than through independent endeavor. In other words, agency is shaped through the constant interplay between individuals and the environment and is closely analogous to the interactive relationship between organisms and other entities within the environment (Priestley et al., 2015; van Lier, 2004).

Mediation is another important notion of an ecological approach to agency. In an ecological perspective, agency is mediated by different factors, such as individual, structural, and cultural factors (Biesta & Tedder, 2007; Hizli Alkan & Priestley, 2019; Willis et al., 2019). However, as mediation emerges in the reciprocal interaction between ecological conditions (Leontiev & Pollari, 2022), this study highlights the notion of *mediation* as what catalyzes the exercise of agency through negotiating the different factors in the ecosystem rather than the different factors themselves to influence agency. *Mediation*, therefore, works in the process of an individual's negotiation for enacting agency through the complex interplay between the different factors. Deeply interconnected with mediation, the notion of *interplay* stresses the reciprocal relationship between individuals and the environment, acknowledging that the individual shapes the social structure, and vice versa (Archer, 2000, 2003). Furthermore, the notion of *interplay* in an ecological perspective pertains to all dynamic interactions between individuals and the environment informing each other both consciously and unconsciously in an organic way (van Lier, 2004). The *interplay* can even encompass the dynamic interaction between inter-ecosystems within the entire environment.

An ecological perspective of agency not only tackles an individual's spatial environment and their interplay with it, as mentioned previously, but also pays

attention to the temporality of the individual’s life course (Emirbayer and Mische, 1998). In other words, the ecological approach encompasses individuals’ dynamic interplay with the temporal dimensions of life trajectories as well as the spatial dimensions of the environment. It explicitly employs three temporal dimensions from the life-course perspective on agency: influences from the past, orientations toward the future, and engagement with the present (Biesta & Tedder, 2007; Emirbayer & Mische, 1998; Priestley et al., 2015). Emirbayer and Mische (1998) used the terms *iterational*, *projective*, and *practical-evaluative* to differentiate the three temporal dimensions. Agency is achieved through a complex and dynamic interplay between these temporal dimensions, rather than through a linear and chronological sequence. For example, using a practical-evaluative understanding in the present may reform the iterational dimension by reinterpreting the past. The projective dimension can also inform the present through the anticipation of an individual. Underlining the temporal dimensions of agency, the ecological perspective recognizes agency as an emergent phenomenon generated through the interplay of individual efforts, available resources, and contextual factors (Priestley & Drew, 2019; Priestley et al., 2015). Taking the individual’s temporality over his or her life course into account, this dissertation combines both individual and environmental dimensions within the definition of agency, as displayed in Figure 1.

Figure 1 Two dimensions of agency (Namgung et al., 2020)



The individual dimension draws heavily on Emirbayer and Mische’s (1998) chordal triad of an individual’s temporal continuum manifested as the iterational, projective, and practical-evaluative aspects. The environmental dimension indicates different types of sociocultural relations and environmental conditions surrounding individuals. The two dimensions interact dynamically with each

other. Although they have distinctions, they are hardly separated, as the dotted line in Figure 1 indicates.

1.2.3 An inclusive ecological approach to agency

An ecological approach to agency, however, has been contested in that its emphasis on the relationality and temporality of agency might connote the overall passivity of human beings (Stetsenko, 2019). Additionally, agency as an emergent phenomenon in the ecological perspective is sometimes regarded as unintentional or unpredictable. This criticism entails crucial concerns that human agency is merely the capacity of actors to shape their responses to problematic situations that they are presented with in their lives and contexts. The responsiveness to context presupposes antecedent events or inputs; therefore, human agency is primarily regarded as a reaction to the issues and problems that individuals encounter (Biesta & Tedder, 2007). The critical perspective contests an ecological approach, highlighting that agency can be achieved only in specific temporal and spatial conditions, which is unpredictable and responsive. However, foregrounding relationality and temporality in the ecological perspective does not necessarily deny the intentionality and directivity that human beings inherently possess, even in the interplay with the environment.

In addition to the emphasis on relationality and temporality, an ecological perspective already highlights that actors' engagement with problematic situations will lead to a transformation of the situation through the transactional relationship between organisms and the environment (Biesta & Tedder, 2007; Emirbayer & Mische, 1998). Individuals' subjective past experiences and future orientations can form a new educational ecosystem through interactions with the objective present environment, such as collegiality, policy expectations, and material resources, which can consequently strengthen and reform teacher agency (Molla & Nolan, 2020; Namgung et al., 2020). Elaborating the organism-environment transaction as well as the relationality and temporality of an ecological perspective, this dissertation adopts an inclusive ecological approach to agency as the theoretical framework of this dissertation in which the relational and emergent attributes of agency foregrounded in an ecological perspective do not erode individual intentionality as a potential for the development of agency; rather, the former is compatible with the latter. Humans exist as part of the natural ecosystem; consequently, they intentionally act by means of the environment to survive and thrive in the ecosystem. Therefore, by acknowledging that human agency cannot be separated from the conditions of the environment as a unified whole, this inclusive ecological approach to agency also indicates how individual intentionality can be a part of and developed within the ecosystem and can even inform the transformation of the entire ecosystem.

1.3 Interplay between teachers and their educational environment

In terms of teacher agency, an ecological perspective highlights teacher agency as achieved through the dynamic interplay of teachers and their environment (Biesta & Tedder, 2007; Drew et al., 2016; Priestley et al., 2015). This ecological perspective foregrounds the reciprocal and dynamic nature of the teacher–environment relationship in that both teachers and the environment are sensitive and responsive to one another. As the ecological approach to agency highlights relationality and temporality in the previous section, it is underlined in an ecological perspective that teacher agency can be achieved through teachers’ interaction with various ecological conditions rather than them possessing agency as a property or capacity (Biesta & Tedder, 2007; Drew et al., 2016; Priestley & Drew, 2019; Priestley et al., 2012, 2015). Ruohotie-Lyhty and Moate (2015) in their study on pre-service teachers have described this relationship in terms of proactive and reactive agency, highlighting how teachers can experience their environment as a resource for or limitation to development. More recently, Moate and Ruohotie-Lyhty (2020) highlighted the ongoing dynamic of the teacher–environment relationship and the way in which this forms the overall ecosystem of teacher development. These previous studies strongly suggest that both teachers and the environment have interactive and bidirectional influences rather than a one-way impact on achieving agency within the educational ecosystem.

Curriculum design and assessment are significant contexts in which teacher agency is enacted in teachers’ professional practice within and beyond the classroom (Hizli Alkan & Priestley, 2019; Liyanage et al., 2015; Priestley et al., 2021, Willis et al., 2019). In particular, contemporary international curricular change calls for teachers’ agentic role in curriculum design and assessment (Finnish National Agency of Education, 2019; Korean Ministry of Education, 2021a; OECD, 2019; UNESCO, 2022). This dissertation pays attention to the interplay between teachers and the environment for enacting teacher agency in relation to curriculum design (Sub-study II) and assessment (Sub-study III). However, the complex and interactive teacher–environment relationship cannot be described easily, as teachers are situated in a very complex and dynamic environment for enacting their teacher agency (Priestley et al., 2015; Pyhältö et al., 2015). Teachers’ environments comprise their relationships with colleagues, students, and their parents, as well as teaching materials and resources, national curricular policies, the educational culture of society, etc. Depending on teachers’ contexts, the environment provides a mix of enabling or constraining roles to enact teacher agency (Pappa et al., 2017; Willis et al., 2019). Bronfenbrenner’s (1979) ecological theory, mentioned in a previous sub-section, can be a useful tool to analyze the different levels of environmental conditions that have been investigated in previous studies on teacher agency by employing his notions of ecosystems: *microsystem*, *mesosystem*, *exosystem*, *macrosystem*, and *chronosystem*.

Considering the complex and dynamic environments with which teachers interact, a variety of personal, structural, and cultural conditions have been identified through research (Willis et al., 2019; Priestley et al., 2015). Personal conditions pertain to teachers' temporal-relational contexts, such as previous work experience, pedagogical expertise, their relationship with students, and future orientation. Although personal conditions primarily involve individual teachers' habits, histories, and beliefs, these are ontologically inseparable from the environment rather than being independent from it, as personal conditions are not formed in a vacuum but by means of the environment (Priestley & Drew, 2019). Teachers' reflexive practices mediate their iterational and projective dimensions regarding teachers' own capacity and structural conditions (Molla & Nolan, 2020; Priestley et al., 2015). By utilizing affordances and addressing constraints in the environment, teachers can create a new educational structure through teacher agency. Through the transactional relationship between organisms and the environment in the educational ecosystem (Biesta & Tedder, 2007; Emirbayer & Mische, 1998), teachers form educational structures through their activities; however, they are also shaped by it.

Structural conditions encompass national assessment guidelines, school timetables, and evaluation checklists designed by the Ministry of Education or a municipality (Willis et al., 2019). These conditions range from mesosystems to exosystems with which teachers interact. They can have a crucial impact on the exercise of teacher agency. Furthermore, these different ecosystems affect each other, which indirectly influences the agency of teachers. For example, an exosystem—such as the emphasis on developing teacher professionalism in revised national curricula—can affect the mesosystem—such as how teachers participate in the teacher learning community at school (Nguyen & Ng, 2020; Shin & Park, 2018). Teachers also encounter the different structural conditions of power and authority as well as the (im)balance of their relationship during the interplay with the environment (Bowen et al., 2021). The complexity of the power relations in which teachers are involved can work in invisible and visible ways. For example, the powers in educational ecosystems can work almost invisibly in national curriculum design by maintaining the existing status quo, assisting in the reproduction of inequality in education (Apple, 2012), disguising cultural capital as a neutral asset, and overlooking the implicit favoring of those who have already acquired linguistic and social competencies (Apple, 2004).

Cultural conditions are ideas, discourses, and prevailing beliefs in the educational ecosystem that shape teachers' pedagogical action. Macrosystems surrounding teachers relate to cultural conditions. These macrosystems often work invisibly and also have a significant impact on different levels of conditions, such as personal and structural ones. When teachers often experience a disjuncture or discrepancy between what they believe and what is allowed in their contexts, they have to negotiate with the environment to enact teacher agency (Willis et al., 2019).

Willis et al. (2019) suggested that personal, structural, and cultural conditions mediate teacher agency; however, they do not provide sufficient room

for individual teachers' intentionality, since teacher agency varies in individual teachers under similar conditions. In other words, individual teachers exist as part of the educational ecosystem and employ intentionality and directivity to at least survive and thrive optimally in the ecosystem. An inclusive ecological approach to teacher agency in this dissertation elaborates on the extant ecological understanding of teacher agency by paying sufficient attention to different ecological conditions as well as teachers' intentional and dynamic interaction with them. Employing an inclusive ecological approach to teacher agency, this dissertation seeks to investigate the strategies that teachers employ to negotiate and interact with the complex and dynamic environment for enacting teacher agency.

1.4 Context of this dissertation

This section elaborates on the context of this dissertation, which encompasses teacher position in Korea, English education in Korea, and Korean English teachers' perceptions of their roles. Furthermore, this section uses Bronfenbrenner's (1979) key concept of the five ecosystems (*microsystem, mesosystem, exosystem, macrosystem, and chronosystem*) to provide insights into the complex environment surrounding Korean secondary English teachers (KSETs). The summarized figure of ecosystems surrounding KSETs, which has been identified as the context of this dissertation, is presented at the end of this section.

1.4.1 Teachers' position in Korea

For several years, South Korea has scored well on the Programme for International Student Assessment (PISA) results, and its periodic educational reforms proactively reflect advanced international educational trends. Education is one of the most important areas of interest and investment in South Korea. This is sequenced by the high popularity of the teaching profession. Public officials in South Korea enjoy high stability and a relatively high salary, so teaching is consistently the most attractive profession in regular polls conducted for high school graduates (Korean Ministry of Education, 2021b). Furthermore, teacher quality in South Korea is known to be one of the highest in the world because the majority of intake for teacher education is composed of top-ranked students.

However, an international educational survey revealed the dark side of the teaching profession in South Korea. According to the results of the 2013 OECD Teaching and Learning International Survey (TALIS), 20% of Korean secondary teachers reported that they regretted becoming a teacher, a very high proportion considering that the international average is 9% (OECD, 2014). This survey result reflects Korean teachers' frustration with their professional practice and their low professional satisfaction, indicating deficient agency. This lack of Korean teacher agency can be examined in several ways; however, it can be partly explained by tracing the historical background of Korean teachers' position in the Korean

educational system. Influenced by other imperialistic countries, the modern form of schooling emerged in Korea in the late 19th century (Kim, 2013). In particular, a government-led public education system was launched in the Japanese colonization period, when obedience was emphasized as a colonial educational policy of subjecting to Japan. Korean teachers were monitored by the government, and it was difficult to secure public school teachers' autonomy in an oppressive atmosphere (Kim, 2013).

Even after Korea's independence from colonization in 1945, teachers had a hard time developing self-determination in their workplace because of the ideological conflict in the Korean political situation. As public servants, teachers must stand on the side of governmental policies and play a passive and limited role in curriculum-making and assessment implementation. Within this nationally supervised environment, Korean teachers have developed a strong sense of organizational professionalism that involves obeying national education policies rather than a sense of occupational professionalism that highlights professional knowledge and autonomous decision making (Son, 2010; Synott, 2007).

Meanwhile, the trend of decentralization, which started in the political area in the 1990s, was gradually extended to the Korean educational system. During this significant shift in the chronosystem of Korean education, teachers were encouraged to expand their participation in curriculum design. However, despite a series of educational reforms to promote a better educational environment for teachers, the low job satisfaction of teachers remains a dilemmatic issue, which is reflected in the international survey mentioned above (OECD, 2014). Ironically, high job stability and the relatively high salary of teachers raised the social popularity of the teaching profession (Korean Ministry of Education, 2021b); however, teachers' job satisfaction levels remained low. Investigating teacher agency through the complex relationship between teachers and the working conditions of the environment in this dissertation will help to understand the discrepancy between the high job popularity and low job satisfaction of teaching professionals.

1.4.2 English education in Korea

South Korea has pursued the development of an educational system to train students who can contribute to a global and high-tech society through different educational policies (Kang, 2002; Synott, 2007). Meanwhile, English has been considered an indispensable tool for achieving the abovementioned goal, and learning English has been a pivotal part of personal educational achievement in South Korea. The strong power of the English language in South Korea is increasingly reinforced for historical and sociocultural reasons; therefore, it is often regarded as a prerequisite for educational and employment pathways (Song, 2016). This sociocultural background serves as a crucial macrosystem for KSETs and has made English one of the most significant subjects in Korean secondary schools, with a relatively high number of lesson hours. Accordingly,

the number of English subject teachers also tends to be higher than that of other subject teachers in secondary schools.

English education in South Korea has been supported by the government and individuals' different efforts (Song, 2016). As a way of building an English immersion environment, during the presidency of Lee Myeongbak (2008–2013), the Korean administration nationally established "English Villages," where students could immerse themselves in various English programs by experiencing an English-dominant environment. Despite the influx of substantial financial investment for the implementation of English Villages, this policy has proved to be inefficient and a huge waste of time and resources (Hong, 2012). In addition, educational initiatives, such as Teaching English in English (TEE) and the National English Ability Test (NEAT), have been implemented by the following administration; however, they have not achieved substantial educational results in English education in South Korea. In particular, NEAT was designed to assess all four English skills: listening, speaking, reading, and writing. Huge financial investments were made in NEAT, and it was expected to replace the English subject in Korean Scholastic Aptitude Test (KSAT). However, it was eliminated in 2015, owing to the difficulties in managing it. In terms of individuals' efforts toward English education, Korean parents spent around 79,000 Korean won (approximately 60 Euros) a month in private English studies (Statistics Korea, 2018), and some of them even invested a lot of money in sending their children to English-speaking countries, as they wished their children would improve their English skills (Kim, 2017). The competitive social atmosphere of South Korea serves as a crucial macrosystem for KSETs, which in turn helps the private English education market prosper in South Korea. The prevalent private English education reinforces the competitive social atmosphere by exploiting parents' fear of their children being left behind without the assistance of private education. Therefore, this competitive social culture as a macrosystem is significantly interrelated with the popularity of the private English education market as an exosystem as well as with parents' fear of their children's future as a mesosystem in a complex way.

Moreover, since 2018, the national English curriculum has been revised and implemented in primary school grades 3 and 4, lower secondary school grade 1, and upper secondary school grade 1. This new "competency-oriented curriculum" highlights the key competencies required in future society, such as English communication, self-management, community, and knowledge-information processing competency (Korean Ministry of Education, 2015; Lee, 2016). Based on the understanding of these key competencies in the national curriculum, English language teachers are expected to organize their English classes such that they help students develop these competencies. In this sense, this new national English curriculum promotes teacher agency in designing their own curriculum. Furthermore, the Korean government has introduced a free learning semester in Korean lower secondary schools since 2016, in which the school does not conduct any regular paper tests, such as mid-term and final exams, and encourages teachers to implement various innovative pedagogical and evaluation methods

on a trial basis (Lee, 2018). The Korean Ministry of Education also announced the implementation of the upper secondary school credit system in some upper secondary schools from 2022 (Korean Ministry of Education, 2021c). This is expected to increase the number of English subjects and enable the decentralization of the English curriculum. The implementation of a free learning semester in lower secondary schools and the credit system in upper secondary schools creates a significant exosystem for KSETs. Furthermore, changes in the curricular policies at both secondary schools require KSETs to assume a leading role in curriculum design at schools. Teachers' leading role in curriculum design is a crucial change in the chronosystem for KSETs, which has been accelerated by changes in the exosystem, such as a free learning semester, credit system, and national curricular revision.

However, high-stakes standardized testing still plays a significant role in the Korean educational ecosystem due to the strong social demand to stratify students for eligibility to progress to higher levels of learning, such as university (Jang, 2017). This implies that a macrosystem, such as sociocultural demand, has a crucial impact on the formation or sustenance of an exosystem, such as high-stakes standardized testing. For example, the Korean government annually arranges a national standardized test, the KSAT, to satisfy this social need in South Korea. Although criterion-referenced assessment was introduced in the English subject of KSAT in 2018 (Korean Ministry of Education, 2014), the strong impact of the KSAT on the pedagogy and assessment of upper secondary classrooms remains extant (Choi & Choi, 2018). Furthermore, the Korean Ministry of Education has announced that it will give more weight to KSAT for university admission from 2023 (Korean Ministry of Education, 2019). Arguably, the strong power of high-stakes standardized testing in South Korea is incongruent with the recently revised Korean national curriculum, which highlights process-oriented assessment and supports individual students' development. This implies that teachers have complex interactions with the environment to enact teacher agency in that they face incoherent structural conditions, even within the same exosystem.

These government initiatives and the deeply entrenched sociocultural environment have arguably provided new opportunities and challenges for teacher agency in educational activities, such as curriculum design and assessment. Moreover, it suggests that making a difference in the well-established relationship between teachers and the environment is complicated and difficult (Priestley et al., 2012).

It is necessary to examine KSETs' backgrounds in relation to English education for a better understanding of the dissertation. There are nine different pathways to obtaining a secondary English teacher qualification in South Korea (Korean Ministry of Education, 2021d), but only four of them are mainly undertaken (Lee, 2012, 2015). First, those who graduate from the English Education Department at a four-year teacher's college gain the qualification. This is the mainstream pathway for obtaining a secondary English teacher qualification. Pre-service teachers take a variety of courses, such as general

English, English pedagogy, English linguistics, and English literature, in the undergraduate curriculum and receive a bachelor's degree with the teacher qualification upon obtaining all the credits required for graduation (Lee, 2018). Second, those who specialize in an English education department within a general university can obtain this qualification, but only two universities in South Korea provide this program (Korean Ministry of Education, 2017). Third, admission to an English-related department, such as English literature and English philology in a general university, allows students to take credits in pedagogical studies to obtain the qualification. However, only 10% of students enrolled in the department can participate in this program, and the percentage can be reduced depending on university conditions (Jeong, 2018). Going to a two-year graduate school of English education is another option for gaining a secondary English teacher qualification. Those with a bachelor's degree from an English-related department at a university can apply for the graduate school of education and obtain a master's degree with a secondary English teacher qualification after the two-year program.

However, getting a teacher qualification does not guarantee working in secondary schools. To obtain a permanent teacher position in public schools, one is required to pass a teacher examination annually administered by the Korean government. Permanent public-school teachers in Korea are government officials, which means extremely high job stability in an unstable Korean labor market and a relatively well-paid salary compared with teachers in other OECD countries (OECD, 2022). These occupational merits have led to the high popularity of the teaching profession and a high competition rate in the national-level teacher examination (Korean Ministry of Education, 2021b). The exam consists of two rounds. The first round encompasses paper tests on the English subject and pedagogical issues. The number of applicants who pass the first round is 1.5 times the total recruitment number, and they are invited to the second round, which involves an in-depth interview and teaching demonstration. Finally, teachers are employed based on the total score of the first and second rounds. In contrast, unlike public schools, private secondary schools do not grant official government positions to teachers but secure their job stability and offer them a similar salary system once they are recruited as permanent teachers. The schools require similar types of teacher recruitment examinations, such as paper tests, in-depth interviews, and teaching demonstrations, but they are designed by schools and not implemented by such criteria as rigid as those implemented by the public teacher examination. However, if those with a secondary English teacher certificate fail to pass the teacher examination for both public and private schools, they can work as a contract teacher who temporarily replaces permanent teachers during their leave of absence. However, this recruitment difference has a significant influence on teachers' job security and the salary system in Korean schools (Choi, 2003; Park, 2012). In other words, permanent teachers have better job security and a better salary than contract teachers.

1.4.3 Korean English teachers' perception of their roles

Korean English teachers work in a situation of English as a foreign language (EFL), where English is taught in a non-English-speaking country. Investigating English language teachers' roles in the EFL setting, Min (2017) suggested several roles for Korean English teachers: a successful learning model for students to follow, an information provider of explicit learning contents, and an activity organizer with competence and teaching skills to employ various methods and strategies. Generally, Korean English teachers adequately perceive the pedagogical roles they implement in class and address high self-efficacy in their roles (Min, 2017). However, Min's study also suggests that this positive teacher perception involves the limitation that it remains only in their epistemological domain rather than their actual professional practice. In other words, their perception of their roles as English teachers does not directly lead to their teacher agency (Ha & Min, 2008). The disjuncture between teachers' perceptions of their roles and their actual professional practice has been identified by another study pinpointing the demotivation that KSETs easily experienced in their professional practice (Jang & Kim, 2019). Jang & Kim's (2019) study presented the practical constraining ecosystems of teacher demotivation as follows: the environment confusing teacher identity, the annually changing school environment resulting from the mandatory periodical rotation system of public school teachers' workplace, students' passive learning attitude, and infringement of teachers' rights.

In fact, there have been abundant efforts to develop teacher agency or teacher professionalism in the Korean education system through various in-service teacher trainings that provide English teachers with lectures and seminars about up-to-date pedagogical knowledge (Kim & Ahn, 2021; Lee, 2008; Lee & So, 2017). A few reputable English teachers identified as experts are invited to demonstrate their pedagogical content and methods in front of the big audience comprising other fellow teachers. Teacher training is conducted in a very cost-efficient way, reminiscent of mass production with low cost and high efficiency in an industrialized system. This top-down and linear approach to developing teacher agency in the Korean English education system significantly overlooks the interactive and relational attribute of teacher agency. Teacher agency does not pertain only to the issues of teacher individuals. Rather, it emerges through the complex interplay between teachers and different ecosystems. Government teacher training programs expect teacher agency to be developed through an input-output model. This approach to teacher education is individual-inclined and relies on a few role model teachers, leaving other mass teachers' teacher agency to their personal responsibility without considering their individual and environmental contexts (Lee, 2021). However, it is also structure-inclined in that a highly efficient teacher training system will make a difference in general English teacher agency. Ironically, teacher training programs seeking high efficiency are considered inefficient by most teachers, as the decontextualized method of "teacher training" significantly lacks the reciprocal and mutual relationship of individual teachers and the environment

in developing teacher agency and therefore deteriorates teachers' motivation. (Lee, 2008; Lee & So, 2017). In that sense, it is inspiring that teachers' learning community is prevalently established in Korean schools as an alternative ecosystem to complement top-down teacher training programs (Shin & Park, 2018).

In terms of process-oriented assessment highlighted in new national English curricula, Lee's (2019) empirical study indicates that Korean English teachers generally welcomed the orientation of the new assessment policy and perceived the importance of assessment for learning through policy implementation. However, her study also suggests that teachers face difficulty in implementing process-oriented assessments because of the internal factors of the assessment structure itself and the external environmental factors at different levels of the ecosystem where teachers are situated.

The series of studies implied that teachers' perceptions of their role do not always correspond to their realistic professional practice (Ha & Min, 2008; Min, 2017; Lee, 2008, 2019; Lee & So, 2017). The gap between teachers' perceptions of their roles and their practical experience has not been fully explored and needs to be investigated further. This dissertation pays attention to this gap and investigates how teachers' perceptions of their roles are realized or transformed in their actual professional practice in relation to the process of enacting teacher agency.

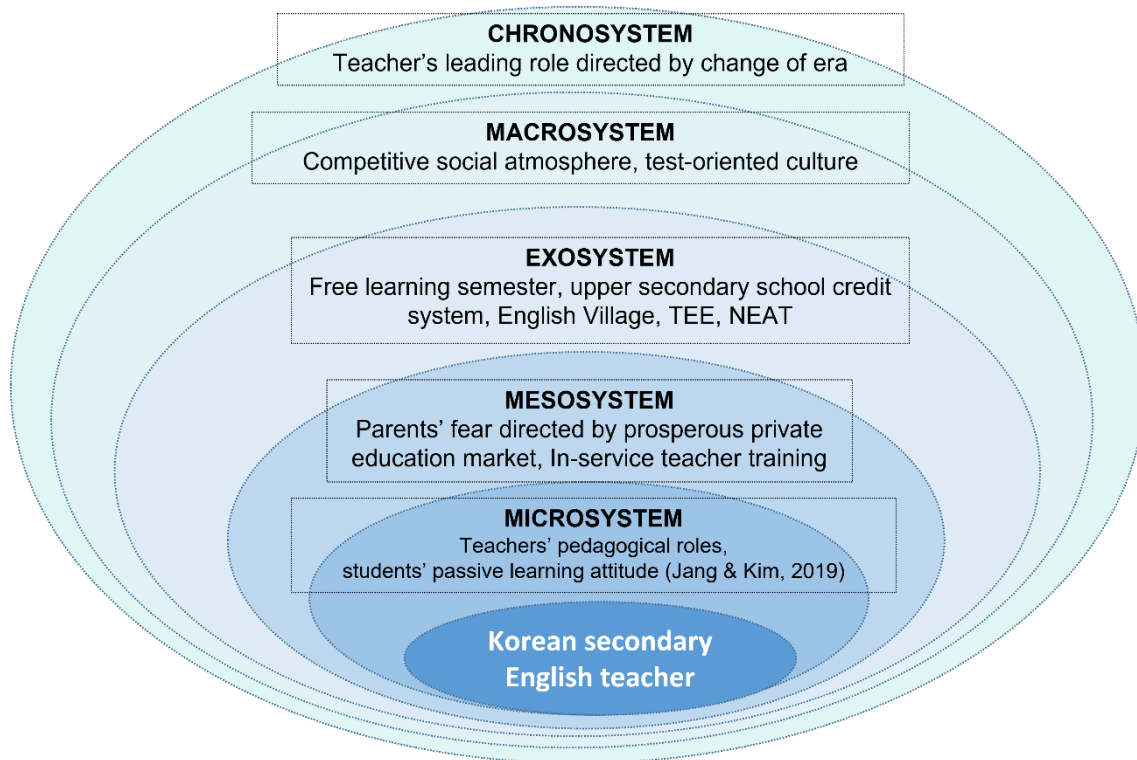


Figure 2 The ecosystems of English language education in South Korea as the context for this study

This section examined the multidimensional environment surrounding KSETs as the context of this dissertation. Drawing on Bronfenbrenner’s ecological theory, the contextual background of this dissertation can be summarized as Figure 2 above. The findings of this dissertation provide a more nuanced and elaborate picture of the multidimensional environment surrounding teachers than the ecosystems as the context of this study, as identified in previous studies.

2 RESEARCH TASK AND RESEARCH QUESTIONS

This doctoral research aims to obtain a deeper understanding of teacher agency through the investigation of the interplay between secondary English teachers and the Korean educational environment. To fulfill the purpose of the dissertation, three sub-studies conduct the following research tasks. Sub-study I investigates how teachers perceive their teacher agency and what mediates their teacher agency. Then, Sub-study II examines different ecosystems of the environment surrounding teachers and how they interact with the ecosystems. Finally, Sub-study III explores the interplay between teachers and temporal environments to enact teacher agency. The dissertation consists of these three empirical studies (Articles I-III).

The overarching research question of this research project is, “How can the examination of Korean secondary English teachers’ agency contribute to an ecological understanding of teacher agency? The overarching research question is specified through the following research questions:

1. What mediates teacher agency in the interplay between teachers and their environment?
2. How do teachers interact with the different ecosystems of their environment?
3. How do teachers draw on temporal environments to enact teacher agency?

The series of empirical sub-studies helps elaborate a dialectical understanding of the ecological approach to teacher agency by answering each research question presented above. Sub-study I pays attention to what teachers as an entity of the whole educational ecosystem employ to mediate teacher agency through their interaction with the environment rather than just responding to the environmental conditions (Biesta & Tedder, 2007; Willis et al., 2019), particularly when they experience the disjuncture between what is espoused and what is realizable. Sub-study II provides a systematic and comprehensive analysis of the different ecosystems with which teachers interact by drawing on

Bronfenbrenner's (1979) ecological theory: microsystems, mesosystems, exosystems, macrosystems, and chronosystems. It also investigates the dynamics of inter-ecosystems that indirectly inform teacher agency as well as the direct interplay between teachers and the different ecosystems. Finally, Sub-study III focuses on how teachers interact with temporal environments to enact teacher agency. The findings from this study indicate that teachers can take a proactive role in transforming ecosystems throughout their life trajectories rather than taking a reactive and responsive stance in their relationships with ecosystems.

In summary, this research project seeks a deeper understanding of how teacher agency is enacted through the complex interplay between teachers and the environment by investigating the mediation of teacher agency (Sub-study I) and its interplay with different ecosystems (Sub-study II) and temporal environments (Sub-study III). The findings of this series of sub-studies provide a more nuanced understanding and insights into teacher agency from an ecological perspective by employing Bronfenbrenner's (1979) ecological theory to examine different dimensions of the ecosystems and explore teacher agency in the Korean context, which has been scantily explored in previous studies. The key focus and specific research questions of the sub-studies are summarized in Table 2.

Table 2 Key topics and specific research questions of the sub-studies

	Key focus	Research questions
Sub-study I	Mediation of teacher agency	(1) How do teachers understand their teacher agency? (2) What mediates teacher agency in the interplay between teachers and the environment?
Sub-study II	Interplay between teachers and different ecosystems	(1) What types of ecosystems surround teachers? (2) How do teachers interact with different ecosystems in the environment?
Sub-study III	Interplay between teachers and temporal environments	(1) How do teachers interact with temporal environments to enact teacher agency? (2) What brings about the transformation of the educational ecosystem?

3 METHODOLOGY

Explicating the methodology of this dissertation, this chapter opens with the ontological and epistemological orientation underpinning this research project. Then, it provides information on the participants of the empirical studies and specifies how the data were collected. Furthermore, it explains the data analysis process and addresses some ethical considerations pertaining to this research project.

3.1 Ontology and epistemology of the study

In this section, I focus on the ontological understanding and epistemological views of this dissertation. The philosophical basis of this research project is informed by critical realist thought. Critical realism comprises three foundational principles: *ontological realism*, *epistemological relativism*, and *judgmental rationality* (Bhaskar, 1975; Archer, 2000; Yucel, 2018). The branch of philosophy asserts the ontological perspective; that is, there is an ontologically objective existence of reality, independent of our beliefs about it (Archer, 2000; Bhaskar, 1975; Manyukhina & Wyse, 2019; Yucel, 2018). This means that material artifacts in human work and the underlying structures exist without human dialogue, and they are not produced and sustained only in individual consciousness. In other words, *ontological realism* recognizes that something may belong to reality, even though we misunderstand it or are even completely ignorant of it. Critical realism acknowledges three domains of reality in causal mechanisms: *the real*, *the actual*, and *the empirical* (Archer, 2000; Bhaskar, 1975; Vincent & O'Mahoney, 2018; Yucel, 2018). *The real* refers to the deepest level of reality, which gives rise to phenomena and events. *The actual* comprises observable events and phenomena. *The empirical* pertains to our experiences of events and phenomena. While social constructivism acknowledges only the domain of the empirical as real and empiricism/positivism as the domain of the empirical and the actual, critical realism recognizes all three domains of reality: the empirical, the actual, and the

real (Bhaskar, 1975; Yucel, 2018). Therefore, critical realism argues that structures and generative mechanisms are also real, although they are not even directly experienceable (Archer et al., 2004). This research project regards teacher agency and the different ecosystems with which individual teachers interact as *the real*, which exists regardless of teachers' experienceable awareness. Critical realists often use the concept of the "*laminated system*," whose internal elements are necessarily "bonded" in a multiplicity of structures, to explain the complex and multidimensional structures surrounding a phenomenon (Bhaskar, 2008; Vincent & O'Mahoney, 2018). This study investigates different types of ecosystems as a "*laminated system*" surrounding teacher agency by drawing on Bronfenbrenner's (1979) ecological theory.

However, ontological objectivity is not equated with epistemological objectivity in critical realism. Critical realism considers the failure to distinguish ontological objectivity from epistemological objectivity an epistemic fallacy (Archer, 2000; Bhaskar, 1975). Rather, it allows for *epistemological relativism* to examine objective reality (Archer, 2000; Bhaskar, 1975; Manyukhina & Wyse, 2019; Yucel, 2018). *Epistemological relativism* acknowledges that our beliefs are socially produced, transient, and fallible. This epistemological fallibilism views knowledge as fallible because it must remain indeterminate, has inherent errors in the methods used to generate it, and is produced via the fallibility of human observation and reason (Archer, 2000; Yucel, 2018). In that sense, this perspective does not deny the epistemological commitment of social constructivism that there are multiple perspectives on any given event, person, or object, and that each person can perceive reality in his or her own way (Burr & Dick, 2017). Even though human dialogue or perception does not create reality itself, reality is reflected in human dialogue and perception; therefore, it is worthwhile to examine them to identify reality. Based on this epistemological perspective, this dissertation investigates "teacher agency" as the objective reality approached through teachers' multiple perceptions of their agency identified through interviews with teachers themselves.

Epistemological relativism is not synonymous with post-modern skepticism – that is, we have no way of comparing our knowledge with the world. Rather, critical realism asserts that we can publicly discuss our various claims about reality and evaluate better or worse arguments on behalf of those claims (Archer, 2000; Bhaskar, 1975; Manyukhina & Wyse, 2019; Yucel, 2018). This *judgmental rationality* enables us to reach reasoned, although provisional, judgments about what reality is objectively like – about what belongs to that reality and what does not (Archer, 2000). Epistemologically, all arguments remain provisional and open to new idea or re-evaluation in this perspective. However, judgmental rationality suggests that a certain argument can be virtually settled as one with the truth of reality. The inclusive ecological approach to agency in this dissertation highlights that teachers, as part of the entire educational ecosystem, can employ intentional and directive orientations in their interplay with the environment (Molla & Nolan, 2020; Namgung et al., 2020). The judgmental rationality of critical realism can dialectically make up for the

unpredictable emergence and relationality of agency observed in previous ecological approaches to teacher agency.

This critical realist perspective is closely connected with the philosophical basis of an ecological approach to teacher agency employed in this dissertation; however, both are not completely identical (Manyukhina & Wyse, 2019). Ontologically, the ecological perspective argues that humans, as part of the natural ecosystem, form a living system within a larger living system that objectively exists beyond human consciousness (Heikkinen, 2020). In other words, it emphasizes the importance of an individual's lived experience of reality and the significance of constructing reality; however, it also recognizes the existence of objective environmental reality and the associated human interplay (Biesta & Tedder, 2007; Drew et al., 2016; Priestley & Drew, 2019; Priestley et al., 2012, 2015). It inclusively acknowledges both the individual's subjective involvement and the environment's objective influence on teacher agency. This means that teachers' dialogue and perceptions to construct teaching practice are important, and so is the influence of the objective material environment. The ecological approach to agency suggests that agency as an objective reality can be approached or perceived through the interplay between subjective individual dialogue and perception and objective environmental reality. Its epistemology does not remain on a human cognitive level, such as individual beliefs or orientation, but is fully explicated by taking into account the individual's subjective interaction with objective reality. This ecological way of approaching epistemology is represented in a series of sub-studies that constitute this dissertation. Based on epistemological relativism, Sub-study I focuses primarily on individual teachers' subjective perceptions of what mediates teacher agency through the interplay between teachers and the environment. Then, paying more attention to ontological objectivity, Sub-study II examines teachers' objective and realistic environments by analyzing multidimensional ecosystems perceived by teachers. Finally, taking a dialectic viewpoint of judgmental rationality, Sub-study III investigates how transformative agency emerges in a realistic manner at the intersection of individual teachers' subjectivity and environmental objectivity, where teachers interact with the environment.

3.2 Data collection

As this research project concerns KSETs' perceptions and enactment of teacher agency, it would be indispensable to gather their actual voices for the dataset (Creswell, 2007). Teachers themselves are significant agents who have a relationship with other ecological entities within the whole educational ecosystem. In terms of teacher agency, it is vital to draw on teachers' voices for the dataset to enhance the validity of this research since the study on teacher agency needs to find what teachers want. In that sense, interviewing is a useful tool to identify teachers' experiences and perceptions of their lives regarding teacher agency (Pappa, 2018; Patton, 2015). This dissertation pays significant

attention to teachers' subjective experiences with objective environmental conditions for enacting teacher agency to answer three different research questions: 1) What mediates teacher agency (Sub-study I), 2) How teachers interact with different environments (Sub-study II), and 3) How teachers interact with temporal environments (Sub-study III). To answer these research questions, this study does not tackle objective environments without taking teachers' subjective interpretations into account. Rather, it investigates teacher agency through the interplay between teachers and the environment – that is, it seeks to identify teacher agency by examining teachers' perceptions of their interaction with the environment. Interviewing was adopted in this dissertation to collect in-depth and nuanced qualitative data for covering the research questions of this dissertation (Creswell, 2007; Hollway & Jefferson, 2000; Pappa, 2018).

Of course, teachers' perceptions do not provide a complete understanding of teacher agency in an ecological way, since they can only represent teachers' perspectives. In an ecological approach, students, parents, or other educational stakeholders can provide different perspectives on teacher agency. However, teachers' voices play a crucial role as a fundamental basis for investigating teacher agency. Therefore, this study conducted semi-structured interviews with 15 KSETs working in public secondary schools. Semi-structured interviews help participants share their experiences without imposing a structure on the narrative and allow them to expand on their experiences within a shared framework (Hollway & Jefferson, 2000). The interview questions were open-ended and included a wide range of questions regarding teachers' professional lives, such as personal experiences in their life history, their professional practice and orientations in curriculum design and assessment, their beliefs and relationships with students, and their perceptions of the educational environment.

This research project aimed to collect comprehensive data by recruiting KSETs from a variety of backgrounds. The participants were deliberately selected from lower (n=8) and upper secondary schools (n = 7) in Chungnam Province, South Korea, to ensure that various voices were collected from both levels of secondary schools. This research also recruited eight male and seven female teachers to balance the participants' sex ratios. The teachers' work experience was also taken into account for participant recruitment: eight teachers with more than 10 years of teaching experience and seven teachers with less than 10 years of teaching experience were included. Moreover, both permanent and contract teachers participated in this project to examine teacher agency from the perspective of job security.

The interviews were conducted between July and August 2018. Participants were informed about the methods, purpose of the study, and ethical commitments before the interviews, and an informed consent form was signed by all participants. The interviews were conducted in Korean to facilitate the maximal participation of interviewees. The interview files were transcribed and translated into English by the author of this dissertation, who works in the same city where the participants work, and the participants were invited through local

teacher networks (Tracy, 2013). This profound sharing, trust, and mutuality between a researcher and those being interviewed can lead to high-quality qualitative research (Creswell, 2007). More details regarding the participants are presented in Table 3.

Table 3 Information regarding study participants

Teacher	Sex	Level of Present School	Career Trajectory (yrs)	Years of Teaching (yrs)	Job Security
1	F	Lower	Lower: 6 Upper: 7	13	Permanent
2	F	Lower	Lower: 2.5 Upper: 0.5	3	Temporary
3	M	Lower	Lower: 5	5	Permanent
4	M	Lower	Lower: 4 Upper: 7	11	Permanent
5	F	Lower	Lower: 30	30	Permanent
6	F	Lower	Lower: 30	30	Permanent
7	M	Lower	Lower: 4.5 Upper: 5	9.5	Temporary
8	F	Lower	Lower: 6	6	Permanent
9	M	Upper	Upper: 13	13	Permanent
10	M	Upper	Upper: 10	10	Permanent
11	M	Upper	Upper: 1	1	Permanent
12	F	Upper	Upper: 22.5	22.5	Permanent
13	M	Upper	Lower: 1 Upper: 6	7	Permanent
14	M	Upper	Upper: 30	30	Permanent
15	F	Upper	Upper: 3	3	Permanent

3.3 Data analysis

The interviews with 15 teachers approximately lasted between 60 and 100 minutes each, were audio-recorded, and transcribed verbatim. The transcripts were saved as Microsoft Word Office Document files and written in Times New Roman (font size 12) with single line spacing. The corresponding transcripts of the interviews ranged from 12 to 24 pages (average 18.47 pages), and the total number of pages of the transcripts was 277. All the sub-studies employed the same dataset and two types of thematic analysis: a data-driven (Sub-study I and Sub-study III) and a theory-driven (Sub-study II) thematic approach to the analysis (Braun & Clarke, 2006). The data analysis began with the transcribed data of the audio-recorded interviews as a way to identify recurring themes in the data informed by the research questions and the guiding epistemology and to interpret the data in a rich and insightful manner using a theoretical

framework employed in this research project (Patton, 2015). Different research questions motivated the analysis, and different findings were obtained from the three different sub-studies. Familiarity with the dataset provided some advantages in making the different findings coherent and interconnected while analyzing the dataset for different sub-studies. Simultaneously, it is also important for researchers to increase rigor in preventing themselves from affecting subsequent data analysis (Hinds et al., 1997; Ruggiano & Perry, 2019). Nevertheless, applying a thematic analysis technique to the whole research project arguably adds to the reliability and trustworthiness of the findings since it provides researchers with more familiarization with ways to find key and overarching themes (Saldana, 2016).

Thematic analysis is a widely used qualitative analytic method (Roulston, 2001), and it is a useful method in qualitative research for identifying, analyzing, and reporting the experiences, meanings, and reality of participants within a dataset (Braun & Clarke, 2006). This research project employed an iterative form of thematic analysis (Tracy, 2012) to elicit critical points in the data regarding the interplay between KSETs and their environment in the context of an ecological approach to teacher agency (Biesta & Tedder, 2007; Drew et al., 2016; Priestley & Drew, 2019; Priestley et al., 2012, 2015). Through multiple re-readings of the transcripts, raw data were coded with descriptive codes before patterns within the data were identified. The coding was performed manually. The descriptive codes were then grouped, and potential themes were named by identifying the patterns. Illustrative extracts were identified following the work. The final stage of analysis was based on a critical dialogue on holistic and comprehensive ways to identify the key themes.

Both Sub-study I and Sub-study III employed a data-driven thematic analysis method that uses inductive analysis to code data without attempting to fit it into a pre-existing coding frame or the researcher's analytic preconceptions (Braun & Clarke, 2006). Considering the research questions, theoretical frameworks, and epistemological commitments, the authors conducted the analytical process. In Sub-study I, three types of legitimations (individual, collegial, and sociocultural) were thematized in response to the question "What mediates teacher agency." The analysis conducted in Sub-study III resulted in the four themes in relation to how transformative agency emerges through the interplay between teachers and the temporal environment: incongruence between environments, aspiration as a quintessence of agency, aspiration compromised, and emergence of transformative agency. In contrast, Sub-study II employed a theory-driven thematic analysis method in which the researcher approaches data with specific questions in mind around which he or she writes codes (Braun & Clarke, 2006). To delve into the multidimensional environment with which teachers interact, Bronfenbrenner's (1979) ecological theory was employed as the theoretical framework in this sub-study. The analytical work outlined how teachers have relationships with different types of ecosystems. Moreover, the analysis found that teachers felt that they were under siege, and

significant convulsions in the chronosystem were identified. An example of how the data were analyzed is presented in Table 4.

Table 4 Data analysis steps (Sub-study II and Namgung et al., 2021)

Steps	Actions taken	Examples	
		Sub-study II	Namgung et al., 2021
1	Coding raw data with descriptive codes	<ul style="list-style-type: none"> Teachers sharing their professional experiences Collegial cooperation enabling the successful management of school events 	<ul style="list-style-type: none"> Collegial support in designing and implementing assessment Daily and informal communication between English colleagues
2	Grouping codes and naming potential themes by identifying patterns	<ul style="list-style-type: none"> Collegiality as a significant mesosystem informing teacher agency 	<ul style="list-style-type: none"> Developing aspiration through collegiality in the present environment
3	Identifying illustrative extracts	I have tremendous support [from my colleagues]. In terms of an English colleague, I receive so much help. When designing my class and undergoing trials and errors, I have abundant help from him. ... it is helpful to listen to other teachers' experiences and ideas ... I can see a different perspective that I couldn't have seen otherwise. (Teacher 15)	
4	Identifying key themes	"Collegiality" under "Mesosystem with complexity"	"Collegiality in present environment" under "Aspiration as the quintessence of agency"

3.4 Ethical considerations

There were several ethical considerations during each stage of the research. First, my research interest in teacher agency was found in my personal professional life as a KSET. Regarding the involvement of participants, all 15 participants are KSETs working in the same municipality where the author of this dissertation works. The same professional background that the researcher and participants share provides advantages to them as insiders of the same occupational group, such as an intense sense of sharing and trust between them (Creswell, 2007), but it simultaneously requires the researcher to act as an outsider to avoid a biased perspective toward the view of the participants (Patton, 2015). Moreover, some participants are co-workers of the author. Therefore, as I endeavored to preserve distance from the participants to maintain an outsider's perspective, some of the participants could have also experienced a similar struggle in maintaining a completely transparent attitude during the interview process owing to their personal relationship with the researcher or a sensitive school issue that is

difficult to share with the researcher working in the same municipality. Additionally, as mentioned previously, this research intentionally designed the balance of lower secondary (n=8) and upper secondary English teachers (n=7) as well as male (n=8) and female (n=7) participants to gather more comprehensive voices in the data by avoiding the partial voices of participants from a specific secondary school level or sex. Moreover, not only permanent teachers but also two contract teachers participated in the interviews to examine the significant difference in teacher agency depending on job stability.

During data collection, it was necessary to obtain participants' consent for the interview to ensure that they participated in the study out of their own volition (Creswell, 2007; Lipson, 1994; Tracy, 2013). An information sheet was presented before conducting each interview. It provided detailed aims and reasons for conducting the study. The participants were also informed that participation in the study was voluntary and that they could withdraw at any stage without any reason or any negative consequences. However, no participant deviated from the interview process, and all participants completed the interview process. While conducting interviews with teachers, my teaching experiences as a teacher and being an insider in the same professional context had a positive impact on understanding their answers to the questions. However, it was crucial that I distance myself from assuming their answers during the interview process as a researcher and act as an outsider from the participants' contexts (Patton, 2015). The participants agreed regarding the confidentiality and anonymization of the data for future research purposes. Anonymization was conducted by assigning numbers to participants and deleting identifiers, such as the names of participants and the schools that link the participants and the data (Creswell, 2007; Ruggiano & Perry, 2019). Notifying participants about this anonymization process helps in keeping them comfortable and reliable during the interview. It can also protect the anonymity of participants during data storage (Creswell, 2007).

Ethical considerations in the data analysis concern the impartiality of the data. Since the interviews were conducted in Korean to overcome the language barrier and enhance the richness of data, the author of this dissertation translated them into English and shared the translated data with co-researchers to verify them without any fabrication or falsification, as research misconduct is prohibited by the Finnish Advisory Board on Research Integrity (TENK) (Varantola et al., 2012). Furthermore, the author of this dissertation and the co-authors of the sub-studies underwent cooperative interpretation and discussion for thematic analysis.

The final ethical considerations concerned the sharing of the findings. Although the findings of the study were shared with the research community, they were also sent to the participants in PDF format to obtain their feedback. This sharing minimizes the possibility of harming the participants (Creswell, 2007). The authorship of the sub-studies of this entire research project has been reasonably shared with the author of this dissertation and with the co-authors according to their research contributions by listing their achievements and

mentioning the credits and weights they deserve for conducting the sub-studies based on the guidelines of TENK (Varantola et al., 2012).

4 FINDINGS

This chapter presents the main findings of the three empirical sub-studies. This dissertation explored how teacher agency is empirically enacted through the interplay between individual teachers and their environment. Exploring this interplay requires an investigation of how teachers understand their teacher agency in relation to the environment, which types of environments surround them, and what enables teachers to exert their teacher agency in practice. In the complementary sub-studies of this dissertation, Sub-study I focused on the multiple disjunctions perceived by teachers during the exercise of teacher agency and which strategies they employ to mediate teacher agency. Sub-study II investigated the complexity of the multidimensional ecosystems surrounding teachers and the dynamic interplay between teachers and the ecosystems, as well as inter-ecosystems. Finally, Sub-study III centered on what brings about transformative agency in individual teachers' professional practices while paying attention to the interplay between teachers and temporal environments. The findings of each sub-study were presented comprehensively in the original publications (see Articles I-III). In this section, I briefly highlight the meaning and relevance of each sub-study in the wider academic field. Then, I present an overview of the main findings of each sub-study and the bigger picture of teacher agency that is created when the findings of the sub-studies are put together.

4.1 Sub-study I: The legitimations that mediate teacher agency

The two research questions underpinning Sub-study I address how secondary English teachers in South Korea understand their teacher agency and what mediates their teacher agency. Teachers' perceptions of their teacher agency have been a significant research area pertaining to teacher agency (Balgopal, 2020; Colegrove & Zúñiga, 2018; Eteläpelto et al., 2015; Pappa et al., 2017; Soini et al., 2015). How teachers perceive their teacher agency is deeply connected to their understanding of their environmental conditions, such as resources or

constraints for teacher agency. This study seeks to deepen the understanding of teachers' perceptions of their teacher agency by examining it in a new educational context with KSETs. Furthermore, the mediation of teacher agency has been investigated by exploring different levels of conditions: personal, structural, and cultural (Willis et al., 2019). This study presents a new way to explicate what mediates teacher agency.

This study found that teachers are constantly aware of their individual and environmental conditions and take those conditions into account to enact their teacher agency. Understanding teacher agency, this sub-study presented two types of agency: espoused agency, which teachers would like to exercise by means of ideal ecological affordances, and realizable agency, which teachers can exercise through different types of legitimation with available ecological conditions. Although espoused agency is not realized as it is, it sustainably provides teachers with the motivation to implement their pedagogical beliefs in their professional practice on a trial basis and guides their future professional pathway as a teacher. This espoused agency intrinsically connects with teacher intentionality in that teachers' pedagogical orientation fostered by ideal ecological affordances informs espoused agency. The findings of the study highlight that teachers experience a significant disjuncture between their espoused agency and realizable agency. In other words, even though they wish to implement their pedagogical ideals in terms of curricula and assessment, espoused agency is filtered out by their interplay with individual and environmental factors in the reality of teaching practice. Several participating teachers enacted their teacher agency by trying to negotiate the contradiction between their espoused hopes of providing good English education and their realized practices of maintaining the established status quo. The degree of the incongruence between espoused agency and realizable agency varied from teacher to teacher depending on the different ecological conditions in places where they were situated and how they interacted with them.

Bridging the incongruence between espoused and realizable agency, legitimation was found to mediate teacher agency in this study. Although teachers mediate between their espoused agency and realizable agency, they employ three types of legitimation: individual, collegial, and sociocultural. These legitimations pertain to their own development, collegial relationships, and the sociocultural environment, respectively. With regard to individual legitimation, teachers censor their own pedagogical behaviors by being conscious of their institutional and cultural environments. For example, regarding the question "Am I speaking in the right way?", KSETs had a self-doubt that their own English speaking might be illegitimate because they were self-conscious about the prevailing Standard English ideology. Even though they are pedagogically espoused to teach all four skills in their teaching practices, their self-doubt marginalized the teaching of speaking skills in actual teaching practice.

The findings also revealed KSETs' collegial legitimation in mediating teacher agency. It was employed when teachers negotiated with the structural environment that colleagues should monitor other teachers' pedagogical

approaches and methods of assessment. In other words, when they teach English with fellow teachers in the same grade, they must establish the same assessment guidelines and design the same questions for paper tests. This means that they should examine each other's assessment types and pedagogical materials for a consensus on assessment. This mechanism of objectification within collegial relationships at school serves to legitimize and sanction KSETs' curriculum design and assessment. Although the relational characteristic of agency often allows teachers to achieve a variety of pedagogical benefits, the obligatory consensus of assessment rarely enables individual teachers to realize idiosyncratic espoused agency.

Finally, regarding the sociocultural level of legitimation, teacher agency was legitimized through external social evaluations. This level of legitimation had a significant impact on the professional agency of teachers working in academically successful schools. Since the exams conducted in academically successful schools are more competitive and involve high stakes, teachers experience greater social pressure in enacting their teacher agency owing to the demand to achieve good results in the exams. This sociocultural legitimation can be identified in the following interview excerpt.

At the beginning of my teaching career, all of my worries were to improve students' English skills and to help them feel what is English about. I started at that point when I was a novice teacher, but the goal has been changed after facing lots of complaints. Lately, I have designed the assessment and class at a level where parents and students don't complain and implemented them in that way. That [Parents' and students' responses] really affected them [the assessment and class]. (Teacher13: Male, Upper Sec., 7y teaching exp)

Teacher 13's pedagogical pathway started on the basis of his orientation; however, it was deviated by sociocultural influences, such as parents' and students' requests for test-oriented classes through sociocultural legitimation. Similarly, some participants in the sub-study explained that test-oriented pedagogy and assessment are prioritized in their teaching practices, even at the expense of the national curriculum, which purportedly encourages teacher agency. The mediation process of the three legitimations between teachers' espoused and realizable agency is indicated in Figure 3 below.

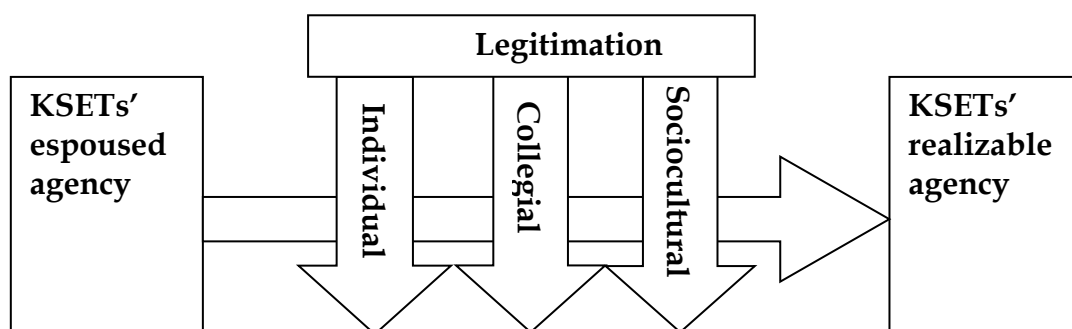


Figure 3 The mediation process of legitimation between Korean English language teachers' (KSETs') espoused and realizable agency (Namgung et al., 2020)

KSET's espoused agency passes through three mediation processes of legitimation before it turns into realizable agency. As the figure illustrates, individual, relational, and sociocultural conditions play a significant role in mediating teacher agency. Furthermore, espoused agency can be transformed into a different form of realizable agency in either a positive or a negative way after the process of legitimation. The findings of Sub-study I imply that teacher agency is achieved not only by teachers' independent beliefs or decisions without being aware of the environment but also when teachers weigh both their own pedagogical orientations and the ecological conditions surrounding them to enact their teacher agency by employing legitimations. These findings contribute to a more nuanced conceptualization of teacher agency, not only as something achieved by an individual as a member of an environment but also as something legitimized by taking both teachers' intentionality and ecological conditions into account. The identification of the legitimations in Sub-study I provides a solid foundation for the interplay between teachers and the environment, highlighted by an ecological approach to teacher agency, and it sequentially leads to Sub-study II, which investigated multidimensional ecosystems with which teachers interact.

4.2 Sub-study II: The interrelationship between teachers and multidimensional environment in English curriculum design

This sub-study investigated the multidimensionality of the environment that informs teacher agency and how teachers interact with multiple levels of the environment. More specifically, it explored which types of ecosystems surround KSETs in relation to curriculum design and how they interact with the ecosystems to enact their teacher agency. Since curriculum making is a dynamic and complex process as a social practice, investigating the interplay between teachers and different levels of the environment in relation to curriculum design provides significant insights for understanding teacher agency (Hizli Alkan & Priestley, 2019; Priestley et al., 2021). Drawing on Bronfenbrenner's ecological theory (1979), this study analyzed five ecosystems surrounding KSETs, and the findings point to the significance of different ecosystems, teachers' proactive roles in the dynamic interplay with the ecosystems, and the complex relationships between inter-ecosystems.

The findings highlighted that teachers had microsystems, such as students' English proficiency or learning motivation, rapport with students, and teaching resources. Mesosystems were identified as students' and parents' complaints, collegiality, and school leaders' support. Teachers recognized that the national standardized testing system, excessive administrative work, and several tasks for homeroom teachers belonged to their exosystems. The macrosystems for KSETs encompassed a competitive and result-oriented educational culture, the culture of the teachers' community, and teacher stratification depending on job security,

such as permanent and contract teaching positions. Finally, teachers are confronted with chronosystems, such as the change of an era and its altered educational requests resulting in national curricular reforms, which were interpreted in both positive and negative ways. The findings illustrate that teacher agency is achieved through the dynamic interplay between teachers and different ecosystems. Each ecosystem affects teacher agency directly and has an indirect impact on teacher agency through inter-ecosystem transformations. This complex interplay between ecosystems and teachers is depicted in Figure 4. The darker arrows emphasize the significant influence and affordances of the ecosystems, whereas the lighter arrows indicate the varying influence of teachers within the overall ecosystem. Although teachers can significantly inform microsystems and mesosystems in the classroom and between colleagues, achieving agency within the exosystem, macrosystem, or chronosystems is more challenging.

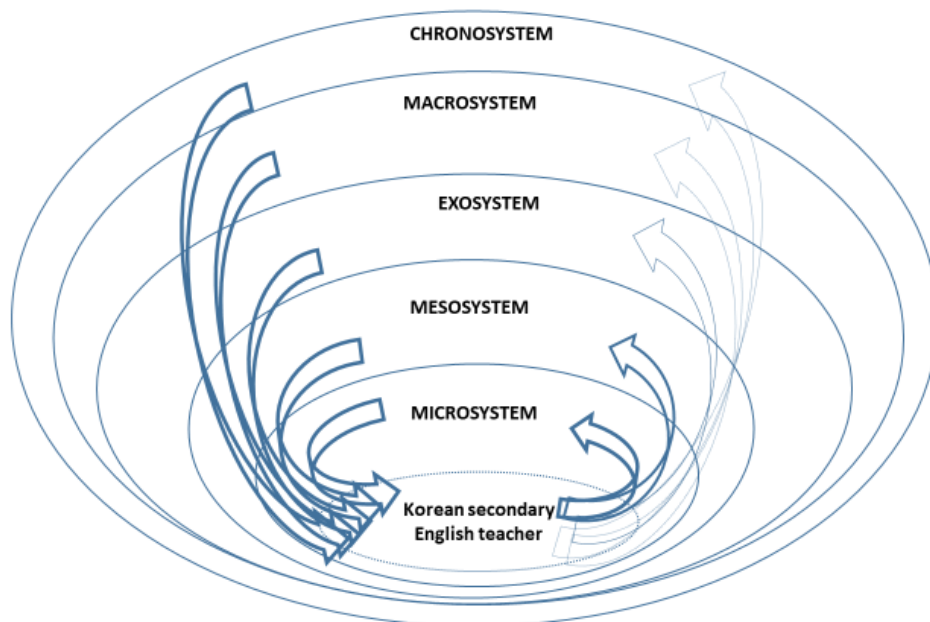


Figure 4 KSETs encompassed by interconnected ecosystems: Mutually constituting without power-sharing (Sub-study II)

In the ecological perspective, teacher agency is regarded as an emergent phenomenon and something to be achieved (Larsen-Freeman, 2019; Priestley & Drew, 2019; Priestley et al., 2015). This sub-study, however, indicates through its findings that experienced teachers tend to exercise a higher degree of agency by utilizing their ample iterational experiences and broad collegial relationships, suggesting that over time, they have built up resources and ways to manage the emergent and temporary attributes of teacher agency not just through a prolonged career but partly as a result of learning and practice. The positive

impact of teaching experience on teacher agency is well described in the following excerpt.

... If the rapport has been established between a student and a teacher, and they trust each other, I think that it creates tremendous synergy in class. In character aspects, as well as pedagogical aspects, I can give the student trusting me a good comment, so the rapport seems to be the most crucial thing. (Teacher 3: Female, Lower Sec., 30y teaching exp)

Teacher 3 had an experiential understanding of how to take advantage of rapport with students for her teacher agency. The findings illustrate that teachers' reflexive practice mediates an individual's iterational and projective dimensions in relation to teachers' own capacity and environmental conditions, through which teacher agency can emerge and be achieved. In this sense, this study suggests that teachers can create a new, high-quality educational ecosystem or transform an existing ecosystem through individual and collective agency by utilizing affordances and resisting constraints. This finding is important in the discourse on implementing an ecological approach to teacher agency, as it highlights individual teachers' agentic roles in enacting teacher agency by means of the environment rather than taking a reactive and responsive stance in the relationship with the environment.

This sub-study also recognizes that relationships between ecosystems can vary to form contrasting educational ecosystems. For example, for participants working within weak collegial interactions or relatively undemocratic school cultures, school-level assessment criteria for the English subject belong to the exosystem because they are not active participants in the ecosystem. However, for those working within strong collegial interaction or highly democratic schools in which their opinions contribute to the design of school-level assessment criteria, these criteria belong to the microsystem because they have an immediate relationship with the ecosystem. This finding suggests that teachers can be surrounded in diverse forms of ecosystems, and the same environmental condition can belong to a different ecosystem depending on the school, municipal, or national educational context. The findings from Sub-study I highlight teachers' proactive role in the dynamic interplay with environmental conditions and the complex relationship between inter-ecosystems for enacting teacher agency. Sub-study III then draws attention to a particular aspect of teachers' practice, that is, assessment.

4.3 Sub-study III: An ecological approach to teacher agency in assessment

Assessment plays a powerful and significant role in education (Pollari, 2017). First, assessment provides students with information about their progress to help them improve their own learning and guides teachers regarding how to plan and implement subsequent teaching (Brown, 2008; Remesal, 2011). In addition to this

educational purpose of assessment, it informs parents of what students have achieved at school and certifies students' attainment of certain qualifications. Assessment also verifies students' eligibility to progress to higher levels of learning, such as university, and even evaluates the educational performance of teachers and schools based on student achievement (Brown, 2019; Brown & Remesal, 2017; Liyanage et al., 2015). As assessment is conducted at the intersection of these multiple ecological conditions, investigating teacher agency in assessment provides significant insights for understanding teacher agency. Furthermore, teacher agency in assessment relates deeply to how teachers enact teacher agency in curricula and overall educational work.

Acknowledging the crucial position of assessment in education, Sub-study III pays attention to how teachers tackle temporal environments in assessment and what brings about the transformation of the educational ecosystem through the dynamic interplay with temporal environments: past environment, present environment, and aspired future environment. The findings highlight that transformative agency emerges through teachers' active interactions with different and incongruent temporal environments. The findings also suggest that KSETs perceived and interacted with temporal environments that put contradictory demands on them. Despite curricular policy reforms and the revised KSAT in the present environment, past environments, such as conventional assessment practices, a test-oriented culture, and high-stakes testing, still had a significant impact on teacher perception and teacher agency in their assessment practices. The incongruent messages that teachers perceived were aggravated by other constraints of the school environment and by the pressure exerted by parents and students who still valued conventional assessment over innovative assessment.

Nevertheless, KSETs enact teacher agency in their assessment practices by employing their aspirations as a quintessence of agency. In other words, teacher aspiration formed through interacting with different temporal environments plays a critical role in triggering and developing teacher agency. Their aspiration is resourced by the critical interpretation of their iterative experiences; present affordances, such as collegiality and professional development; and projective orientation regarding assessment. In this sense, professional learning experiences can play a crucial role in developing teachers' aspiration since aspiration cannot be created in a vacuum but is formed through interaction with a variety of ecological affordances. However, KSETs' teacher agency became contested and compromised due to ecological constraints. They encompass the sociocultural demand on "fairness," insufficient material resources, such as excessive lesson hours and class size, enormous loads of administrative work, and collegial consensus regulation in assessment. Nevertheless, transformative agency emerged through the interplay of the teachers' continuous action directed by their aspiration and other ecological affordances.

Figure 5 depicts the interplay between teachers and the different temporal environments found in the study: past, present, and future environments. The arrows are indicative of the strength of influence—the greater the influence, the

thicker the arrow. The divided arrows point to the compromises that KSETs made as they negotiated with the environmental conditions and struggled to reform the present environment, with the ecological transformation being weaker in practice than they had hoped. The teachers' projected inner beliefs regarding the environment of their aspirations are manifested as a dotted circle representing the beginning of their imaginative projections. The teachers took advantage of this aspired future environment to enact their agency in the present environment.

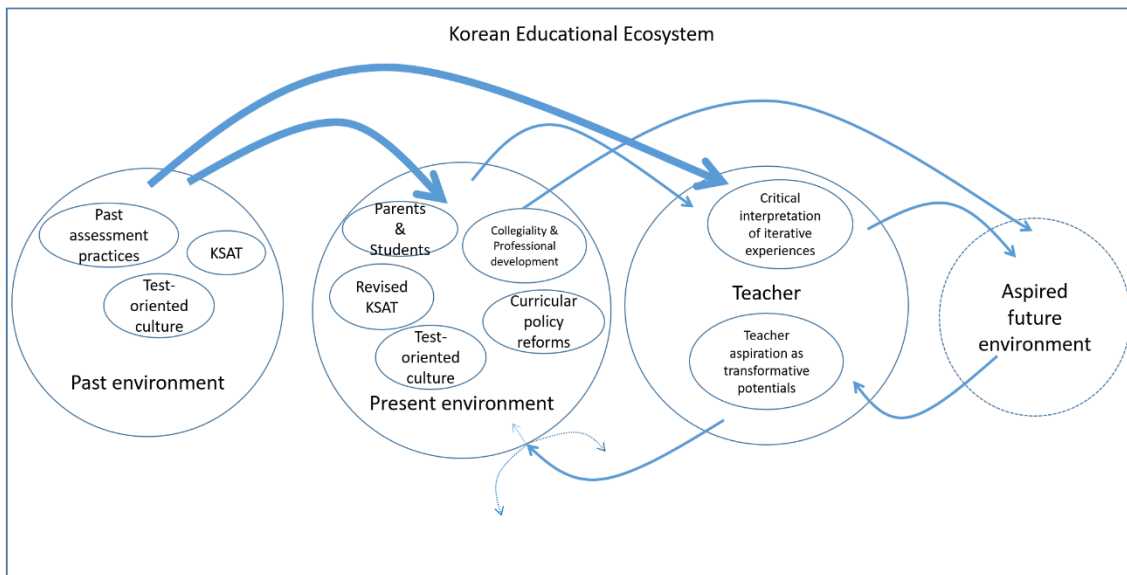


Figure 5 The interplay between KSETs and temporal environments within the Korean educational ecosystem (Namgung et al., 2021)

The findings suggest that there is a temporal and contextual critical point where teachers' transformative agency emerges and the entire assessment ecosystem is transformed. Being sustained by their aspiration and supported by other ecological affordances, teachers' continuous attempts toward teacher agency are necessary to reach the critical point.

Finally, the findings of all the sub-studies complement each other and provide a bigger picture of teacher agency. Drawing on an ecological perspective, teacher agency is enacted through the dynamic and complex interplay between teachers and different levels of ecosystems (Sub-study II) while teachers negotiate with different temporal environments (Sub-study III). However, teachers can play a proactive and transformative role in the interplay with the environment, rather than taking a reactive and responsive stance. Teacher agency is mediated when teachers employ three levels of legitimation: individual, collegial, and sociocultural (Sub-study I). This combination of the sub-studies will be discussed in more detail in the following section.

5 DISCUSSION

This dissertation aimed to investigate what mediates teacher agency and how teachers interact with the multidimensional and temporal environments surrounding them to enact teacher agency. This chapter discusses the findings of the empirical sub-studies according to the research questions and presents some points to contribute to the existing discussion on teacher agency. First, the legitimation employed to mediate teacher agency and aspiration for transformative agency are addressed in this chapter. Second, the interplay between teachers and synchronic and diachronic environments is discussed. Third, this chapter discusses whether teacher individuality is preservable within the entire educational ecosystem.

5.1 Legitimation mediating teacher agency and aspiration for transformative agency

A key finding regarding how teachers perceive their teacher agency was the disjuncture between the espoused agency that they wish to exercise and the realizable agency that is legitimized by teachers' individual and environmental factors (Sub-study I). In other words, teachers employed legitimations to mediate between espoused agency and realizable agency. For the participants, whether their agency is considered legitimate significantly influenced the way in which teacher agency was exercised, either proactively or reactively (Ruohotie-Lyhty & Moate, 2015). This finding suggests that the process of legitimation is a keen mediator between teachers' espoused and realizable agency. As seen in other sociocultural contexts, teacher agency conflicts with the working conditions and established structures (Drew et al., 2016; Pappa et al., 2017; Priestley et al., 2021; Vähäsantanen, 2013); however, in this dissertation, legitimation more keenly mediates the interplay between teachers and the environment, which provides an important insight for understanding teacher agency. This dissertation puts forward three types of legitimations: individual, collegial, and sociocultural.

These legitimation processes provide a more elaborate conceptual tool for understanding the mediation of teacher agency compared with individuals' internal conversation or reflexivity, which mediates human identity and external reality, as highlighted by Archer (2000, 2007). In other words, legitimation in this study works in more diverse ways compared with Archer's internal conversation in that this study encompasses not only a conscious and rational process but also an unconscious and irrational one, whereas Archer's conceptualization mainly highlights the conscious and rational processes. For example, external realistic powers, such as collegiality and test-oriented culture, sometimes overwhelm individual orientation in legitimation processes, which implies that individual teachers' reflexivity does not work under overwhelming external power. Furthermore, this research project found the complex and dynamic interplay between teachers and different ecosystems to have an impact on teacher agency (Sub-study II), which goes beyond teachers' internal conversation. Therefore, legitimation may provide a more dialectic and elaborate explanation that takes into account both individual teachers and ecological conditions regarding the mediation of teacher agency compared with the perspectives of critical realists by encompassing both conscious and unconscious mediation of teacher agency.

Furthermore, the issue of incongruence between espoused agency and realizable agency was particularly identified in curriculum design and assessment (Sub-study I & Sub-study III). The studies suggested that the incongruence between espoused agency and realizable agency arose significantly when the teachers' pedagogical orientation was different from the ecological conditions of ecosystems. The incongruence of espoused and realizable agency reinforces the ecological perspective and highlights that teacher agency is enacted through teachers' negotiation between the pedagogical orientation that teachers have formed throughout life trajectories and the available ecological conditions in different ecosystems (Biesta & Tedder, 2007; Drew et al., 2016; Priestley & Drew, 2019; Priestley et al., 2012, 2015). Furthermore, teachers experience confusing messages from different ecosystems. This research project, for example, found that even though exosystems, such as curricular reforms, encourage teachers to implement innovative assessment practices for students' development on a trial basis, macrosystems, such as a (standardized) test-oriented culture still extant in the present, inhibit them from innovating assessment practices. Teachers legitimize their assessment practices by taking into account a variety of ecosystems surrounding them. This notion of legitimation can explicate teachers' dilemmas in assessment practices, which has been identified in other Asian countries, such as China, Hong Kong, and Singapore (Cheng et al., 2010; Liyanage et al., 2015; Mee, 1998). This dissertation suggests that teachers' legitimations play a crucial role in bridging the gap between their espoused agency and realizable agency.

However, the significant use of legitimations for teacher agency does not mean that legitimations just inhibit teacher agency, leaving teachers only in a reactive position when they encounter environmental constraints. Rather, they employ aspiration to enact teacher agency proactively and even transform the

educational ecosystem (Sub-study III). The findings from this dissertation suggest that aspiration cannot be developed in a vacuum but through teachers' critical interpretation of past experiences, projective orientations, and present affordances, such as collegiality and professional development (Emirbayer & Mische, 1998; Molla & Nolan, 2020; Priestley et al., 2015). In other words, teachers' aspirations are formed under the influence of and through negotiation with the various environmental conditions in their life trajectories, and this can, in turn, affect the environment in a variety of ways. This finding is in line with van Lier's (2004) argument that the educational ecosystem does not go through gradual or linear transformation but is shaped in an ongoing and emergent way through the complex and dynamic interplay between individuals and the environment.

Legitimation and aspiration presented in this study elaborate transactional attributes of shaping teacher agency in an ecological perspective. Figure 6 illustrates how legitimation and aspiration work in the interplay between teachers and the environment. This dissertation suggests that teachers employ legitimation to enact teacher agency in the zone of legitimation (ZOL). Even though this ZOL is teachers' inner space, both individual teachers and the environment intervene and interact with each other to enact teacher agency in the zone. Teachers and the environment are not clearly separated because they exchange reciprocal influences, which is represented by the dotted line in Figure 6. Specifically, teachers re-evaluate their espoused agency by matching it with external environmental conditions before it is enacted as realizable agency outside the ZOL. Each teacher has his or her own ZOL, which grows and develops like a living organ through the interplay with the environment in the teachers' life trajectories. In other words, the ZOL is not a "static" zone but a "dynamic and developmental" zone that changes and grows through interplay with the environment. Teachers interact with multidimensional ecosystems in the ZOL in a complex and dynamic way. Different ecosystems have an enabling or constraining impact on enacting teacher agency, depending on teachers' individual life history or their present ecological context. For instance, one teacher can enact teacher agency out of aspiration in some ecosystems, such as the microsystem and exosystem, while finding it difficult to realize aspiration in other ecosystems. Furthermore, similar ecological conditions do not lead to the same teacher agency because teachers' different aspirations are combined with ecological conditions in the ZOL, and teacher agency is enacted differently in teaching practice. Teacher agency initiated by teacher aspiration should undergo the mediation of the legitimations before it is enacted in teaching practices. After going through the legitimations, teacher agency is fully exercised (in green color), diminishingly exercised (in blue color), or failed and reflected back to remain only inside teachers' minds (in red color). It is, therefore, important to provide professional development for promoting teacher aspiration and fostering various ecological conditions in the environment to support the enactment of teacher agency (Drew et al., 2016).

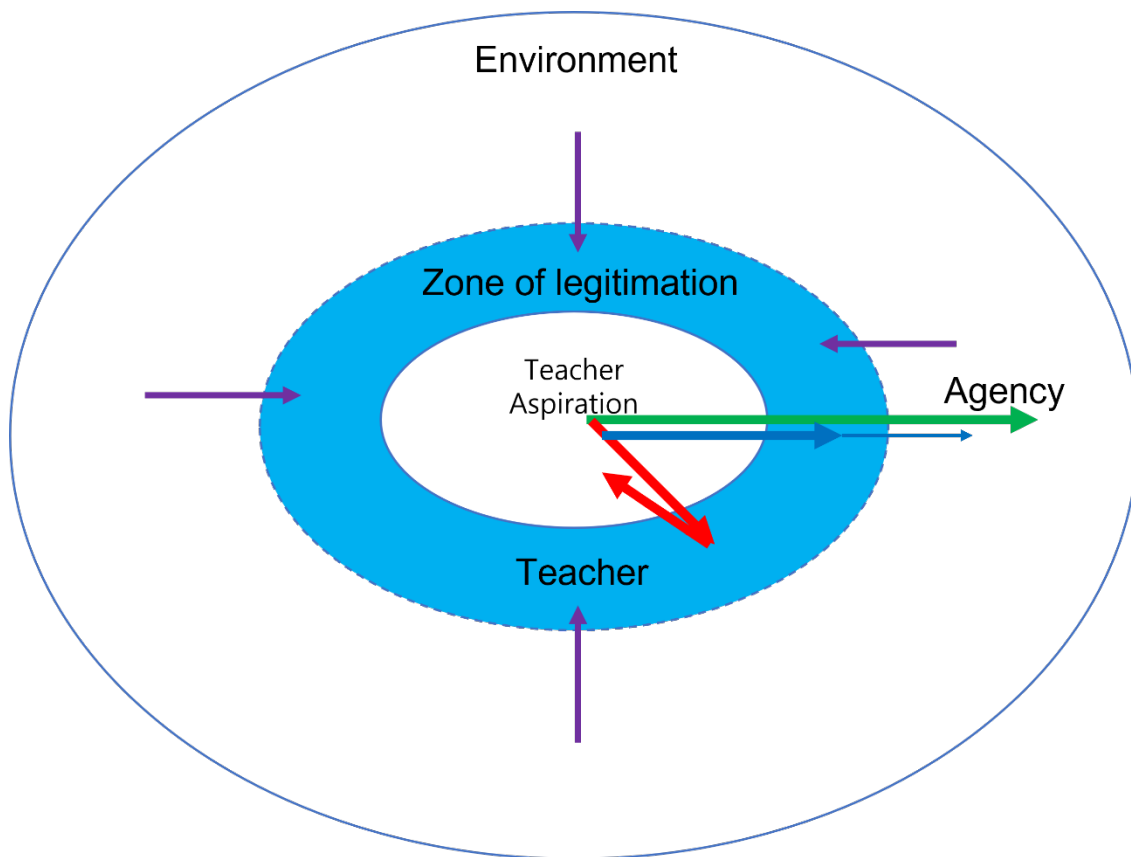


Figure 6 Legitimation and aspiration in the interplay between teachers and the environment

5.2 The interplay between teachers and synchronic and diachronic environments

The environment plays a crucial role in enacting teacher agency from an ecological perspective, since teacher agency is not enacted only by an individual's independent will or aspiration; rather, it emerges through the mutual relationship between an individual teacher and the environment (Biesta & Tedder, 2007; Drew et al., 2016; Priestley & Drew, 2019; Priestley et al., 2012, 2015). Building upon the emergence and relationality of an ecological approach to teacher agency, this dissertation paid more attention to the multidimensionality and temporality of the environment with which teachers interact. Previous studies on agency have explored the interplay between teachers and multiple types of environments, such as collegiality (Hökkä et al., 2017; Lieberman, 2009; Vähäsantanen et al., 2020), curricular change (Drew et al., 2016; Priestley et al., 2012; Wei & Chen, 2019), and assessment culture (Davison, 2004, 2007). Moreover, teachers' temporal environments have been significantly investigated from an ecological perspective (Biesta & Tedder, 2007; Priestley et al., 2015). This dissertation employs the terms "synchronic" and "diachronic environments" to

explicate the multidimensionality and temporality of environments. These terms provide an elaborate and organized explanation of teachers' relationships with spatial and temporal environments.

While Sub-study II investigated multidimensional ecosystems at a temporal juncture, namely in a synchronic environment, Sub-study III highlighted how teachers are surrounded by multiple temporal environments and interact with them to enact their teacher agency. Metaphorically, Sub-study II anatomized multiple layers of ecosystems surrounding teachers by cutting the sphere of teacher agency vertically, whereas Sub-study III investigated the interplay between teachers and temporal environments by cutting the sphere of teacher agency horizontally. This indicates that teachers enact teacher agency through their interplay with synchronic and diachronic environments in a complex and dynamic way, analogous to a sphere of teacher agency, where teachers at the core simultaneously interact with multiple layers of synchronic and diachronic environments vertically and horizontally. First, teachers interact with a synchronic multidimensional environment: microsystem, mesosystem, exosystem, macrosystem, and chronosystem (Sub-study II). Corresponding to the ecological perspective, which highlights the complex and dynamic interplay between teachers and the environment (Biesta & Tedder, 2007; Drew et al., 2016; Priestley & Drew, 2019; Priestley et al., 2012, 2015), this dissertation demonstrated that teachers synchronically interact with different ecosystems. Furthermore, each ecosystem not only interacts with individual teachers directly but also has an indirect impact on teacher agency through inter-ecosystem transformations. In other words, multidimensional ecosystems have a reciprocal relationship not only with teachers but also with other types of ecosystems. This mutual relationship of multidimensional ecosystems empirically informs the complexity and dynamics of the interplay between teachers and the environment in agreement with the literature, drawing on the ecological perspective of teacher agency (Drew et al., 2016; Priestley et al., 2015).

This research also recognizes that relationships between ecosystems can vary to form different educational environments depending on the context in which teachers are situated (Sub-study II). For example, for participants working within weak collegial interactions or relatively undemocratic school cultures, school-level assessment criteria for the English subject belong to the exosystem. For those working within strong collegial interactions or highly democratic schools in which their pedagogical opinions contribute to the design of school-level assessment criteria, these criteria belong to the microsystem (Sub-study II). Therefore, the extent of democracy within a school or department can affect which types of ecosystems surround teachers and whether they enable or constrain teachers, thereby influencing how teachers enact their agency. This finding suggests that synchronic environments that surround teachers can consist of different types of ecosystems, and the same environmental aspect can belong to a different ecosystem depending on the context of teachers.

However, as the ecological approach to teacher agency highlights individuals' temporality by drawing on the life-course notions of agency

(Emirbayer & Mische, 1998; Priestley et al., 2015), the research reported here provides longitudinal temporal insights into teacher agency as well as cross-sectional views into the ecosystems. The chronosystem in the ecosystems surrounding teachers (Sub-study II) has a significant connection with the temporal environments investigated in Sub-study III. This finding confirmed the crucial impact of temporal environments on enacting teacher agency (Biesta & Tedder, 2007; Drew et al., 2016; Priestley & Drew, 2019; Priestley et al., 2012, 2015). Participants demonstrated different ways of exploiting three temporal environments: past, present, and future environments. For example, high-stakes standardized testing, such as KSAT, in a past environment still influenced some teachers' current pedagogical pathway, and they stuck to their teaching approach toward high-stakes standardized testing, whereas other teachers tried implementing innovative curricula and assessment as curricular reforms in the present environment (Sub-study III). The diachronic environments identified in this dissertation uphold that teachers' interactions with temporal environments are multifaceted and complex (Priestley et al., 2012, 2015). Furthermore, since parents and students in teachers' microsystems or mesosystems can respond to their temporal environments in diverse ways, teachers may well have even more dynamic interactions with their complex environments to enact teacher agency.

Figure 7 metaphorically presents the combined findings of Sub-study II and Sub-study III, which illustrate teachers' interplay with synchronic and diachronic environments in a two-dimensional structure. Teachers are situated at the intersection of a synchronic multidimensional environment (vertical line) and a diachronic environment (horizontal line). This vertical and horizontal view of teacher agency connects with the notion of a laminated system, which is often used by critical realists (Vincent & O'Mahoney, 2018). Even though it cannot present all the examples of interactions between individual teachers and the ecosystems, Figure 7 demonstrates the complexity and dynamics of their interplay with some examples identified by the sub-studies of this dissertation. Teachers still tackle the past environment, such as an exosystem (e.g., a strong impact of KSAT) and a macrosystem (e.g., a test-oriented culture). The test-oriented culture of the past environment also influences parents in the mesosystem of the present environment, which in turn has an impact on teachers in the present. However, teachers can also employ the aspired future environment, such as a macrosystem (e.g., non-competitive culture), an exosystem (e.g., teacher-based assessment), and a microsystem (e.g., alternative teaching methods), to enact teacher agency in the present environment even though the future environment remains in teachers' imagination, as represented by the dotted lines in Figure 7. Teachers interact with different levels of synchronic environments in the midst of the complex influences of different diachronic environments.

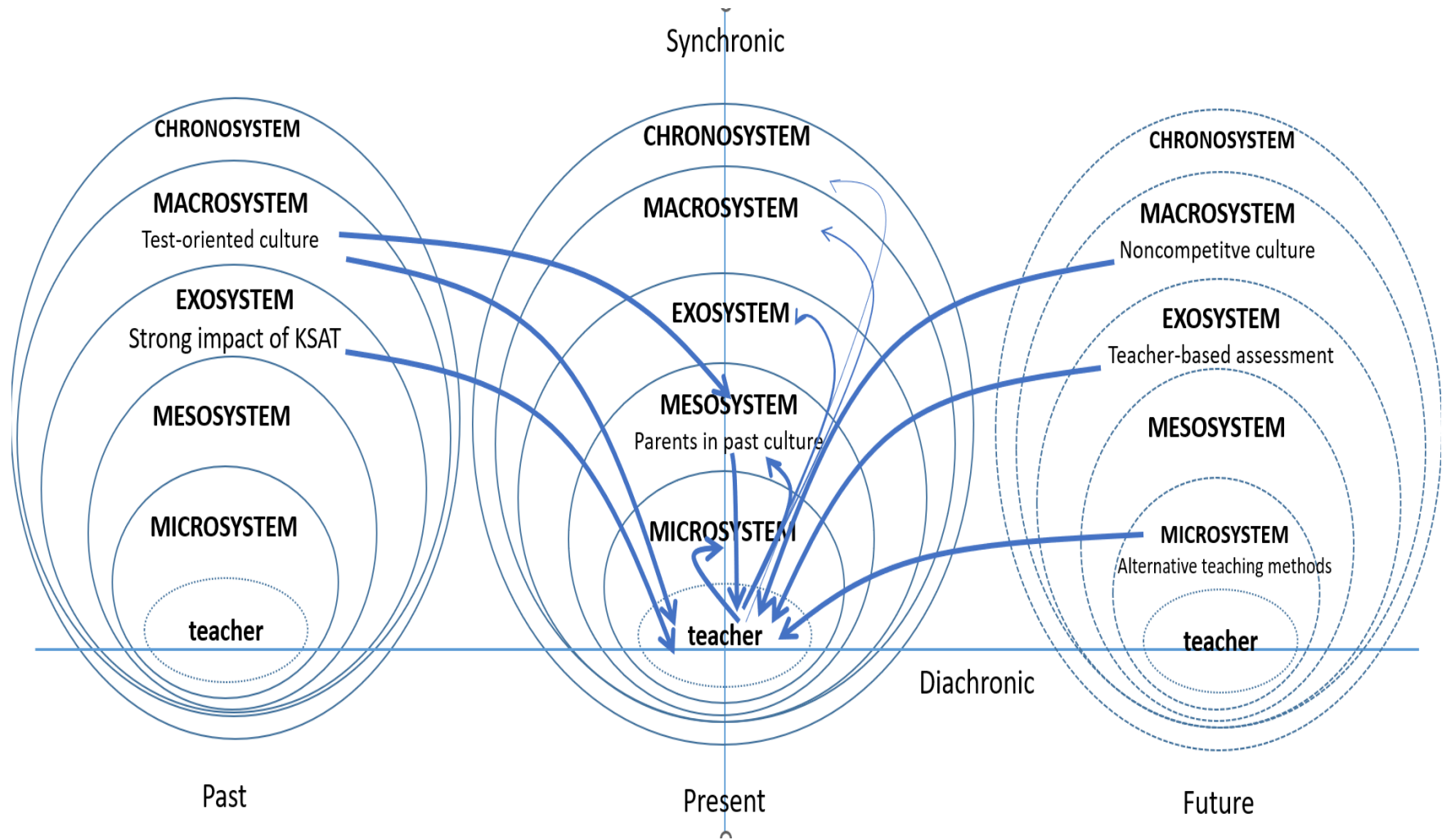


Figure 7 Teachers' interplay with synchronic and diachronic environments

Situated at the very center of these complex synchronic and diachronic environments, teachers enact teacher agency by interacting with multidimensional environments. Furthermore, each ecosystem of a different temporal environment can influence teachers directly and have an indirect impact on them through inter-ecosystem interaction (e.g., test-oriented culture of a past macrosystem affecting parents in the present mesosystem), which intensifies the complexity of the interplay between teachers and the environment.

5.3 Preserving teacher individuality within the entire educational ecosystem

Individuality has been a crucial topic in the discourse of agency. Individuals' intentionality and consciousness in doing their actions used to be regarded as a crucial factor in shaping agency (Giddens, 1984). However, the lack of analytical explanation on the relationship between individuals and the social structure in shaping the agency has been criticized by the critical realist approach, which asserts the dualism of the individual and the social (Archer et al., 2013), and sociocultural approach, which highlights object-oriented social processes (Leontiev, 1978) or individual interaction with the social influences (Billett, 2006). This study, however, acknowledges an ecological perspective on agency, a more balanced stance toward the individual and the social by highlighting the complex interplay between individuals and the environment for enacting agency (Biesta & Tedder, 2007; Drew et al., 2016; Priestley & Drew, 2019; Priestley et al., 2012, 2015). Elaborating on the ecological approach to agency by employing Bronfenbrenner's (1979) ecological theory and exploring teacher agency in the Korean context, this dissertation clearly illustrates that individual teachers and the environment are not ontologically separate or independent; rather, they are deeply interconnected. This suggests that teachers are a part of the whole educational environment and have an organic and inseparable relationship with the environment in their professional practice.

However, the inseparability of teachers and the environment from an ecological perspective does not mean the loss of teachers' individuality. Reinterpreting the notions presented by Rayner (2010), a biologist and an ecologist, teachers and the environment are not "*discrete*" (characterized as separate and discontinuous) but "*distinct*" (characterized as connected and continuous). The inseparability between individuals and the environment in the ecological perspective has been contested in that it was interpreted in the same way, with emphasis on the reactive and responsive mode of agency (Stetsenko, 2019). Nonetheless, the relationality of an ecological approach does not negate teacher individuality but facilitates it so that teacher individuality can be developed or strengthened. This research project reinforces the importance of recognizing the transaction between agency and environments in an ecological perspective (Biesta & Tedder, 2006; Emirbayer & Mische, 1998) by suggesting that

teachers can create a new, high-quality educational ecosystem or transform an existing ecosystem through individual and reflexive agency by utilizing affordances and resisting constraints within the environment (Sub-study III). This transformative agency is well described in the following excerpt.

Perseverance. When students do [a performance assessment] and say to me, "Teacher, I don't wanna do it. Is it okay that we don't do it?", I respond patiently to them, "Just do it and something will come out." I need to push them, otherwise they might think, "What is this worth?" But when they finish it, they often say to me, "Something happened." ... The problem is that students don't know such a future. I expected such a future and assigned them the project [a performance assessment]. Perseverance to say to them, "Sorry but keep calm and just do it." is a supporting factor. Moreover, I'm grateful for collegial support. I really feel supported when they encourage me by saying "Try it. It sounds great."

(Teacher 2: Female, Lower Sec., 3y teaching exp)

Teacher 2 combined her individual pedagogical belief on process-oriented assessment with environmental affordances, such as collegial support to transform the microsystem, e.g., students' fear and resistance to an innovative assessment. Although teachers do not change the types of ecosystems, they can contribute to the transformation of the quality of each ecosystem by interacting with the environment. In other words, the interplay between teachers and the environment can transform ecosystems to facilitate the exercise of teacher agency. The current sub-studies also found that the transformation of ecosystems occurs not only through a direct interplay between teachers and ecosystems but also through an indirect interplay between inter-ecosystems. For example, changes in the chronosystem, such as the global trend highlighting teachers' participation in the development of curricula and assessment, triggered national curricular and assessment reforms in the exosystem, which, in turn, promoted collegial collaboration and collective professional learning in the mesosystem (Sub-study II). Therefore, it is imperative to implement various actions on a trial basis to foster multidimensional ecosystems that enable teacher agency, and teachers need to play a proactive role in the transformation of ecosystems. As the relationship between individual teachers and the environment is dynamic and complex, the research reported here suggests that it is difficult to separate it analytically. As teacher individuality is inseparable from the entire educational ecosystem, it can be characterized as an attribute of the ecological approach in this research project, and this is quite different from the human reflexivity of the critical realist perspective (Archer, 2000, 2004, 2007; Bhaskar, 1975; Manyukhina & Wyse, 2019; Yucel, 2018) in that this dissertation recognizes the inseparability between individual teachers and the environment but does not deny teacher individuality. In this sense, the ecological approach to teacher agency gained more potency in this research. Teacher individuality cannot be formed in a vacuum; it is preserved and developed through relationships with various ecological conditions within the entire educational ecosystem. Sub-study III highlighted that teacher aspiration, crucially connected with teacher individuality, is developed through teachers' interplay with temporal environments in teachers' life courses, namely their critical interpretation and

projective orientation with the ecological conditions surrounding them in the present.

Since the individual and the social are inseparable due to the dynamics of their complex and reciprocal relationships, this dissertation presents a dialectic form of an ecological approach to agency that individual reflexivity highlighted in critical realism (Archer, 2000) can be compatible with the significance of temporal-relational contexts foregrounded in life-course agency (Emirbayer & Mische, 1998) within an ecological approach to agency. In other words, individual teachers employ practical-evaluative reflexivity in the present environment to enact teacher agency by taking advantage of critical interpretations of their past experiences and aspiration for projective orientation. Moreover, some participants in the study addressed the possibility of their positive practical-evaluative actions by exploiting even negative educational experiences in their life trajectories. This suggests that teacher agency has emergent and directive attributes so that teachers can develop it by employing positive projective aspiration and available present affordances, despite their negative past experience and present ecological constraints. The findings of the study are in line with Molla and Nolan's (2020) assertion that individuals' subjective past experiences and future orientations can form new educational structures through interactions with the objective present environment, such as collegiality, policy expectations, and material resources.

6 CONCLUSION

6.1 Practical implications

This dissertation highlights the centrality of teacher agency in teachers' professional development and the dynamic interplay between teachers and different levels of environments for its realization. Specifically, this doctoral research highlights how teachers employ legitimation to mediate teacher agency while interacting with synchronic and diachronic environments. This section provides some practical implications for this dissertation. First, the findings of this research project suggest that teachers' sufficient understanding regarding the complexity and dynamics of the teacher–environment relationship will help in the development of teacher agency in their professional practices. This means that notions regarding teacher agency and the interplay between teachers and the environment should be foregrounded in the curriculum for pre-service teacher education and subsequent education programs for in-service teachers. The emphasis on teacher agency in teacher education will play a crucial role in tackling the issue of incongruence between pre-teacher education programs and in-service teaching practice (Park et al., 2018). This curricular change in both pre-service and in-service teacher education will significantly reform the existing exosystem as an affordance for raising individual teachers' awareness of teacher agency and will subsequently lead to the transformation of different ecosystems.

Underlining the complex interplay between teachers and the environment for teacher agency requires simultaneous change in multidimensional ecosystems. In other words, a solitary change in exosystems, such as curricular and assessment-related reforms highlighting teacher agency, does not bring about the actual emergence of teacher agency, even though it might have a significant impact on inter-ecosystem transformation (Lee, 2019; Lee & Chun, 2017; Liyanage et al., 2015; Priestley et al., 2015). Rather, teacher agency can be achieved efficiently with simultaneous changes in different ecosystems, such as

school and social culture, to encourage curricular and assessment-related innovation (macrosystem), supportive school leadership and collegiality (mesosystem), and sufficient provision of teaching materials and resources (microsystem).

The incongruence between high social popularity and low job satisfaction in the teaching occupation in South Korea may result partly from the failure of simultaneous changes in different ecosystems. The demand for a high degree of teacher agency through curricular reforms without providing supportive ecological conditions can demotivate teachers (Jang & Kim, 2019). Taking these simultaneous changes in different ecosystems into account, the findings of this research project suggest several practical implications for educational authorities and school leadership. Educational authorities and school leadership can play a significant role in facilitating teacher agency and school development by employing various strategies (Soini et al., 2016). They should consider an ecological approach to implementing educational initiatives by providing a variety of affordances to support the emergence and development of teacher agency. This research, for example, suggests practical affordances, such as strengthening collegiality and professional development within the teacher community, implementing educational policies for teacher agency, and supporting material resources. Through this ecological approach to teacher agency, educational authorities or school leadership can foster different ecological conditions to catalyze the emergence and development of teacher agency. Such simultaneous changes in ecological conditions in relation to teachers' work will facilitate the emergence of teacher agency, as teachers cope with the complexities of developing a new curriculum (Drew et al., 2016).

The findings also suggest that ecological reformation requires democratic and deliberative discussions between educational stakeholders on multidimensional measures. According to the findings of Sub-study II, the measures encompass several initiatives to improve structural conditions, such as optimizing lesson hours and class size, revising the policy of collegial consensus in assessment, and alleviating teachers' excessive administrative work. However, teachers have usually been marginalized in the phases of planning and implementing educational policies, such as curriculum making; therefore, they have low efficacy in their work and experience demotivation in their teaching practice (Kim, 2017). This implies that teachers and other educational stakeholders, such as parents and students, should be involved in discussions on building structural environments for developing teacher agency (Pyhältö et al., 2015; Priestley et al., 2021).

6.2 Theoretical implications

An ecological perspective highlighting agency as something that is achieved in specific temporal and relational circumstances (Biesta & Tedder, 2007; Drew et al., 2016; Priestley & Drew, 2019; Priestley et al., 2012, 2015) gains extra potency

in this research. Although previous theorizations of agency have focused on what supports and inhibits the development and exercise of teacher agency (Lasky, 2005; Lipponen & Kumpulainen, 2011; Pappa et al., 2017), the concept of “legitimation” in this study elaborates the transactional attributes of teacher agency in the interplay between individual teachers and environmental conditions. For the participants in this study, the legitimations they experienced as Korean secondary English teachers profoundly influenced the orientation of their teacher agency, either to manage within the given constraints or to attempt to work in a way that was consistent with their beliefs in English pedagogy and assessment. Moreover, the different levels of legitimation suggest the importance of the environment as a key constituent in enacting teacher agency. This theoretically expands an ecological approach to teacher agency in that legitimation encompasses teachers’ conscious and unconscious interplay with the environment beyond teachers’ conscious and reflexive internal conversation or the unconscious and unpredictable emergence and achievement of teacher agency by means of the environment. For example, Sub-study I demonstrated that teachers’ conscious reflexivity regarding curricula and assessment may not work properly through different legitimations conducted consciously or unconsciously by means of relational and cultural constraints. In this sense, this dissertation argues that this notion of “legitimation” can provide a useful conceptual tool to reach a deeper understanding of teacher agency in an ecological perspective and contribute to the literature on the emergence and development of teacher agency. However, some research participants addressed their experience of enacting teacher agency, despite the presence of ecological constraints, by employing aspiration and interacting with their temporal environments in the life course. This finding strengthens the understanding of the transactional relationship between teachers and the environment through an ecological perspective in that teachers go beyond relational and reactive responses to the environment and play a transformative and proactive role in the interplay with the environment by transforming existing ecosystems (Biesta & Tedder, 2006; Emirbayer & Mische, 1998).

This research also elaborates on investigating the environment with which teachers interact to enact teacher agency by examining synchronic and diachronic environments as the “laminated system” surrounding teacher agency. Drawing on Bronfenbrenner’s ecological theory (1979), this study delved into the five synchronic ecosystems surrounding KSETs: microsystems, mesosystems, exosystems, macrosystems, and chronosystems. The specified theorization of the environment provides a comprehensive overview of the synchronic environment with which teachers interact and a theoretical basis for further research in relation to the teachers’ environment. Furthermore, this study addressed teachers’ interactions with different temporal environments during their life course. Participants employed their critical interpretation of past experiences and projective aspiration within the ecological conditions surrounding them in the present to exercise teacher agency. Because parents and students in teachers’ microsystems or mesosystems can also interact with their temporal

environments in diverse ways, teachers have dynamic interactions with their complex environments to enact teacher agency. This dissertation empirically demonstrates the complexity and dynamics of teacher agency at the intersection of synchronic and diachronic environments.

This research has been conducted in the Korean educational context, in which a test-oriented culture is a strong part of the macrosystem. The findings of this study highlight that a test-oriented culture in the macrosystem not only interacts with teacher agency directly but also affects other ecosystems, such as national assessment guidelines in the exosystem and parents' responses to teachers' assessments in the mesosystem. In other words, this dissertation suggests that ecosystems dynamically interact with each other by themselves without the direct involvement of teachers; moreover, interactions in inter-ecosystems have a significant impact on teacher agency. Ecosystems with a strong impact and interactions in inter-ecosystems arguably vary in different educational contexts. Moreover, this study indicates that different ecosystems within a synchronic environment can change at different speeds. Hasty or unexpected changes within one or more ecosystems can cause feelings of helplessness in teachers (Kim, 2017). In other words, teachers can feel a sense of temporal disjuncture about the changes in some ecosystems in a synchronic environment. Teachers, therefore, need opportunities to voice and participate in the transformation of ecosystems as educational agents to avoid being marginalized, even though it takes longer to get teachers involved in the process.

6.3 Limitations

There are several limitations to this study. First, data collection was conducted in one specific region: Chungnam Province in South Korea. Although this research does not seek statistical generalization of the teacher agency of KSETs, collecting an extensive range of data from a greater number of participants working in different regions would provide more diverse and plentiful insights into teacher agency and help elucidate particular and specific information regarding teacher agency (Creswell, 2007). Nevertheless, the balance of sex ratio, secondary school level, and work experience was purposively taken into account during participant recruitment in this research project to reduce the biases of the dataset and increase its credibility (Tracy, 2013). Moreover, although interviewing is a valid and useful research method for understanding teacher agency, particularly for investigating teachers' perceptions of teacher agency in their professional practice, multiple and different data sources and methods rather than a single source of data can provide corroborating evidence to increase the credibility of qualitative research (Creswell, 2007; Hinds et al., 1997; Ruggiano & Perry, 2017). Furthermore, diverse sources and methods will help identify a variety of ecological conditions with which teachers interact, which can epistemologically strengthen an ecological approach to teacher agency and contribute to a more comprehensive ecological understanding of teacher agency. This research,

therefore, leaves room for different data sources and methods, such as observations, focus group interviews, and case studies, despite the difficulty in employing different methods in this research project. The limitations acknowledged here can be overcome by future research, for which some suggestions are addressed in the following sub-chapter.

6.4 Directions for future research

This dissertation provides a more nuanced understanding of teacher agency as an emergent and experienced phenomenon and elaborates on the investigation of the complex interplay between teachers and their environment. Interviews are an appropriate and popular method for collecting data from individuals with significant experiences, as research and carefully designed interviews can provide ample space for participants' perspectives (Creswell, 2007). However, future research could include different sources and methods, such as observations, field notes, focus group interviews, and case studies, to enhance the validity of the qualitative research (Creswell, 2007) and to provide a more comprehensive picture of teacher agency. An ecological perspective is a valuable conceptual tool to investigate a wide array of ecological environments as well as the relationship between teachers and the environment for a better understanding of teacher agency. As teachers' relationships with students were identified as a crucial microsystem for teacher agency in this research project (Sub-study II and Sub-study III), this leaves the door open for further research on the interrelationship between teacher agency and student agency. As Nam et al. (2021) underlined, teacher agency can be a pivotal environment for developing student agency, and this empirical study also provides an important connecting line for further research regarding the interrelationship between teacher agency and student agency. Furthermore, most studies on teacher agency have been conducted in Western countries (Cong-Lem, 2021). More studies in other contexts, such as Asia, Africa, and Latin America, need to follow up on this research project conducted within the Korean context, which will contribute to the diverse and holistic view on teacher agency.

SUMMARY IN FINNISH

Tässä väitöskirjassa tutkitaan, miten korealaiset perusasteen ja toisen asteen englanninopettajat (KSET) hahmottavat ja toteuttavat omaa opettajan toimijuuttaan korealaisessa koulutuksen ekosysteemissä. Opettajien toimijuutta koskevaa tutkimusta on tehty pääasiassa länsimaiden kontekstissa (Cong-Lem, 2021). Tässä tutkimushankkeessa keskitytään kuitenkin opettajien toimijuuteen korealaisessa koulutus kontekstissa. Tutkimalla toimijuutta tässä kontekstissa tutkimus pyrkii laajentamaan toimijuuden tutkimuksen kansainvälistä kenttää ja tarjoamaan entistä kattavamman kuvan opettajien toimijuudesta.

Yhtä tutkimuksessa hyväksyttyä määritelmää toimijuudelle ei ole olemassa (Eteläpelto ym., 2013). Toimijuutta onkin tutkittu monista eri teoreettisista lähtökohdista, joista tämä tutkimus nojaa vahvimmin ekologiseen lähestymistapaan. Ekologinen lähestymistapa asettaa keskiöön yksilön ja ympäristön monimutkaisen vuorovaikutuksen (Priestley ym., 2015). Tässä tutkimuksessa tuodaan tämän lisäksi esille yksilön toiminnan intentionaalisuus ja kehitetään näin ekologista lähestymistapaa entistä dialektisempaan ja vivahteikkaampaan suuntaan. Näkemyksessä painottuu tasapuolisesti intentionaalisuus, ajallisuus ja ympäristön merkitys toimijuudelle.

Ekologisen lähtökohtansa mukaisesti tutkimuksessa keskitytään opettajien ja ympäristön väliseen dynaamiseen vuorovaikutukseen. Tutkimus keskittyy opettajien subjektiivisiin kokemuksiin ympäristöstään voidakseen vastata kolmeen eri tutkimuskysymykseen: 1) Mikä välittää opettajien toimijuutta (osatutkimus I), 2) Miten opettajat ovat vuorovaikutuksessa eri ympäristöjen kanssa (osatutkimus II) ja 3) Miten opettajat ovat vuorovaikutuksessa ajallisten ympäristöjen kanssa (osatutkimus III). Tutkimuksen aineisto koostuu puolistrukturoiduista haastatteluista, jotka on tehty 15 korealaisen englanninopettajan kanssa Chungnamin maakunnassa Etelä-Koreassa. Aineistoa on tematisoitu opettajan toimijuuden välittymisen ja eri ekosysteemien ja ajallisten ympäristöjen kanssa tapahtuvan vuorovaikutuksen näkökulmasta.

Alatutkimuksessa I tutkittiin opettajien ja ympäristön välistä monimutkaista vuorovaikutusta, ja siinä havaittiin, että opettajat havainnoivat jatkuvasti aktiivisesti olosuhteitaan ja ottivat ne huomioon toimijuutensa toteuttamisessa. Samaan aikaan opettajat kokivat merkittävää ristiriitaa kahden eri toimijuuden tyyppin välillä. Ensimmäinen näistä oli tavoiteltu toimijuus, jota opettajat olisivat halunneet toteuttaa ihanteellisissa olosuhteissa, ja toinen toteutettavissa oleva toimijuus, jota opettajat kokivat voivansa toteuttaa pohtiessaan toimijuuttaan suhteessa ympäristössään vaikuttaviin eri legitimaation tasoihin. Tutkimuksessa todettiin, että opettajat säätelivät toimijuuttaan suhteessa kolmeen eri legitimaation tasoon, yksilölliseen, kollegiaaliseen ja sosiokulttuuriseen. Nämä legitimaation tasot koskivat opettajien omaa kehitystä, kollegiaalisia suhteita ja sosiokulttuurista ympäristöä.

Osatutkimuksessa II tutkittiin erilaisia ekosysteemejä, joiden kanssa opettajat ovat vuorovaikutuksessa. Erilaiset ekosysteemit, joiden kanssa opettajat

ovat vuorovaikutuksessa, käsittävät mikrosysteemit, mesosysteemit, eksosysteemit, makrosysteemit ja kronosysteemit. Tutkimuksessa mikrosysteemit käsittivät tekijöitä, jotka olivat suoraan läsnä luokkahuoneessa, kuten oppilaiden englannin kielen taito tai oppimismotivaatio, suhde oppilaisiin ja opetusresurssit. Mesosysteemejä muodostivat oppilaiden ja vanhempien palaute, kollegiaalisuus ja koulun johtajien tuki. Kansallinen standardoitu testausjärjestelmä, liiallinen hallinnollinen työ ja monet kotiluokanopettajien tehtävät liitettiin puolestaan opettajien työtä muokkaaviin eksosysteemeihin ja makrosysteemeihin kuuluivat taas kilpailullinen ja tuloshakuinen opetuskulttuuri, opettajayhteisön kulttuuri ja opettajien virkoihin liittyvät tekijät, kuten vakituiset ja työsopimussuhteiset opettajanvirat. Viimeisimpänä opettajien töihin vaikuttivat erilaiset kronosysteemit, kuten aikakauden vaihtuminen ja muuttuvat koulutustarpeet, jotka näkyivät puolestaan sekä myönteisesti että kielteisesti tulkituissa kansallisissa opetussuunnitelmauudistuksissa. Kukin ekosysteemi vaikutti opettajan toimijuuteen joko suoraan tai epäsuorasti ekosysteemien välisten vuorovaikutusten kautta.

Alatutkimuksessa III korostettiin opettajien vuorovaikutusta ajallisten ympäristöjen kanssa opettajan toimijuuden muotoutumisessa. Tässä tutkimuksessa kiinnitettiin huomiota siihen, miten opettajat käsittelevät ajallisia ympäristöjä arviointia kehittäessään ja miten yksilön ja ajallisten ympäristöjen dynaaminen vuorovaikutus sai aikaan muutoksia ekosysteemeissä. Tutkittuja, opettajien huomioimia ajallisia ympäristöjä olivat mennyt ympäristö, nykyinen ympäristö ja tavoiteltu tulevaisuuden ympäristö. Tuloksissa korostui, että transformatiivinen, muuttava toimijuus syntyi aktiivisen vuorovaikutuksen kautta. Opettajien toiveet, jotka muodostuvat vuorovaikutuksessa eri ajallisten ympäristöjen kanssa, olivat ratkaisevassa asemassa transformatiivisen toimijuuden synnyssä.

Tutkimuksella on sekä käytännöllistä että teoreettista antia. Tutkimuksen tulokset viittaavat siihen, että yksilöiden ymmärrys opettajan ja ympäristön välisen suhteen monimutkaisuudesta ja dynamiikasta tukee opettajan ammatillista toimijuutta. Tätä tietoa voidaan käyttää opettajien perus- ja täydennyskoulutuksen kehittämisessä. Teoreettisesti väitöskirja monipuolistaa toimijuuden ekologista tarkastelukulmaa, jossa relationaalisuus ja ajallisuus ovat keskeisessä roolissa, tuomalla tarkasteluun mukaan opettajan toimijuuden intentionaalisuuden. Tutkimuksen mukaan ollessaan vuorovaikutuksessa synkronisten ja diakronisten ympäristöjen kanssa opettajat säätelevät omaa toimijuuttaan legitimaation eri tasojen kautta. Lopuksi väitöskirja pohtii tutkimuksen toteutusta ja ehdottaa, että tulevaisuissa tutkimuksissa käytettäisiin entistä monipuolisempia tutkimusmetodeita laadullisen tutkimuksen validiteetin parantamiseksi (Creswell, 2007) ja jotta opettajien toimijuudesta saataisiin entistä kattavampi kuva. Vaikka tämä väitöskirja edistääkin osaltaan opettajien toimijuutta koskevaa kansainvälistä tutkimusta tutkimalla opettajien toimijuutta uudessa korealaisessa kontekstissa, tutkimusta tulisi edelleen jatkaa myös muissa konteksteissa, kuten Aasiassa, Afrikassa ja Latinalaisessa Amerikassa.

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ORIGINAL PAPERS

I

INVESTIGATING THE PROFESSIONAL AGENCY OF SECONDARY SCHOOL ENGLISH TEACHERS IN SOUTH KOREA

by

Namgung, W., Moate, J., & Ruohotie-Lyhty, M. (2020).

Asian-Pacific Journal of Second and Foreign Language Education, 5, 1-17.

DOI: [10.1186/s40862-020-00083-1](https://doi.org/10.1186/s40862-020-00083-1)

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ORIGINAL ARTICLE

Open Access

Investigating the professional agency of secondary school English teachers in South Korea



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Abstract

This qualitative study examines the professional agency of secondary English teachers in Midwestern South Korea. Specifically, it investigates how secondary English teachers in South Korea understand their professional agency and what mediates their professional agency. The ecological approach in this study recognises that agency encompasses both individual and environmental dimensions and is formed through the constant interplay between the individual and the environment. The dataset for this study comprises 15 semi-structured interviews with secondary English teachers in South Korea. The thematic analysis highlights a significant gap between Korean English teachers' espoused agency and realisable agency, as well as three levels of legitimation that teachers have to negotiate. These levels are individual, collegial and sociocultural. The findings from this study suggest that the participating teachers censored their own pedagogical behaviours due to their own sense of inadequacy and in response to structural requirements as well as the external evaluation of parents and high-stakes test scores. This study concludes with implications for English teachers in South Korea, theorisation on teacher agency and future research.

Keywords: Professional agency, Legitimacy, Secondary English teacher, Korean education

Introduction

In South Korea the teaching profession is consistently the most attractive career choice in regular opinion polls for high school graduates due to high job stability and the relatively high salary of teachers (Korean Ministry of Education, 2015a, b), and the intake for teacher education is only a small percentage of all applicants. It is perhaps surprising then that according to the OECD Teaching and Learning International Survey (TALIS) 2013 results, 20% of Korean secondary teachers reported that they regret becoming a teacher, a very high proportion since the international average is 9% (OECD [The Organization for Economic Cooperation and Development], 2014). This discrepancy between the high popularity and the low job satisfaction of the teaching profession suggests it is worth investigating the relationship between teacher

professionals and the working conditions of the environment. This relationship has been quite extensively explored in western cultural contexts through the lens of professional agency (Biesta & Tedder, 2006; Pappa, Moate, Ruohotie-Lyhty, & Eteläpelto, 2017; Van Lier, 2008), however, it has received little attention within the Korean educational context (Kim, 2013a, b; Yoo, 2015).

Teachers have played an important role in the development of Korea throughout the twentieth century (Kang, 2002; Synott, 2007). During the first decades of Japanese colonisation periods, teachers were tasked with fostering pupils to be obedient and cooperative people for the Japanese Empire (Kim, 2013a, b); subsequently, teachers were tasked with preparing pupils to be suitable workers for the developing nation of South Korea modelled on the competitive, capitalist system of the US. This historical background has arguably encouraged Korean teachers to follow top-down instructions and disrupted the formation of teacher initiative and autonomy. Over time, grassroots level initiatives that had promoted more altruistic forms of education were squeezed out of the increasingly competitive system (Kang, 2002). Successive governments resisted the establishment of a teachers' union that promoted the basic rights of teachers and students because of its anti-governmental stance (Kang, 2009) and teachers have been overly committed to long working hours teaching and doing excessive administrative works (Lee, 2019).

Furthermore, Korean teacher culture has been characterised as defensive and conservative with Korean teachers teaching their subjects and evaluating students' ability in a way that seeks to avoid student and parent complaints (Lee, 2006). Although some Korean teachers brave the trials and errors of implementing innovations in teaching or assessment, external criticism, whether from parents or the municipal education office, often carries such weight that Korean teachers and school administrators have been hesitant to put new ideas into practice (Kim, 2003). It is this relationship between individual teachers and their work environment that is the focal interest of this study and in particular "the capacity of people [in this instance, Korean secondary school English teachers] to act purposefully and reflectively on their world" (Rogers & Wetzel, 2013, p. 63).

The current study focuses on the professional agency of teachers. Professional agency has been investigated in a variety of educational fields to date with studies targeting teachers from different educational levels including vocational school (Vähäsantanen, 2013), primary school (Haneda & Sherman, 2018; Pappa et al., 2017), and pre-service teacher education (Kayi-Aydar, 2015). Research on the professional agency of teachers has also addressed a wide range of curricular concerns, including the foreign language mediation of education (Moate, 2014), the agency of language teachers (Ruohotie-Lyhty, 2013) and teachers' capacity to develop the curriculum in school (Priestley & Drew, 2019; Priestley, Edwards, Priestley, & Miller, 2012). In the following section, we outline key developments in conceptualisations of agency in order to illustrate how an ecological exploration of professional agency extends conventional conceptualisations of agency.

Theoretical framework

Agency

Agency has been a popular research topic across disciplines, such as the social sciences and education in this post-modern era that favours human creativity and autonomy in

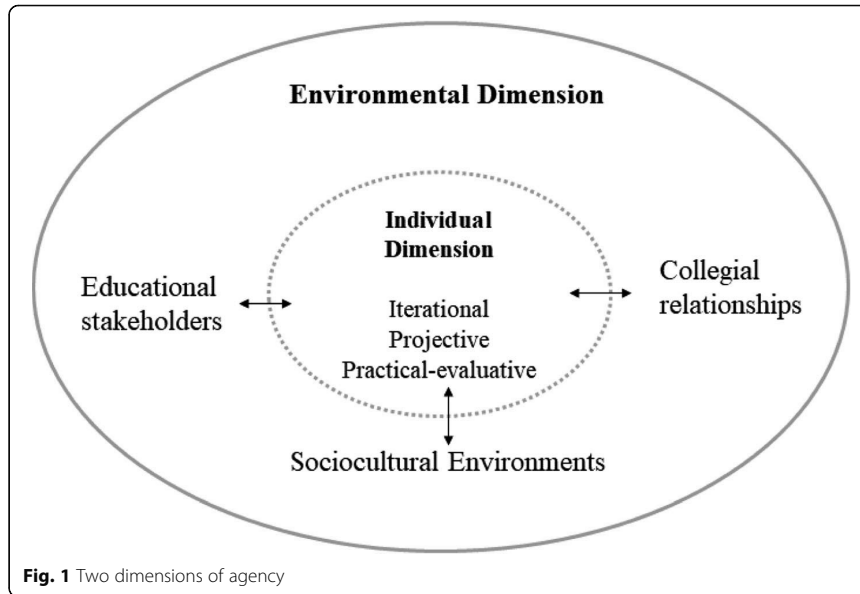
personal and professional life. Despite the multiplicity of research, no shared definition of agency had been agreed (Eteläpelto, Vähäsantanen, Hökkä, & Paloniemi, 2013) and the crucial individual-environment relationship has been formulated in significantly different ways perhaps due to a tendency to simplify the capacity of actors for autonomous action and to over-emphasise an individualistic view (Priestley, Biesta, & Robinson, 2015). Giddens (1984), for example, defines agency as the intentional action of an individual responding to problematic situations or autonomously acting independent of social constraints (Biesta & Tedder, 2006). A contrasting perspective emphasises agency as a socioculturally mediated capacity to act (Ahearn, 2001), a view which suggests that individual wants, values and priorities of decision-making are socially determined. In contrast to this overly-socialised view of agency as a capacity shaped and moulded by the social context, Archer advocates a dualistic concept of agency that recognises the way in which humans form society through their activities, but they are also shaped by it. She points out that there is always an interplay between structure and agency as distinctive sets of causal powers in reality (Archer, 2000).

Emirbayer and Mische's (1998) conceptualisation of agency acknowledges the temporally embedded process of social engagement that is informed by the past as well as oriented toward the future as a projective capacity to imagine alternative possibilities within the conditions of the present. For Emirbayer and Mische (1998) agency emerges from the interaction between individual capacity and the environment. Biesta and Tedder (2006) also define agency as a transaction with the environment thus emphasising the intrinsic relationship between agency and the environment in which agency is realised and realisable.

As previous studies point out, it seems to be difficult to analyse the complexity of agency and the interplay among variant components of agency with extreme versions of the structure-agency dichotomy. It is perhaps helpful to recognise that agency is not only an individual's voluntary control over behaviour but also a social event that does not take place in a void or in an empty wilderness (Eteläpelto et al., 2013; Lipponen & Kumpulainen, 2011). In Fig. 1, both individual and environmental dimensions are encompassed within the definition of agency. The individual dimension draws on Emirbayer and Mische's (1998) chordal triad of an individual's past, future and present manifested as the iterational, projective, and practical-evaluative aspects. The environmental dimension is an umbrella term to indicate different kinds of social structures that can affect the formulation of agency through the range of affordances and constraints that belong to sociocultural environments. The dotted line between the individual and environmental dimensions indicates the distinction between these two dimensions, without suggesting that they can be separated. It is the overall ecology and ongoing interplay between the individual and environmental dimensions of agency that are of particular interest in the present study.

Interplay between the individual and the environment in educational contexts

The interplay between the individual and environment in educational contexts has been conceptualised in a number of ways. Van Lier (2000) has contributed to the notion of agency by drawing on an ecological perspective and emphasising the significance of affordance. Affordance acknowledges the properties of the environment and the active



responsiveness of a learner, for example, whether a language learner is able to use resources that are offered (Sun, 2019). Van Lier (2004) notes that an individual can be agentic when choosing or refusing to use a resource that is available within the environment. This ecological perspective, however, acknowledges the reciprocal and dynamic nature of the individual-environment relationship in that both individuals and the environment are sensitive and responsive to one another. Ruohotie-Lyhty and Moate (2015) in their study of pre-service teachers have described this relationship in terms of proactive and reactive agency highlighting how teachers can experience their environment as a resource for or limitation to development. More recently, Moate and Ruohotie-Lyhty (Moate, J., & Ruohotie-Lyhty, M.: Identity and Agency Development in a CLIL-based Teacher Education Programme, forthcoming) have highlighted the ongoing dynamic of the individual-environment relationship and the way in which this forms the overall ecology of teacher development.

The interplay between individual and environment can also be examined with the notion of legitimacy, a notion that recognises the complications of power and authority, as well as the (im) balance of relationships. A stance, action or organisation may be legally legitimate, yet this does not automatically bestow social legitimacy. Moreover, legitimating powers can work almost invisibly, for example, by maintaining the existing status quo, assisting in the reproduction of inequality in education (Apple, 2012) or cloaking cultural capital as a neutral asset and overlooking the implicit favouring of those who have already acquired linguistic and social competencies (Apple, 2004). In this way, legitimacy can be seen as a self-serving concept in that as it supports selecting others, it simultaneously reinforces itself (Arnot, 2006). Strict national curricula and standardised tests that stratify students in competitive educational environments, for example, can lead both to increasing privatisation and increasing centralisation of control over official knowledge to “educational apartheid” (Apple, 2004) with students and teachers in a mechanism of objectification (Foucault,

2012). Within this complex ecology of interconnecting and competing interests, teachers have to work out their individual commitments and pedagogical practices.

Legitimation has been a useful notion in the field of applied linguistics. Although all languages might be linguistically equal, they are not equal as forms of sociocultural power since speakers of different languages are afforded different levels or forms of social power and authority, for example, whether they are considered a legitimate lingua franca or not. The issue of linguistic legitimacy is more severe within a single language. If one form of a speech among others imposes itself as the only legitimate one, the other different class or regional dialects have to be measured against the legitimate language (Bourdieu, 1977). The dominant form of speech in the language becomes the norm against the other modes of expression. The legitimate linguistic practices emphasise the significance of the environment since legitimation is not intrinsic to a language but rather contextually and socially constructed and dependent on a variety of ecological factors (Ennsner-Kananen, 2018).

Individuals, however, are often unaware of the forces and values that inform and guide their actions (Savaya & Gardner, 2012), and significant discrepancies can exist between the espoused theories that teachers believe guide their behaviours and the theory-in-use reflected in their behaviours in practice (Argyris & Schon, 1974; Jones, 2009). This study defines espoused agency as that which teachers would like to exercise in the ideal ecological affordances and realisable agency as that which teachers can exercise through various types of legitimation within the particular conditions of their environment. In the present study on secondary English teachers' professional agency in South Korea, we are particularly interested in the interplay between the individual teachers and the conditions of their working environment, and the implications this has for the realisation of their professional agency.

This complex and ecological conceptualisation of agency, therefore, suggests an important distinction between agency and autonomy. Whilst agency entails multidimensional attributes that include intrapersonal and environmental factors (Larsen–Freeman, D., 2019), autonomy focuses primarily on an individual's independent and free decision for action. Moreover, this conceptualisation does not equate teacher agency with teacher autonomy as teachers granted autonomy do not necessarily achieve agency as they, for instance, habitually reproduce past patterns of behaviour or as they may lack cognitive and relational resources (Priestley *et al.*, 2015). This study recognises that research on the professional agency of teachers is not just a matter of examining individual teachers' capacity to act but also an examination of the environment that influences the formation and realisation of teacher agency and the way in which the overall ecology for teacher agency develops (Priestley & Drew, 2019).

Context for the research

Educational policies in South Korea have long sought to globalise and develop an educational system that produces an efficient workforce able to meet the demands of an industrialised high-tech society (Kang, 2002; Synott, 2007) and English has been considered the most important foreign language for a variety of historical and sociocultural reasons. Both the government and individuals endorse globalisation and English education through top-down and bottom-up efforts (Song, 2016). The Korean administration implemented a policy of so-called "English Village" where students can experience

English-dominant culture all around the environment to satisfy Korean people's aspiration for learning English. In spite of the huge financial investment to establish English villages around Korea, this investment has resulted in a huge deficit and inefficiency (Hong, 2012). A series of English educational policies such as English immersion education, Teaching English in English (TEE), and National English Ability Test (NEAT) have also been introduced but seem to have contributed little improvement to English education in South Korea. In addition to governmental initiatives, Korean people invest around 79,000 Korean won (about 60 Euros) a month in private English studies (Statistics Korea, 2018) and many Korean people spend a lot of money sending children to English-speaking countries to improve their English communication skills (Kim, 2017). In the competitive social atmosphere of South Korea, a private education market is well established and benefits from stimulating parents' fear of their children being left behind without the assistance of private education.

Meanwhile, a new English national curriculum has been developed and implemented in primary school grade 3~4, lower secondary school grade 1 and upper secondary school grade 1 from 2018. This new "competency-oriented curriculum" (Lee, 2016) emphasises key competencies in anticipation of societal developments including English communication competency, self-management competency, community competency and knowledge-information processing competency (Korean Ministry of Education, 2015a, 2015b). English subject teachers are required to be fully aware of these competencies and expected to design their English classes that enable students to develop the competencies through various activities. Teachers need to consider reorganising their own English curriculum as the new English national curriculum encourages teacher agency in making their own curriculum in order to promote diversity and creativity. In particular, the Korean government has implemented a free learning semester in every Korean lower secondary school since 2016, in which the school does not have any regular paper tests such as mid-term and final exams and encourages teachers to employ process-oriented evaluation (Lee, 2018). The free learning semester has been extended from one semester to one academic year in some lower secondary schools since 2018.

These government initiatives have arguably offered new opportunities for teacher agency in educational activities as well as curriculum organisation. Nevertheless, changing the dynamics of the well-established relationship between the working environment and teachers' professional agency is complex and challenging (Priestley et al., 2012).

Research questions

This study aims to examine how secondary English subject teachers in South Korea exercise their own professional agency within the context of English language education. The particular research questions are:

- (1) How do secondary English teachers in South Korea understand their professional agency?
- (2) What mediates the professional agency of South Korean English teachers?

Methodology

This qualitative study is based on interviews with 15 secondary English teachers in South Korea. The participants include eight lower secondary school teachers and seven

upper secondary school teachers who work in Chungnam Province, South Korean Mid-western area. The first author works at the same municipality and the participants were invited through local teacher networks (Tracy, 2012). More details on the participating teachers are provided in Table 1.

Research design and data collection

Investigating the professional agency of secondary English teachers in South Korea requires that the actual voices of the participants are part of the study. The semi-structured interviews used in this study were designed to provide a space for the participants to share their experiences without imposing a structure on the narrative and allow the participants to expand on their experiences within a shared frame (Holloway & Jefferson, 2000) as the first author also acted as the interviewer in the study. The questions were open-ended and focused on their temporal experiences including past, present and future as well as their knowledge and opinion with regard to practical English education, for example:

- Why did you decide to become a secondary English teacher?
- What type of English teacher do you wish to become?
- What supports or enables you to teach as you think it is desirable or appropriate?
- What prevents you from exercising your professional agency in teaching English?

The data were collected from July to August 2018. Participants were informed about the methods, purpose of the study and ethical commitments prior to the interviews, whilst an informed consent form was signed at the beginning of interviews. The interviews were recorded on two devices and stored in a computer as well as on a

Table 1 Information on participants

Teacher	Sex	Level of Present School	Career trajectory (yrs)	Years of teaching career (yrs)	Job Security
1	F	Lower secondary	Lower: 6 Upper: 7	13	Permanent
2	F	Lower secondary	Lower: 2.5 Upper: 0.5	3	Temporary
3	M	Lower secondary	Lower: 5	5	Permanent
4	M	Lower secondary	Lower: 4 Upper: 7	11	Permanent
5	F	Lower secondary	Lower: 30	30	Permanent
6	F	Lower secondary	Lower: 30	30	Permanent
7	M	Lower secondary	Lower: 4.5 Upper: 5	9.5	Temporary
8	F	Lower secondary	Lower: 6	6	Permanent
9	M	Upper secondary	Upper: 13	13	Permanent
10	M	Upper secondary	Upper: 10	10	Permanent
11	M	Upper secondary	Upper: 1	1	Permanent
12	F	Upper secondary	Upper: 22.5	22.5	Permanent
13	M	Upper secondary	Lower: 1 Upper: 6	7	Permanent
14	M	Upper secondary	Upper: 30	30	Permanent
15	F	Upper secondary	Upper: 3	3	Permanent

password-protected external hard drive for secure data protection. The collected data have been anonymised.

Data analysis

The interviews lasted from 1 hour to about 1 hour and 40 minutes and were transcribed verbatim (see the Additional file 1). An iterative form of thematic analysis (Tracy, 2012) was used to elicit the critical points in the data with regard to the teachers' professional agency and the interplay between the individual teachers and their work environment. Thematic analysis is a useful method for a qualitative research for identifying, analysing and reporting experiences, meanings and reality of participants within data (Braun & Clarke, 2006). Through multiple re-readings of the transcripts, the data were coded with descriptive codes before patterns within the data were identified. The final stage of analysis was based on the critical dialogue between the professional agency as a theoretical construct and professional agency as a lived experience. The analytical process was conducted manually rather than using qualitative data analysis software. An example of how the data were analysed is presented in Table 2.

Findings

As an investigation into the professional agency of secondary English teachers in South Korea, this study is particularly interested in the dynamic interplay between individual teachers and their ecological environments. The findings suggest that legitimacy of professional agency is particularly significant in relation to the individual self, collegial relationship, and the wider sociocultural environment as outlined in more detail in the following section.

Individual legitimation

At the heart of professional agency is the individual's relationship with his or her self. A striking finding in this study was the way in which individual teachers censored their own pedagogical competency by drawing on individual and ecological factors. Although the participants recognised that they are supposed to take an agentic position in curriculum design according to a new curriculum policy, their doubt in their own competency and lack of confidence, as well as remaining structural constraints, inhibited their agency as the following extracts indicate:

Table 2 Steps of data analysis

Steps	Actions taken	Examples
1st	Coding the raw data with descriptive codes	Parents' complaints about KETs' teaching materials and methods Parents' requests for KETs' English teaching related to KSAT
2nd	Grouping codes and naming basic themes by identifying patterns	Parental complaint
3rd	Identifying illustrative excerpts	'I started at that point when I was a novice teacher but the goal has been changed after facing lots of complaints. At last, I came to design the assessment and class at a level where parents and students don't complain and implemented them in that way.' (Teacher 13)
4th	Identifying key themes	'Parental complaint' under 'Sociocultural legitimation'

I think I use the textbooks in about 90% of my English class. Even though it is recommended to reorganise the curriculum and include the materials from outside of textbooks and also the importance of textbooks is being decreased these days, I still depend highly on textbooks because I think I'm not enough to reorganise the curriculum with the materials outside of textbooks. (Teacher 2)

If we don't have textbooks, it's not socially allowed 100% for teachers to design the curriculum by themselves and teachers lack time to design the curriculum without textbooks and we have a lot of other paperwork so we depend on the textbooks... Many complicated factors affect us, which leads us to make classes limited to textbooks. As a new national curriculum was implemented, that kind of atmosphere seems to have changed a lot and I also began to aspire to get a little more away from textbooks. (Teacher 8)

All the lower secondary English teachers interviewed articulated that they depend on textbooks in about 80% of their English classes. From their perspective, textbooks were considered as neutral, pre-given and positivistic, 'safe' options that are part of a well-established pedagogical practice, even if they did not correspond with current policy and even the aspirations of the teachers. It is also noticeable in Teacher 8's excerpt that the implementation of a new national curriculum encouraging English teachers to be more agentic stimulated them to try taking more agentic attitude on selecting teaching materials. This shows that the appropriately framed curricular specification might play a powerful role in enabling English teachers' espoused agency (Priestley et al., 2015). The denial of individual legitimacy was also present, however, as the participants considered the four skills of reading, writing, listening, and speaking. As Teacher 3 explained:

I guess that the four skills of practical English are the most important rather than English for academic scores. The ideal English teacher is to help improve practical English skills to be good at the four skills I'm a very deficient teacher and it's never-ending to study a foreign language in terms of its nature. So I should study more. That sometimes makes me unsure (of my English skills). In particular, this is applied to many English teachers, in the speaking part, when I teach speaking, I sometimes think, "Am I speaking in the right way?". That's the most challenging part of the four skills. (Teacher 3)

Teacher 3 has the espoused agency to help students improve the four skills in a practical way but it is inhibited by his doubt on his own English speaking ability. The self-doubt profoundly connects with the ideology of Standard English, which is the belief that there is a single authentic version of the language and that other variants of the language are dialects that reflect improper ways of speaking (Schulzke, 2014). As an ideology that is prevalent among Korean secondary English teachers, this belief legitimises native speakers from core English-speaking countries whilst Korean secondary English teachers experience their own English speaking as illegitimate. This stance with regard to individual legitimation reflects the proposition that language is not only an instrument of communication or even of knowledge, but also an instrument of power that can empower or undermine (Bourdieu, 1977).

In practice, the participants' distrust of their own competency to teach these skills, in particular speaking, limited their freedom to design student assessment and directed their professional agency in ways that ran counter to their own ideals. The participants admitted to focusing assessment on student accuracy rather than fluency to limit the amount of speaking in English classes. Some participants tried to reconcile the disjuncture between their espoused belief and assessment practice by acknowledging that they wished to include more non-assessed activities to develop students' fluency in every English skill. In these examples, the participants' professional agency was exercised to compensate for their personal insecurity and contradictory practice rather than to develop English language education. Many of the teachers in the study were aware of what was expected of them as English teachers within the Korean education system, yet the lack of a legitimate sense of self seemed to compromise the teachers' agentic experience.

Collegial legitimation

In South Korea, English teachers that are assigned to teach in the same grade at a secondary school should reach collegial consensus with regard to what is assessed. In other words, fellow English teachers assigned in a same grade are expected to organise the same types of assessment and set the same test range. Even though collaboration with colleagues may initiate a variety of pedagogical benefits, this structural requirement has significant implications for the kind of teaching materials and approaches that can be legitimately adopted in English classes, as highlighted in the extracts below:

I can teach according to the teaching contents but because I need to follow norm-referenced assessment and must make my assessment criteria consistent with fellow teachers teaching other classes in the same grade, it really limits my teaching. I wish I could assess my classes based on what I taught them... If the assessment is restricted, it is followed by the limit of teaching in class. I can't teach what I want and bring richer materials into my English classes. (Teacher 5)

It's not easy to reorganise the curriculum. As I told you before, if I take charge of one grade by myself, it would be easy to reorganise it because I can do it as I want... In this large school, three English teachers teach 3rd grade. So we can't help having classes with textbooks, making questions only within textbooks, no prior learning, of course, I agree with that, anyway it's sad that only textbook-oriented classes are possible with three English teachers in same grade. (Teacher 6)

The structural constraints that English teachers in the same grade should make their assessment plan in consensus hardly allow them to take agentic actions in deciding the content and pedagogy of English curriculum as well as its assessment. They espouse to assess students based on what they actually teach in class but have to consider realistically what other colleagues teach in different classes because all of the students in a year group take the same paper tests. Within this setting, idiosyncratic pedagogical ideas and espoused agency on what to teach and what to assess are easily compromised through the process of collegial consensus.

The upper secondary English teachers appeared to be under greater pressure than the lower secondary counterparts in making the teaching materials and assessment consistent due to the critical importance of academic scores for university admission. If more than two teachers are involved in teaching students within the same grade, they always need to consider how the other teachers utilise the teaching materials and assessment.

... There is the problem with teachers' cooperation. We all think differently and if anyone wants to try something, the teacher can't implement it by oneself. Because two or three teachers are tied in a grade, any teaching or assessment plan will not be realised if just one teacher doesn't agree with it. I don't care to be compared with other teachers, but it's really difficult to make changes when working in a team. If any fellow teacher doesn't move or any teacher next to me is less innovative than me, the game is over ... (Teacher 10)

I seem to pay a lot of attention to students' assessment. I don't want to hear that students ruined the exam because of me so I'm sensitive to their assessment. What should I do if my class progress is slower than other teachers' classes? This year, it's okay to progress with my class slower than last year but I'm pressured with the class progress and there are three English teachers in a grade so we're pressured to make the class progress in consensus. Why does that teacher teach this but my teacher doesn't teach it? What if that comes in the exam but I didn't mention that? This kind of issue I have. Everyone seems to focus exclusively on the English exam because the high school records are important. (Teacher 11)

Any teaching methods and assessment types require the approval of each fellow English teacher working within the same grade in order to be considered legitimate. Even if the teachers recognise that individual students have their own learning styles and wish to be pedagogically innovative, the participants in this study face the dilemma of how to work within the given structures of collegial collaboration. If a teacher wishes to be pedagogically innovative, he or she faces the inevitable task of first having to persuade colleagues and risk being the cause of dissatisfaction for the entire grade. It is perhaps unsurprising that although the participants in this study shared idiosyncratic pedagogical perspectives, they could not help realising a form of agency that ran counter to their own pedagogical preferences. This suggests that collegial legitimation can play a critical role in inhibiting their teacher agency if it is utilised as a monitoring structure to decide what is legitimate in teaching English.

Sociocultural legitimation

Korean parents tend to pay careful attention to students' numerical academic scores as they can be used to stratify students in school and for entrance to the next stage of education. This kind of social atmosphere demands neutral and positivistic assessment which is deemed fair and beyond reproach. For the participants in this study, this keen interest of parents appears to influence how secondary

English teachers actually teach English, particularly for teachers working in the upper secondary school:

At the beginning of my teaching career, all of my worries were to improve students' English skills and to help them feel what English is about. I started at that point when I was a novice teacher but the goal has changed after facing lots of complaints. Lately, I have designed the assessment and class at a level where parents and students don't complain and implemented them in that way. That [Parents' and students' responses] really affected them [the assessment and class]. (Teacher13)

Teacher 13's espoused agency was to improve students' English skills and to help them feel what English is about but it was inhibited by students' and parents' complaints that required his class to be more oriented towards KSAT preparations. For the participants in this study, sociocultural legitimation can differ dramatically according to the context where the teachers work with English teachers working at high performing schools experiencing greater pressure than those working at low performing schools. The former needs to be more sensitive to the responses of other educational stakeholders including parents and students. Teachers have to pay more attention to the way they teach or assess in order to maintain or even further raise the high attainment in standardised examinations such as KSAT. However, as teachers working in low performing schools do not face such pressure or scrutiny, they can more easily design their teaching and assessment in the way they want.

If I work at a girls' high school now, I could teach my class as I wish. But in the past, the English classes at the girls' high school couldn't be separated from KSAT, I felt quite burdened by it so I couldn't teach as much as I wished On the other hand, I don't have any burden at the present school. I do teach as I wish and don't have any mental restriction. (Teacher 9)

The girls' high school in the above excerpt has a reputation as a high achieving upper secondary school in the local municipality. Teacher 9 described in the excerpt how his hopes and intentions, which are his espoused agency as an individual, were inhibited by the sociocultural expectations of the environment. Structural expectations that legitimised particular practices pressured this teacher to teach to the test in this upper secondary school. This pressure disappeared, however, when he began to teach in his present school, a vocational high school with low attainment. In this new environment, Teacher 9 was able to return to his original hopes and intentions as a teacher.

For the participants in this study, their professional agency appears to be significantly influenced by sociocultural considerations such as external evaluations, parental intervention and the reputation of the school that legitimise or deny the validity of pedagogical practices. Although the participants consistently hoped to improve students' English skills and help them gain a real taste for learning English through their iterative experiences, this espoused agency was constrained by complaints from parents and students. As a result, the realisable agency of these teachers was bound to pedagogical practices that they had not envisaged for themselves but which were considered legitimate within the sociocultural setting.

Discussion

The two research questions underpinning this study address how secondary English teachers in South Korea understand their professional agency and what mediates their teacher agency. This pioneering research on teacher agency within the Korean context highlights the way in which 'legitimacy' plays a pivotal role in mediating the teacher agency. This provides a new lens for making sense of teacher experiences in general as well as in the Korean context. Furthermore, on a teacher education level it can draw attention to the responsibilities of educational leadership as well as educating teachers to be aware of the professional responsibilities they have pertaining to their own development, collegial relationships and the sociocultural environment.

The findings indicate that the individual aspirations and intentions of secondary English teachers in South Korea are subject to significant pressures from individual teacher selves, collegial relationships and the wider sociocultural setting. With regard to individual legitimation, teachers censor their own pedagogical behaviours using Standard English ideology that they have seemingly internalised as well as an exacerbated sense of their own inadequacy in linguistic and pedagogical terms. Withholding individual legitimation seems to redirect the professional agency of teachers towards compensatory actions that might conflict with their espoused ideals but provide some kind of reassurance.

Collegial legitimation refers to the structural requirement that colleagues monitor other teachers' pedagogical approaches and methods of assessment. Agency is not inherited in a person but is relational in that it persists only through the constant interaction with others (Larsen–Freeman, D., 2019). Although the relational characteristic of agency often enables teachers to achieve a variety of pedagogical benefits, the monolithic and obligatory consensus of assessment hardly allows English teachers to achieve the heterogeneous and idiosyncratic espoused agency. The collegial consensus obligated by educational policies means that if a teacher hopes to trial a new pedagogical approach, this has to be a public trial. It is perhaps unsurprising that many of the participants exercised their professional agency by trying to reconcile the contradiction between their espoused hopes to provide a good language education and their realised practices of maintaining the established status quo. Once they have to teach English with other fellow teachers in a same grade, they become trapped in the mechanism of objectification and they judge each other's assessment types as well as teaching materials for its consensus in the mechanism. The mechanism of objectification between the collegial relationships at school serves to legitimise secondary English teachers' pedagogical methods and assessment.

Finally, with regard to sociocultural legitimation, the teachers' professional agency was legitimised through the external evaluation of parents and high-stakes test scores. This form of legitimation most keenly impinged on the professional agency of teachers working in academically successful schools. The higher the stakes for the student exams are, the greater the pressure on teachers to exercise their professional agency is within the established constraints of the demand to pass the exams, even at the expense of the mandated curriculum that purportedly favours the teacher agency. It appears as though the examination holds not only students but also secondary English teachers in the mechanism of objectification (Foucault, 2012). Moreover, these examinations favour the cultural capital of academically successful social groups so teachers become part of the reinforcing mechanisms of cultural capital (Song, 2016).

A key finding in this study is the disjuncture between the teachers' espoused agency that they wish to exercise and the realisable agency that is legitimised by individual and environmental factors. For the participants whether their agency is considered legitimate or not significantly influenced the way in which professional agency was exercised, whether proactively or reactively (Ruohotie-Lyhty & Moate, 2015). This finding suggests that the process of legitimation is a keen mediator between the teachers' espoused and realisable agency. As in other sociocultural contexts, the professional agency of individual teachers is held in tension with the working conditions and established structures (Pappa et al., 2017; Vähäsantanen, 2013), yet here legitimation more keenly mediates the interplay between the individual and environment provides an important insight.

As Fig. 2 indicates, Korean English teachers have clear ideas and understanding of the teacher type that they would like to be, the pedagogical practices they would like to incorporate and the hopes they have for their students' learning experiences. The inconsistencies between what is espoused and what is realised correspond with findings in other contexts as well (Priestley et al., 2012). In this study, however, it is not only the gap between what is espoused and what is realised, but Korean English teachers also have to contend with three different levels of legitimation: individual, collegial and sociocultural. Each level raises a different kind of question: Am I good enough? Will my colleagues agree? Is this appropriate for the wider community? It is perhaps unsurprising that the enacted agency of Korean English teachers is sometimes significantly different from their espoused agency.

The invisible and obscure nature of legitimacy can have a powerful impact on teacher agency (Apple, 2004). It is hoped that by drawing attention to the hidden ideology and power relations surrounding English education in Korea secondary English teachers can be aware of the legitimacy challenges they face. Awareness is arguably an important practical-evaluative consideration that can challenge the potency of earlier iterational experiences that reinforce existing pedagogical ways by undermining the potential projective considerations that can develop new approaches to the development of English education (Emirbayer & Mische, 1998). In this study, the belief in Standard English ideology, for example, appears to undermine the legitimacy of individual teachers' practices. If this ideology is challenged by individual teachers and especially within the wider community, professional agency can be exercised in developing the expression of Korean identities and values as well as English competency rather than being subordinated to a myth that sustains itself at the expense of others. Legitimacy itself does not connote to negativity but implies value neutrality. We argue that individual, collegial and sociocultural legitimation can play a positive and effective role for English teachers to achieve their professional agency in more educational affordances such as

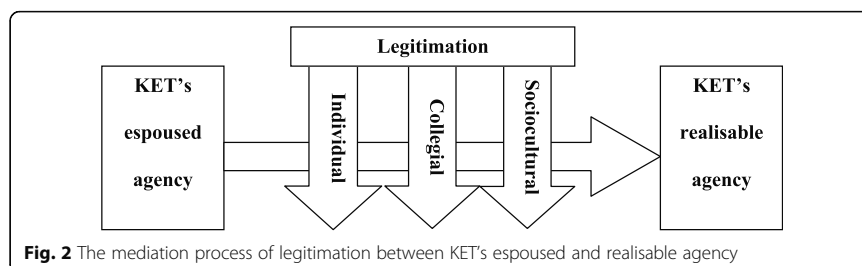


Fig. 2 The mediation process of legitimation between KET's espoused and realisable agency

educational policies to encourage teacher agency, supportive school leadership and social trust. It is the active interplay between individual teachers and the environment that legitimises or undermines teacher agency.

Conclusion

This study suggests that even when an individual teacher's professional agency is compatible with the ideals of educational structure, professional agency is always in relation to a complex dynamic system and requires a specific temporal and spatial situation in order to flourish. (Larsen–Freeman, D., 2019). It highlights that teacher agency cannot be achieved in a laissez-faire environment but it is formulated in the interplay between individual teachers and the ecological environments such as educational policy support, proper in-service teacher education and autonomous collegial collaboration.

Earlier theorisations of agency as something that is achieved in specific temporal and relational circumstances (Eteläpelto et al., 2013; Larsen–Freeman, D., 2019; Priestley et al., 2015) gain extra potency in this research. Whilst earlier research has focused on what resources and hampers the development and exercise of professional agency (Lasky, 2005; Lipponen & Kumpulainen, 2011; Pappa et al., 2017), the concept of 'legitimation' in this study introduces another consideration to the interplay between individual teachers and the conditions of their environment. For the teachers in this study the legitimacy they experienced as English language teachers and teacher professionals profoundly influenced the orientation of their professional agency, whether to manage within given constraints or to attempt to work in a way that aligned with their beliefs regarding good English pedagogy. Moreover, the levels of legitimation suggest the importance of community as a key constituent in the exercise of professional agency. We argue that this concept of 'legitimation' can provide a new lens to reach a broader awareness of agency and contribute to the literature on the development of teacher agency.

There are several limitations of this study. First, the data collection was in one specific region, Chungnam Province in South Korea. A greater number of participants from different regions would provide greater insight into secondary English teachers' professional agency in South Korea and might introduce other aspects of legitimation that affect them. We also recognise that although interviews are often used to gain deep understanding of teachers' professional agency, future research could include other methods such as observations, focus group interviews and case studies to examine the exercise and legitimation of teachers' professional agency from an ecological perspective, not only individual phenomenon. It is hoped, however, that the research reported here takes a pioneering role in a new and meaningful area of educational research area in South Korea.

Supplementary information

Supplementary information accompanies this paper at <https://doi.org/10.1186/s40862-020-00083-1>.

Additional file 1. Transcription.

Acknowledgements

The authors would like to thank the secondary English teachers in South Korea for their participation and valuable insights. In addition, they would like to thank the reviewers for their feedback.

Authors' contributions

All three authors have participated in designing, directing and coordinating this research. Wook Namgung, the first author, carried out collecting and analysing the data and drafted the manuscript. Josephine Moate, the second author, assisted in drafting the manuscript and contributed to this study in a variety of ways such as providing reference materials, insightful suggestions and constructive feedback. Maria Ruohotie-Lyhty, the third author, provided a lot of insightful suggestions and constructive feedback on the manuscript during the entire research period. The authors read and approved the final manuscript.

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Funding

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Availability of data and materials

Some of the data have been already shared in the interview excerpts of this article. However, the whole data will not be shared because they encompass quite a large amount of data and are saved in a Korean word-processing programme.

Competing interests

The authors declare that they have no competing interests.

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Received: 7 November 2019 Accepted: 17 March 2020

Published online: 09 April 2020

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II

AN ECOLOGICAL APPROACH TO TEACHER AGENCY IN ENGLISH CURRICULUM DESIGN AT KOREAN SECONDARY SCHOOLS

by

Namgung, W., Moate, J., & Ruohotie-Lyhty, M. (2023).

Curriculum and Teaching, 38(1), 67-84.

DOI: [10.7459/ct/38.1.05](https://doi.org/10.7459/ct/38.1.05)

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An Ecological Approach to Teacher Agency in English Curriculum Design at Korean Secondary Schools

Drawing on an ecological approach to teacher agency, this empirical study investigated the dynamic interplay between teachers and the environment which emerges as teachers enact their professional agency in curriculum design. The dataset comprises semi-structured interviews with 15 Korean secondary English teachers. The findings from the thematic analysis indicate that teacher agency is achieved through the dynamic interplay between teachers and different ecosystems: micro-, meso-, exo-, macro- and chronosystem. This study concludes with practical and theoretical implications as well as suggestions for future research.

Keywords: teacher agency; ecological approach; ecosystems; English curriculum

Introduction

Reformulations of curricula are increasingly characterised by emphases on student-centred learning, teachers as facilitators and a focus on process as well as product in assessment, etc. (Priestley and Drew, 2019). This change reconstructs teachers' role as agents of professional developers of curricula (Priestley et al., 2012), an approach highlighted in the current English curriculum in South Korea (Korean Ministry of Education, 2015). However, this curricular change regarding teachers' role does not necessarily align with teacher perception of their professional agency (Lee, 2019; Lee & Chun, 2017; Priestley et al., 2015). To understand this misalignment, this study uses an ecological approach to explore the complex interplay between teachers and multidimensional environments within Korean educational context.

The modern Korean education system emerged in the late 19th century pressured by neighbouring imperialistic countries focusing on obedience (Kim, 2013). As public servants, Korean teachers must follow governmental policies and national curriculum. Within this nationally supervised environment, Korean teachers have

developed a strong sense of organisational professionalism obeying the national education policies rather than a sense of occupational professionalism that highlights professional knowledge and autonomous decision-making (Son, 2010; Synott, 2007).

Although Korean teachers were not granted a privilege to design classroom curricula (Lee, 2019), in the 1990s education started to follow the wider trend of decentralisation by expanding teacher participation in curriculum design. Intensifying this trend of teacher participation in curriculum design, 2015 Korean national curriculum encouraged teachers to construct curricula by selecting teaching materials, devising teaching methods and implementing innovative assessment (Korean Ministry of Education, 2015). As such, Korean teachers play dual roles as curriculum practitioners and curriculum developers (Lee, 2019) which entail different forms of professionalism and create dilemmas for teachers (Son, 2010). Although recent curricula emphasise the importance of teachers' agentic role in curriculum design (Priestley et al., 2015), this change neither guarantees the overall reformation of school structure nor completely reshapes teacher identity. This study investigates the dynamic interplay between teachers and the environment which emerges whilst teachers form their agentic roles as required by new national curriculum.

In the following section we outline the theoretical framework of this study in more detail before explaining the methodological considerations in this study.

Theoretical framework

This study uses an ecological approach to teacher agency. Traditional sociological accounts of agency debate whether individual efforts or social structures crucially inform agency (Ahearn, 2001; Biesta & Tedder, 2006; Giddens, 1984). Highlighting human reflexivity, Archer (2000) reframed this dichotomy by advocating a dualistic concept of agency recognising that humans form society through their activities and are

shaped by it. Human reflexivity that mediates the structure-agency dialectic actually gives more dignity to agency (Akram, 2012). The totality of relationships between individuals and the environment with attention given to context-specific as well as emergent and relational aspects of agency are central concerns of an ecological approach to agency (Larsen-Freeman, 2019; Priestley et al., 2015; van Lier, 2004).

Narrowing the general human agency to the professional agency of teachers, the ecological perspective underlines agency as exercised through the dynamic interplay of teachers and their environment. Priestley et al. (2015) emphasise that teacher agency is something one achieves by means of the environment. Teacher agency can be achieved at an individual level and even collective levels through collegiality (Hökkä et al., 2017; Lieberman, 2009; Vähäsantanen et al., 2020). An ecological approach also pays a significant attention to how to use the resources, or affordances, of the environment when teachers enact agency (Van Lier, 2004).

The three temporal dimensions of past influences, future orientations and present engagement are crucial considerations when regarding teacher agency from an ecological perspective (Emirbayer and Mische, 1998). These dimensions highlight agency as an emergent phenomenon and over time through the interplay of individual efforts, available resources and contextual and structural factors agency is achieved (Priestley & Drew, 2019; Priestley et al., 2015). This perspective, however, does not deny directive and transformative attributes of agency, rather it can embrace them. In other words, teacher agency can be developed through professional learning and collegial collaborative practices as teachers can bring about new educational environment through interacting with objective contexts (Molla & Nolan, 2020; Namgung et al., 2020; Stetsenko, 2019).

The developmental aspects of agency are also underlined in the interconnected ecosystems of Bronfenbrenner's (1979) ecological theory. For Bronfenbrenner, the *microsystem* is the immediate environments where humans participate and interact. The *mesosystem* forms through linkages between different microsystems. The *exosystem* is constituted through events that affect what happens in the person's immediate environment whereas the *macrosystem* through the social and cultural values that affect human development. The *chronosystem* entails the temporal changes over time. The overall environment is formed through the complex interplay between individuals and ecosystems.

In our study, we use Bronfenbrenner's theorisation to examine how different ecosystems affect the emergence and development of teacher agency in curriculum design. As illustrated in Figure 1, the dotted-line boundaries between ecosystems indicate different foci as well as the dynamic sensitivity between ecosystems. Our focal interest is on the dynamic interplay between teachers and different ecosystems as Korean secondary English teachers (KSETs) exercise their agency within the whole environment of Korean education.

Research questions

This empirical study explores the dynamic interplay between teachers and the ecosystems of Korean education. The particular research questions are:

- (1) In which ways do ecological environments affect teacher agency?
- (2) How do KSETs interact with ecological environments to enact their teacher agency?

Methodology

This qualitative study is based on interviews with 15 KSETs from lower and upper secondary schools in the Chungnam Province in South Korea. The first author has working experiences or personal acquaintance with participants and the participants were contacted through the first author's social networks (Tracy, 2013). More information on participants is provided in Table 1.

Research design and data collection

Exploring the interplay between teachers and their environment requires the experiential voices of the participating teachers. This study employed the semi-structured interviews to provide space for teachers to share their experiences without imposing a rigid structure on the narrative and allowing teachers to describe their experiences within a shared frame (Hollway & Jefferson, 2000). The questions were open-ended and focused on how KSETs design English curriculum for their class as well as the interplay between teachers and different types of ecosystems regarding English curriculum design such as school structure, collegial relationship, educational policies and socio-cultural environment.

The interviews were conducted over two months in the summer of 2018. Participants were provided with information on the purpose, methods, and ethical commitments prior to the interviews and before signing their consent. The first author conducted interviews in Korean which were then transcribed and translated into English by the first author and verified through triangulation. The pseudonymised dataset was securely stored on a computer and a password-protected external hard-drive.

Data analysis

The 60-100 minute interviews were transcribed verbatim. An iterative form of thematic

analysis (Tracy, 2013) elicited the critical points in the data with regard to the interplay between teachers and their environment. Thematic analysis is well known as a useful method in qualitative research for identifying, analysing and reporting experiences of participants within data (Braun & Clarke, 2006). By reading the transcripts several times, researchers coded the data with descriptive codes and identified patterns of the codes to generate potential themes. Then, the potential themes were reviewed whether they work with regard to the coded extracts and the whole data set. The authors of this study carried out the final stage of analysis to define key themes through the critical dialogue on the interplay between teachers and different levels of ecosystems: micro-, meso-, exo-, macro-, and chronosystem. An example of the steps of data analysis is illustrated in Table 2.

Findings

From an ecological perspective, teacher agency is an emergent phenomenon formed through the interplay of individual efforts, available resources and contextual and structural factors (Priestley et al., 2015), spatially and temporally situated in that it differs across time and place (Larsen-Freeman, 2019). The findings outline how ecosystems inform the professional agency of secondary English teachers in Korea and how teachers interact with the environment as they enact their agency.

Microsystems at hand

KSETs were intimately surrounded by microsystems formed through relationships with students and resources within their immediate environment. Participants felt that students were crucial within the microsystem, particularly students' English proficiency or learning motivation.

The student composition of this girls' high school is the best within this municipality. I can teach the way I have in mind. ... The student composition is a significantly positive factor within the environmental dimension. Considering the student level or disposition, they just follow my way though it's nothing special. (Teacher 10)

If most students are too pathetic or their English level is too low in school, they don't have the learning motivation and basic English knowledge... they're just too many [low-achieving students] so there are no peer students as mentors and ... [the low-achieving students have] already shut down their minds to English. ... I sometimes feel the limit of my ability. (Teacher 12)

The contrast in the excerpts indicates that teachers exercise their agency in different ways depending on students. The English level or motivation of students energises teachers in different ways, informing them with a sense of potential or inadequacy. This microsystem was significant for teachers with high-level and low-level students although it informed teacher agency in different ways. Teachers with high-achieving students had little difficulty in enacting their teacher agency in curriculum implementation. However, teachers with low-achieving students entered a negotiative process with themselves to rediscover meaning in the English curriculum and appropriate ways to respond to their students.

The teachers' rapport with students also affected the exercise of teacher agency. Good relationships with students enhanced teacher agency as they enacted the curriculum. The significance of this positive rapport is highlighted in the way some teachers sought personal conversations with students during breaks.

... If the rapport has been established between a student and a teacher, and they trust each other, I think that it creates tremendous synergy in class. In character aspects, as well as pedagogical aspects, I can give the student trusting me a good comment, so the rapport seems to be the most crucial thing. (Teacher 3)

This excerpt indicates that a close relationship between teachers and students creates a supportive emotional arena for teacher agency in implementing the curriculum (Han, 2017; Vähäsantanen et al., 2020). Participants, particularly experienced teachers, seemed well aware of this affordance and strategically established positive microsystems for exercising teacher agency by making an active individual effort to strengthen the rapport with students.

Teaching resources in school also inform the microsystem and according to this study KSETs are supported with well-equipped resources. The socio-cultural privilege of English in Korean society means that English classrooms and a variety of learning materials, including books and multimedia, are readily available. Moreover, the teachers in this study were able to take advantage of these resources when exercising their agency.

When it comes to support, I think we're well supported with respect to resources. Even though it's not a super-abundant budget, we have an adequate budget and every school is equipped with a separate English classroom just like an Art classroom or Music classroom. There are no other classrooms with a designated special purpose other than for English. (Teacher 2)

Well-equipped resources cannot guarantee teacher agency as this requires teachers' active interplay with the affordances. The interviews, however, exemplified how agentic teachers bring resources into their classes from their daily lives, such as TV

programme and comic books. This readiness to utilise the resources available in daily life illustrates the interconnectedness of different ecosystems as a resource for teachers (Guerrettaz & Johnston, 2013; Priestley and Drew, 2019; Priestley et al., 2015).

Mesosystems with complexity

The mesosystem is formed through the complex relationships that interconnect with the microsystem. Mesosystems were found to critically impact teacher agency in curriculum design and, in this study, parents were particularly significant as any complaint from parents regarding the curriculum seemed to prompt school leaders to inhibit teacher agency. Complaints to schools, municipalities or directly to teachers all operated as structural pressure.

... If I could assess students as I want, I would like to have them practice expressing emotions in English using a 'shadowing technique' or something like this. But I can't teach things like that at all. If I teach it like a maverick, it is directly followed by complaint calls. I have often received them... (Teacher 13)

Within the contemporary neo-liberal educational system of South Korea, KSETs must take into account the education is a commodity and educational customers such as students and parents are always right (Apple, 2004). As teachers are obliged to meet students' and parents' needs (Son, 2010), their direct and indirect complaints seem to wither the exercise of teacher agency.

Another crucial interconnection informing the mesosystem is collegiality. As teachers shared their professional learning experiences, they obtained useful teaching skills and empathy from each other. These findings suggest that within this context

strong teamwork and mutual learning play a key role in improving teacher agency. Collegial cooperation enables the successful management of important annual events, such as English camps and can support novice teachers as they construct teacher agency through dialogic and collective feedback from colleagues (Rostami & Yousefi, 2020; Wei & Chen, 2019).

I have tremendous support [from my colleagues]. In terms of the English colleague, I receive so much help. When designing my class and undergoing trials and errors, I have abundant help from him. ... it is helpful to listen to other teachers' experiences and ideas ... I can see a different perspective that I couldn't have seen otherwise. (Teacher 15)

However, the collegial mesosystem can also play a negative role, for example, in relation to assessment. In Korea, English teachers teaching the same grade should reach collegial consensus on what is assessed. This structural constraint can significantly limit teacher agency when deciding the content and pedagogy of the English curriculum:

I can teach according to the teaching contents but because I need to follow norm-referenced assessment and must make my assessment criteria consistent with fellow teachers teaching other classes [in the same grade], it really limits my teaching. I wish I could assess my classes based on what I taught them... If the assessment is restricted, it consequently limits teaching. I can't teach what I want and bring richer materials into my English classes. (Teacher 5)

Additionally, this study indicates how school leaders crucially inform the mesosystem. Leaders should provide teachers with administrative support for pedagogical work, and although experienced Teachers 5 and 6 could utilise strategies to

maximise affordances, most participants struggled to obtain support from school leaders.

... [School leaders] neither support nor inhibit us. They tell us to do whatever we want. Who complains about it when we conduct process-oriented assessment to students? However, they [leaders] will inhibit us when trouble comes. So, teachers seem to be attentive to them. The school gets in trouble when a parent calls the school to complain... (Teacher 10)

As Teacher 10 put it, this study found that school leaders tend to take a reactive, rather than proactive, role in supporting teachers' pedagogical work. Leaders ostensibly allow teachers to innovate but if any complaint or critical response comes, leaders seem reluctant to protect teachers and recommend that teachers stay within the accountable norms of teaching and assessment. This lack of support is experienced as a constraint on teacher agency.

Teachers under siege by exosystems

Teachers are not active participants in exosystems, yet actions and events within the exosystem affect the design of the curriculum and teacher agency. One prominent exosystem for the participating teachers was the national standardised testing system, including the Korean Scholastic Aptitude Test (KSAT). Despite the decreasing influence of KSAT on university admission, it remains the most influential high-stakes test in South Korea and school tests often follow the KSAT. The current national curriculum, however, highlights process-oriented assessment and consistency between teaching and assessment, recommending teachers to exercise agency in reorganising their curricula according to school contexts. The participants working in upper

secondary schools experienced a dilemma between teaching to the high-stakes test and testing what they taught based on the curriculum and a huge gap exists between the demand of KSAT and English textbooks (Kim, 2015). The participants in this study felt required to teach to the high stakes test rather than enact their teacher agency:

I think if KSAT has not changed, it doesn't mean the curriculum has changed. KSAT focuses on limited domains and skills for answering questions but the national curriculum continues to require practical studies, which I suppose is inconsistent. ... it's a good English teacher who teaches them how to answer the questions such as filling gaps and it seems to be an incompetent English teacher who tells them that there is an authentic English expression like this, teaches an expression from an American drama and tells them that this kind of expression can be used in writing. (Teacher 11)

Excessive administrative works formed participants' exosystem. Administration is assigned to all teachers in Korean secondary schools with teachers spending an average six hours a week on administration (OECD, 2014). This workload negatively affects secondary English teachers' curriculum design as this reduces time for class preparation and assessment. Teacher 12 explained that teachers sometimes undertake administrative tasks, such as reports, for educational offices and National Assembly members. These tasks may only take a couple of hours, but they distract from pedagogical tasks. Some teachers complained that they occasionally take on administration that should be assigned to office workers.

I think it's most important to have enough time for class preparation. The environment which allows teachers to focus on teaching. That kind of environment was formed last year but it's difficult this year. Last year I had a small amount of

administrative work but this year I have too much. So, it's a clear contrast in the quality and quantity of class preparation. (Teacher 4)

If English teachers are assigned as homeroom teachers, this significantly affects their teaching preparation due to administrative, relational and even emotional tasks. Teacher 14 described homeroom teaching as one of the most stressful tasks that inhibits teacher agency. Furthermore, as Teacher 10 pointed out, the demands of the exosystem negatively impact collegial collaboration and collective reflexivity, as well as the rapport with students. These examples highlight the complex interconnectedness of the wider ecology as different ecosystems inform each other and the capacity for teacher agency.

Macrosystems overarching Korean education system

Macrosystems surrounding secondary English teachers entail any belief systems, ideology or culture in the Korean education system. This study found that the competitive culture and emphasis on grades or assessment affected teacher agency. Although participants wanted to improve students' practical English skills, direct and indirect complaints undermined their good intentions. To avoid conflict or a negative social environment, the teachers produced curricula which compromised their pedagogical beliefs. Some teachers, however, also used the competitive and result-oriented educational culture to control students' behaviour or study habits, in effect re-enforcing the existing system:

Anyway, as I assess by test records, namely, everything is evaluated by test records, parents and students value them. So, I guess I tend to control students by the test. Actually, that's not what I aspire to do, but when the entire atmosphere

flows in that way, I try to control kids in this way by saying, 'The records should be better' or 'You'd better get more scores'. It seems like that. In fact, that somehow goes against my belief. (Teacher 8)

Most participants similarly recognised that the competitive culture negatively impacts teacher agency in designing the curriculum, although they also recognised the realistic power of the test records and their own authority in assessing students through the practical-evaluative consideration. Utilising this power relation, the teachers tried to enact their professional agency through pedagogy. This finding suggests that teachers are not just victims of the competitive and result-oriented culture but can also utilise the macrosystem for exercising their teacher agency.

Another finding points to the way the culture of a teacher community also informed the macrosystem. KSETs rarely intervene in colleagues' pedagogical actions and have few opportunities for peer observation or pedagogical development discussions. This individualism creates the 'cellular structure' of schools (Lieberman, 2009) inhibiting teacher agency. Just as students without any learning motivation cannot achieve learning goals, teachers unwilling to learn or trial different pedagogies can hardly achieve teacher agency. As Teacher 9 observed:

One of my concerns nowadays is a problem with colleagues and students. Colleagues include principals or vice principals. A kind of atmosphere to disrupt learning? I usually use this expression to students. We normally name low-achieving students as slow learners but some students are not slow learners but unwilling learners. In that case, the problem stems from the students. For the colleagues, it is a similar problem with the atmosphere or climate unwilling to teach properly. (Teacher 9)

Teacher 9 worked at a vocational school where most students are characterised as low-academic attainment and low-learning motivation and liberal arts subjects, such as English, are marginalised. With the highly individualistic and conservative teacher culture, many teachers form prejudice towards unwilling learners and believe that no pedagogical strategies will improve students' learning.

Teacher stratification according to job stability is another formative feature of the macrosystem. Permanent teachers who passed the national teacher exam are qualified as public servants and their job stability is secure. However, contract teachers should regularly renew their contracts. The fragility of temporary positions disadvantages teacher agency. Teacher 2 disclosed the difficulties she had in making a long-term teaching plan due to her temporary working contract: some pedagogical ideas could not be practiced as she was unsure who would be teaching the students next year. The short-term contracts can significantly limit teacher agency:

Even though I want to express my educational viewpoints, [it's different compared] with a permanent teacher. As a matter of fact, whatever permanent teachers say, that's not a problem. They just get a social glare or the school leaders' stare. However, in my case, if I say it too strongly, they might think, 'Is that temporary one insane?' In some cases, if I don't fit in with the basic line of the school system, they won't hire me. It has a definite impact. (Teacher 7)

As permanent teachers are hired by the government, they cannot be fired by school leaders and can enact greater agency. Contract teachers, however, are generally hired by individual schools and their decisions are informed by the perspectives of school leaders or collegial authorities for contract renewal. The unequal working status

between permanent and contract teachers appears to be in line with that of other working areas in Korean society (Choi, 2003; Park, 2012).

The convulsion of the chronosystem

Chronosystems pertain to how ecosystems develop over time. This study found that changing the national curriculum demarcated a critical moment in the chronosystem affecting teacher agency and the design of the English curriculum. Most participants welcomed the process-oriented assessment guidelines and encouragement to innovate assessments and teaching methods viewing this as facilitating teacher agency:

The assessment guideline is changing at the moment. It was not the case before but I think the system is gradually changing. Because our education is turning in another direction, I think the very fact that the performance assessment can take up 60% has helped me a lot. In the aspect of English education policy, not only English, but also general education policy is steering in the direction where I'd like to go. I believe that the most helpful thing for what I'm doing is the change in the guidelines. (Teacher 8)

This change appears to align with global trends of framing teachers as active agents developing curriculum and assessment (Drew, Priestley & Michael, 2016). Although teachers may need time to adjust to this new role, this change marks a shift in the chronosystem and the conditions for teacher agency. As Teacher 6 put it, the change in the chronosystem promoted collegial collaboration or collective professional learning in curriculum design in the mesosystem.

However, curricular change can also inhibit teachers with feelings of debilitation. The Korean national curriculum frequently changes in an incoherent manner as political power transitions. Teachers' voices are often excluded in the process

of national curricular change and in this study, the lack of teacher involvement eroded the participants' sense of professionalism:

[The current] English curriculum has only about 30 achievement standards but it used to be about 60. Meanwhile, the codes totally changed. The professionals' codes never change. The reason why doctors are professionals is that once the appendix is encoded, it can be intensified but never disappears... That codes change like this means that we are not considered as professionals and the codes are just tools to identify curriculum. I don't think so. Teachers are professionals. (Teacher 5)

Teacher 5 pointed out that teachers are marginalised during curricular change, which undermines teacher professionalism. Change in the Korean national curriculum repeatedly requires teachers to understand and prepare for the implementation of new curricula without the accumulation and extension of professional knowledge in turn undermining teacher agency.

Discussion

This study explored how ecosystems affect KSETs' professional agency in curriculum design and how these teachers interact with the ecosystems to enact their teacher agency. The findings illustrate teacher agency is achieved through the dynamic interplay between teachers and different ecosystems (Priestley & Drew, 2019; Priestley et al., 2015). Each ecosystem affects teacher agency directly and has an indirect impact on teacher agency through inter-ecosystem transformations. This complex interplay between the ecosystems and teachers is depicted in Figure 2. The darker arrows emphasise the significant influence and affordances of the ecosystems whereas the lighter arrows indicate the varying influence of teachers within the overall ecology.

Whilst teachers can significantly inform micro- and mesosystems in the classroom and between colleagues, achieving agency within the exo-, macro- or chronosystems is more challenging.

Teacher agency is regarded as an emergent phenomenon and something to achieve in the ecological perspective (Larsen-Freeman, 2019; Priestley & Drew, 2019; Priestley et al., 2015). This study indicates that experienced teachers tend to exercise a higher degree of agency by utilising their ample iterational experiences and broad collegial relationships, suggesting that over time they have built up resources and ways to manage the emergent and temporary attributes of teacher agency not just through the prolonged career but partly as the result of learning and practice (Biesta & Tedder, 2007; Emirbayer & Mische, 1998). Teachers' reflexive practice (Namgung et al., 2020) mediates individual's iterational and projective dimensions in relation to teachers' own capacity and environmental conditions, through which teacher agency can emerge and be achieved (Molla & Nolan, 2020). Moreover, this study suggests that teachers can create a new educational ecology through individual and collective agency by utilising affordances and resisting constraints. In this sense, the ecological perspective presents a more comprehensive explication on teacher agency.

We recognise that relationships between ecosystems can vary to form contrasting educational ecologies. For participants working within weak collegial interactions or relatively undemocratic school cultures, for example, the school-level assessment criteria for English subject belong to the exosystem. For those working within strong collegial interaction or highly democratic schools in which their opinions contribute to the design of school-level assessment criteria, these criteria belong to the microsystem. Therefore, the extent of democracy within a school or a department can

affect the overall ecology of the environment in turn influencing how teachers enact their agency.

Conclusion

This study highlights the centrality of teacher agency in teachers' professional development and suggests that enacting teacher agency can be accelerated by promoting the affordances of different ecosystems and encouraging teachers to overcome the constraints in professional practice. Ultimately the roles formed by teachers determine their career trajectories; how they see their jobs affects their current vocational behaviours and projective orientation (Brew et al., 2018). This study may help school leaders and teacher educators, as well as teachers, promote reflexivity as part of teacher agency by focusing on the interplay between different ecosystems and teachers. This research, therefore, has practical implications regarding the administrative support of affordances for teacher agency and teachers' epistemological emancipation from constraints.

Moreover, this study indicates that different ecosystems within the same environment can change at different speeds. Hasty or unexpected change within one or more of the ecosystems can cause teachers to feel helpless. Teachers need opportunities to voice and participate in change processes as educational agents to avoid being marginalised or pacified. Furthermore, the ecological perspective should expand to embrace teachers' capacity to interact with ecosystems beyond the immediate emergent phenomena and professional learning should continue to develop teachers' capacity to interact with or even reform ecosystems to enact their professional agency within the context of practice (Biesta & Tedder, 2007; Molla & Nolan, 2020).

Teacher agency is exercised in teachers' lived experiences and it emerges through the dynamic and constant interplay between teachers and their environment. To

grasp the wider picture of an ecological approach to teacher agency, future research could include other methods such as observations, focus group interviews and case studies or explore different contexts. An ecological perspective offers a wide array of affordances for further investigating teacher agency.

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Figures and Tables

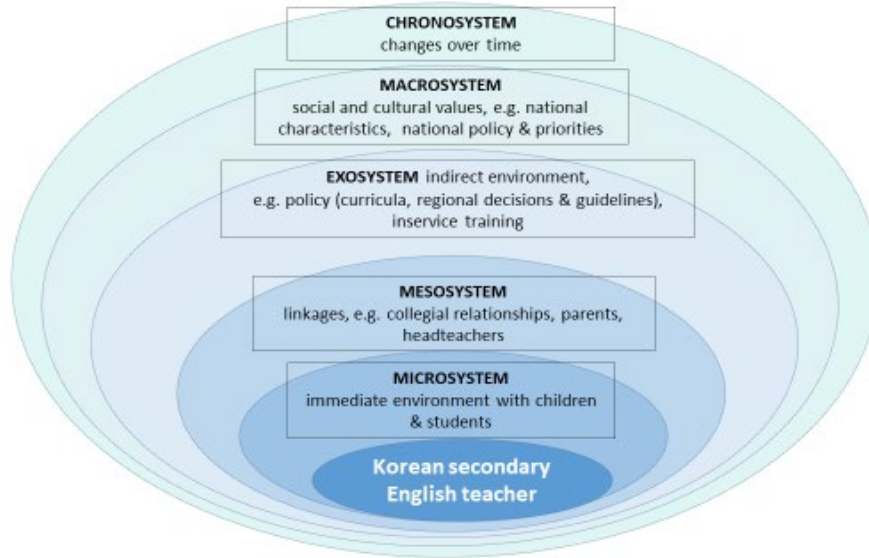


Figure 1. The five ecosystems of an educational ecology

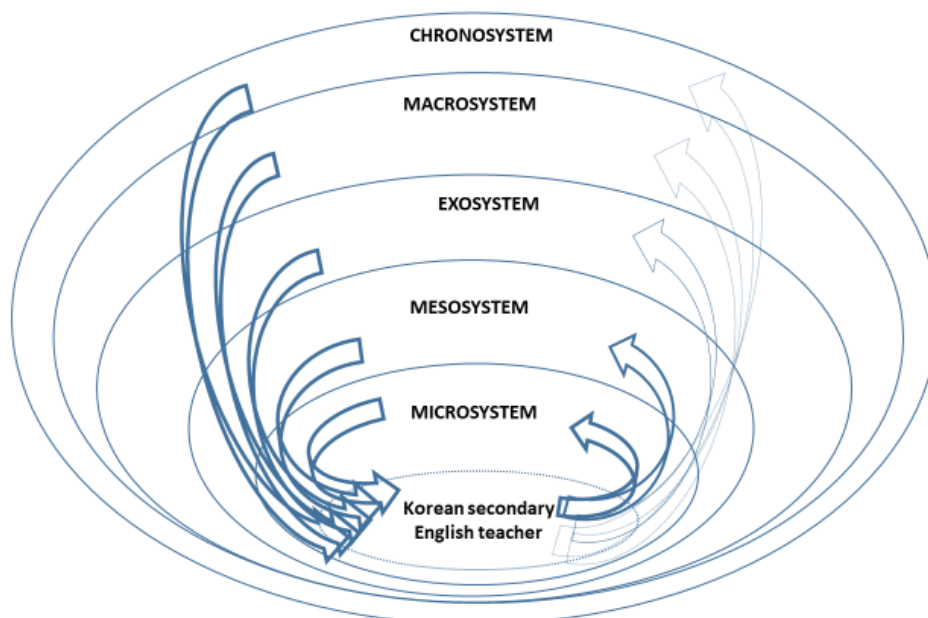


Figure 2. Korean secondary English teachers encompassed by interconnected ecosystems: Mutually constituting without power-sharing

Table 1 Information on participants

Teacher	Sex	Present Secondary School Level	Career trajectory	Teaching experience (yrs)	Job Stability
1	F	Lower	Lower, Upper	13	Permanent
2	F	Lower	Lower, Upper	3	Contract
3	M	Lower	Lower	5	Permanent
4	M	Lower	Lower, Upper	11	Permanent
5	F	Lower	Lower	30	Permanent
6	F	Lower	Lower	30	Permanent
7	M	Lower	Lower, Upper	9.5	Contract
8	F	Lower	Lower	6	Permanent
9	M	Upper	Upper	13	Permanent
10	M	Upper	Upper	10	Permanent
11	M	Upper	Upper	1	Permanent
12	F	Upper	Upper	22.5	Permanent
13	M	Upper	Lower, Upper	7	Permanent
14	M	Upper	Upper	30	Permanent
15	F	Upper	Upper	3	Permanent

Table 2 Steps of data analysis

Steps	Actions taken	Examples
1 st	Coding the raw data with descriptive codes	Principal's indifference to teachers' curriculum design at class School leaders attentive to students' and teachers' complaints
2 nd	Grouping codes and generating potential themes by identifying patterns	School leaders' reactive role in supporting teachers
3 rd	Identifying illustrative excerpts	... [School leaders] neither support nor inhibit us. They tell us to do whatever we want. Who complains about it when we conduct process-oriented assessment to students? However, they [leaders] will inhibit us when trouble comes. So, teachers seem to be

		attentive to them. The school gets in trouble when a parent calls the school to complain... (Teacher 10)
4 th	Defining key themes	'School leaders' reactive role in supporting teachers' under 'Mesosystems with complexity'

Declarations*Acknowledgements*

The authors would like to thank the secondary English teachers in South Korea for their participation and valuable insights. In addition, they would like to thank the reviewers for their feedback.

Declaration of interest statement

The authors have no conflicts of interest to disclose.

Data availability statement

Some of the data have been already shared in the interview excerpts of this article. However, the whole data will not be shared because they encompass quite a large amount of data and are saved in a Korean word-processing programme.

Funding details

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.



III

REPOSITIONING TEACHERS AS ASSESSORS: COMPROMISED ASPIRATIONS AND CONTESTED AGENCY

by

Namgung, W., Moate, J., & Ruohotie-Lyhty, M. (2021).

Apples: Journal of Applied Language Studies, 15(2), 47-67

DOI: [10.47862/apples.101524](https://doi.org/10.47862/apples.101524)

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Repositioning teachers as assessors: Compromised aspirations and contested agency

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The global trend to emphasise assessment for learning brings up the issue of repositioning teachers in assessment. The contemporary curricular policy reforms encourage teachers to take an agentic role in assessment, but multiple dimensions of the environment affect its realisation. Drawing on an ecological approach to teacher agency, this empirical study investigated how Korean secondary English teachers (KSETs) perceive and enact their own teacher agency in assessment within the ecosystem of Korean education. The dataset for the study comprises semi-structured interviews with 15 KSETs. The interview questions involved the main themes such as personal experiences over the life course regarding assessment and professional practice in assessment. The findings from the thematic analysis indicate that past environment like the excessive emphasis on high-stakes standardised testing still affected teacher perception and teacher agency in the present assessment practices directed by a curricular reform, and the incongruence the teachers experienced between past and present environment significantly influenced the enactment of teacher agency. The findings suggest teachers aspire to enact teacher agency regarding assessment through the critical interpretation of their iterative experiences, present affordances, and projective orientation. Aspirations can be compromised, however, through negotiations with the environmental conditions in assessment practice, and teachers struggle to enact teacher agency leading to ecological transformation. This study concludes with practical implications to enhance teacher agency in assessment, theoretical implications regarding the conceptual expansion of the ecological perspective and suggestions for future research.

Keywords: teacher agency; assessment; ecological approach; aspiration; Korean secondary English teachers

1 Introduction

In many countries the goal of assessment is shifting from assessment *of* learning to assessment *for* learning (Davison, 2004; Davison & Leung, 2009; Spencer & Hayward, 2016; van der Nest et al., 2018). This shift highlights the crucial purpose of all assessment for individual learners, formative and summative, and suggests that the evaluation of educational provision is to provide evidence and to contribute to the improvement of learning (Brown & Remesal, 2017; Remesal, 2011;

Corresponding author's email: ngwook00@gmail.com
eISSN: 1457-9863
Publisher: University of Jyväskylä, Language Campus
© 2021: The authors
<https://apples.journal.fi>
<https://doi.org/10.47862/apples.101524>

Spencer & Hayward, 2016). From the perspective of assessment for learning, the learner takes a pivotal role because it is the learner who does the learning, and the assessment helps teachers not only verify the extent of learning but also select what to teach in the next lesson. This new concept of assessment has the potential to increase equal educational opportunities for all learners, since assessment is not any more constructed as classification of learners, but as a mutual pedagogical tool for teachers and learners. (Davison & Leung, 2009; Remesal, 2011). The role of the teacher is central in this change since the teachers are responsible for making the decisions about the forms of assessment and implementing new student-centred and more equity-oriented assessment practices in schools. Their possibilities to do so are, however, also tightly connected to socio-political contexts. The global trend to emphasise the interconnectedness between assessment and learning, therefore, brings up the issue of repositioning teachers in assessment (Ayala et al., 2008). Placing teachers at the centre of assessment means that they are involved in the entire assessment process based on the professional judgment in students' learning and that assessment is carried out in ordinary classrooms rather than relying exclusively on external examinations (Davison & Leung, 2009). Whilst assessment *of* learning easily ends up stratifying students with the assessment results, assessment *for* learning contributes to the increase of equal educational opportunities by supporting every student's learning and encouraging the continuation of learning. Contemporary Korean education policies regarding assessment are in line with this global educational trend. The recent Korean national curriculum issued by the Korean Ministry of Education presents a new orientation to assessment which highlights assessment as process-oriented and strengthens the coherence between curriculum, pedagogy, assessment, and student records (Kim & Kim, 2020; Lee, 2019).

However, the deeply entrenched sociocultural demand to stratify students for eligibility to progress to higher levels of learning such as university still exerts enormous influence on the implementation of high-stakes standardised testing (Jang, 2017). The Korea Institute for Curriculum and Evaluation annually administers a national standardised test, the Korean Scholastic Aptitude Test (KSAT) to meet this social expectation in South Korea. Despite the introduction of criterion-referenced assessment in the English subject with the 2018 KSAT (Korean Ministry of Education, 2014), the strong influence of the high-stakes standardised test in the pedagogy and assessment of upper secondary classrooms remains evident (Choi & Choi, 2018). Arguably, the social drives for standardisation and performativity in Korea go against the recent revisions of the Korean national curriculum which promote process-oriented assessment.

The discrepancy between the assessment orientation directed by the new national curriculum and conventional assessment characterised by standardisation and performativity appears to confuse Korean secondary English teachers (KSETs) when implementing actual classroom-based assessment (Kim & Yun, 2015). Moreover, the discrepancy between English textbooks based on curricular requirements and the high-stakes tests, such as KSAT, makes the situation worse (Kim, 2015). Working under these conditions, teachers face a significant dilemma as they seek to agree with the policy orientation of the coherence between curriculum, pedagogy, assessment, and student records but can hardly ignore the demands of standardised testing.

Although a number of educational systems promote teacher agency in relation to assessment (Davison & Leung, 2009) and recent research highlights how

teachers continue to face the discourses and expectations of standardisation and performativity (Buchanan, 2015; Cloonan et al., 2019; Tao & Gao, 2017; Liyanage et al., 2015; Priestley et al., 2015; van der Nest et al., 2018), teacher experiences of assessment within the Korean educational context have received scant attention (Kim & Yun, 2015). Theoretical notions and research findings regarding teacher agency in one context cannot be immediately applied into another context. Moreover, as the research on teacher agency has been dominated by the scholars in western context, this example of teacher agency in Korean context can provide a richer and more comprehensive perspective in understanding teacher agency, which can contribute to the international research conversation on teacher agency. This study also adds to the limited literature on teacher agency in assessment and seeks to suggest the appropriate directions to enhance teacher agency in assessment. Using an ecological approach to teacher agency, this study examines the interrelations between teachers and the environment that inform their professional practice of assessment.

2 Theoretical framework

Agency, a concept that has received considerable attention in educational research, can be roughly defined as 'the capacity of people to act purposefully and reflectively on their world' (Rogers and Wetzel, 2013: PAGE). Whereas initial sociological accounts of agency debated whether individual efforts or social structures crucially inform agency (e.g. Giddens, 1984), agency was later reframed as a dualistic concept recognising that humans form society through their activities and are shaped by it (Archer, 2000). More recent conceptualisations of agency continue to redress this balance, for example, by highlighting the mediational role of human reflexivity as part of the structure-agency dialectic and giving more dignity to an individualistic view of agency (Akram, 2013).

An ecological approach to agency, however, highlights the totality of relationships between individuals and the environment underlining the context-specific, emergent and relational attributes of agency (Biesta & Tedder, 2007; Larsen-Freeman, 2019; van Lier, 2004). From an ecological perspective, individuals and environment are not ontologically independent or separate, rather they are interrelated in complex ways. Agency is shaped through the constant interplay between individuals and the environment as an organism grows in its relations with the environment in an ecosystem (Priestley et al., 2015; van Lier, 2004).

In terms of the professional agency of teachers, a specific occupational group, the ecological perspective recognises agency as achieved between the dynamic interplay of teachers and their environment (Priestley et al., 2015). In this perspective, context does not surround the matter of investigation, but is the heart of the ecosystem (van Lier, 2004). The significance of context is highlighted in research that demonstrates how teacher agency can be achieved at collective levels through collegiality as a crucial relational environment as well as at an individual level (Hökkä et al., 2017; Lieberman, 2009; Vähäsantanen et al., 2020). Furthermore, agency can be achieved when an agent chooses whether to act and how to use the resources, or affordances, of the environment (van Lier, 2004). During the process of achieving teacher agency, the multiple dimensions of the environment affect teachers and teachers conversely contribute to shaping the professional

contexts. This study adopts an ecological approach to agency as a lens to investigate how different environments, including habitual assessment culture, curricular reforms, and collegiality, interrelate and inform teachers' professional practices.

This ecological understanding of teacher agency draws on three temporal dimensions from the life-course perspective: past influences, future orientations and present engagement (Emirbayer & Mische, 1998). Underlining the temporal dimensions of agency, the ecological notion of teacher agency recognises agency as an emergent phenomenon generated through the interplay of individual efforts, available resources, and contextual and structural factors (Priestley & Drew, 2019; Priestley et al., 2015). Moreover, an ecological perspective also acknowledges the development of teacher agency through professional development and collegial collaborative practices. Teachers' subjective past experiences and future orientations can reform an educational ecosystem through interactions with objective present environment such as collegiality, policy expectations and material resources, which can strengthen and reform teacher agency (Namgung et al., 2020; Molla & Nolan, 2020; Stetsenko, 2019).

However, the domain of assessment has received little attention in research on teacher agency despite its crucial aspect in teachers' professional practice. One study in this area, however, highlights that although assessment policy reforms might be in line with the global trend of recognising the importance of teacher agency in classroom practice, teachers can be discouraged from implementing the curricular and assessment reforms because of the conflict with traditional pedagogy and assessment mediated by deeply entrenched test-oriented cultures (Liyanage et al., 2015). This finding demonstrates that the implementation of assessment initiatives encouraging teacher agency does not guarantee its achievement as complex individual and sociocultural factors are involved. A study from Van der Nest et al. (2018), however, suggests that formative assessment activities in classrooms can have a positive impact on the development of teacher agency. If teachers reflect on and take control of the assessment process, their agency can be strengthened despite the diverse constraints of the context.

Research on teacher-based assessment (TBA) also provides insights into teacher agency in relation to assessment supporting the paradigm shift from assessment of learning to assessment for learning. As TBA emphasises teachers' involvement in the whole process of assessment from the beginning to the end (Davison, 2007; Davison & Leung, 2009), it also allows students to be actively involved in the assessment process without ignoring students' crucial position in assessment. Whereas students can conduct self- and/or peer-assessment, teachers can provide immediate and constructive feedback to students through continuous formative assessment embedded in the curriculum (Ayala et al., 2008). Although TBA was intended to complement external high-stakes standardised testing, its introduction has been hampered due to pedagogical and sociocultural constraints (Cheng et al., 2010; Chim, 2015). These studies highlight the need to carefully consider the validity and reliability of different forms of assessment, the perceptions of educational stakeholders regarding the value of different approaches, and whether sufficient resources and professional development are provided for teachers before or during the implementation of TBA.

The relationship between teachers' beliefs or conceptions on assessment and their professional practices in assessment has been highlighted in other previous

studies (Brown & Remesal, 2017; Remesal, 2011; Remesal & Brown, 2014). Remesal (2011), for example, explicated teacher beliefs on assessment using a continuum between pedagogical and societal pole. The study addressed the effect of teachers' beliefs on assessment practice in relation to four dimensions: learning, teaching, accreditation of learning and teachers' accountability. From the ecological perspective, however, teacher beliefs cannot be regarded as something isolated from the environment as teachers themselves are a significant part of the environment from an ecological perspective (Heikkinen, 2020). This study pays substantial attention to the crucial role of teacher aspiration as a directive and oriented teacher belief in assessment practice.

Existing research suggests that a holistic approach is needed to address the diverse and complex dimensions of assessment regarding teacher agency. This study, therefore, seeks to investigate the complex and dynamic interplay between teachers and their environment in assessment practices by employing an ecological perspective. This perspective recognises the totality of relationships between individuals and the environment underlining the context-specific, emergent and relational attributes of agency (Larsen-Freeman, 2019; Priestley et al., 2015; van Lier, 2004).

3 Research questions

This empirical study explores how KSETs perceive and enact their own teacher agency in assessment within the ecosystem of Korean education. The particular research questions are:

- 1) In what ways do KSETs perceive the effect of the environment on their teacher agency in assessment?
- 2) In what ways do KSETs interact with their environment to enact their teacher agency in assessment?

4 Methodology

The current study adopted an interpretive qualitative research methodology (Creswell, 2007) to address KSETs' lived experiences and perceptions of assessment. The first author, an experienced KSET, collected the qualitative data by interviewing 15 KSETs, purposively selected from lower (n=8) and upper secondary schools (n=7) in the Chungnam Province, South Korea. The eight male and seven female participants had a wide range of careers from 1 to 30 years. All of the participants worked in public secondary schools, with fourteen of the participants having worked in different schools as Korean public school teachers are obliged to rotate their working place within a certain period of years (i.e. generally 5 years at maximum) (Choi, 1996). The first author works in the same municipality and the participants were invited through local teacher networks (Tracy, 2012). This intense sharing, trust and mutuality between a researcher and those being researched can contribute to enhancing the quality of the interpretive or qualitative research (Creswell, 2007). More details on the participating teachers are provided in Table 1.

Table 1. Information on participants.

Teacher	Sex	Level of Present School	Career trajectory(yrs)	Years of teaching (yrs)	Tenure
1	F	Lower	Lower: 6 Upper: 7	13	Permanent
2	F	Lower	Lower: 2.5 Upper: 0.5	3	Contract
3	M	Lower	Lower: 5	5	Permanent
4	M	Lower	Lower: 4 Upper: 7	11	Permanent
5	F	Lower	Lower: 30	30	Permanent
6	F	Lower	Lower: 30	30	Permanent
7	M	Lower	Lower: 4.5 Upper: 5	9.5	Contract
8	F	Lower	Lower: 6	6	Permanent
9	M	Upper	Upper: 13	13	Permanent
10	M	Upper	Upper: 10	10	Permanent
11	M	Upper	Upper: 1	1	Permanent
12	F	Upper	Upper: 22.5	22.5	Permanent
13	M	Upper	Lower: 1 Upper: 6	7	Permanent
14	M	Upper	Upper: 30	30	Permanent
15	F	Upper	Upper: 3	3	Permanent

4.1 Research design and data collection

Exploring how KSETs perceive and enact their teacher agency in assessment by means of the environment requires that the voices of participants are part of the study (Creswell, 2007). The semi-structured interviews were designed to provide space for the participants to share their experiences regarding the professional practice of assessment without imposing a structure on the narrative and allowing the participants to expand on their experiences within a shared frame (Hollway & Jefferson 2000). The questions were open-ended and encompassed a wide spectrum of questions: personal experiences over the life course (how they decided to become an English teacher, what types of English teacher they want to be and why), professional practice in assessment (how they undertake assessment in the curriculum, what types of environments afford or constrain the enactment of teacher agency in assessment in their professional practice) as well as other issues such as their English curriculum design and practice.

The interviews were conducted between July and August 2018. Participants were informed about the methods, purpose of the study and ethical commitments prior to the interviews, and an informed consent form was signed. The interviews were conducted in Korean to enable the maximum participation for interviewees, transcribed and translated into English by the first author. The second and third authors have been involved in the design of the study, as well as the analytical process and interpretation of the findings. The pseudonymised dataset was securely stored on a computer and a password-protected external hard-drive.

4.2 Data analysis

The interviews approximately lasted between 60 and 100 minutes and were audio-recorded and transcribed verbatim. Being a useful method for a qualitative research for identifying, analysing and reporting experiences, meanings and reality of participants within data (Braun & Clarke, 2006), an iterative form of thematic analysis elicited the critical points in the data regarding the interplay between KSETs and their environment in undertaking assessment (Tracy, 2012). Through multiple re-readings of the transcripts in relation to KSETs' assessment, initial descriptive codes were generated, and the codes were collated into potential themes based on the recurrent identified patterns of the codes. After checking if the themes work in relation to the coded extracts and the entire data set, the authors defined and named the key themes for this study (incongruence between environments, aspiration as the quintessence of agency, aspiration compromised, and emergence of transformative agency). An example of how the data were analysed is presented in Table 2.

Table 2. Steps of data analysis.

Steps	Actions taken	Examples
1 st	Coding the raw data with descriptive codes	Collegial support in designing and implementing assessment Daily and informal communication between English colleagues
2 nd	Grouping codes and naming potential themes by identifying patterns	Developing aspiration through collegiality in present environment
3 rd	Identifying illustrative extracts	I have tremendous support [from my colleagues]. In terms of an English colleague, I receive so much help. When designing my class and undergoing trials and errors, I have abundant help from him. ... it is helpful to listen to other teachers' experiences and ideas ... I can see a different perspective that I couldn't have seen otherwise. (Teacher 15)
4 th	Identifying key themes	'Collegiality in present environment' under 'Aspiration as the quintessence of agency'

5 Findings

The analysis identified four important themes typical of the participants' perceptions and experiences of their teacher agency in assessment practices: (1) incongruence between environments, (2) aspiration as the quintessence of agency, (3) aspiration compromised, and (4) emergence of transformative agency. Each of these themes is elaborated on to address the KSETs' experience of agency in assessment. These findings are discussed in relation to literature on teacher agency and assessment in the following section of the paper.

5.1 Incongruence between environments

Although the new curriculum ostensibly encouraged KSETs to implement innovative and individualised assessment purporting an agentic position for teachers, almost all participants (14/15) shared that their surrounding environment limited their teacher agency in assessment. A notable factor that constrained teacher agency, particularly at the upper secondary level of education, was the presence of KSAT, the high-stakes national test. As indicated in the following extract, teachers perceived the KSAT as one of the most critical conditions that they cannot ignore in the assessment practice.

Excerpt 1

I personally think that the national curriculum and KSAT are a paradox. The national curriculum suggests the final level students should reach through a course. It suggests doing something with practical texts or talking about various topics using the four language skills: reading, writing, speaking and listening. But the gap between the curricular suggestions and KSAT assessment criteria is tremendous... the main goal of recent KSAT is a kind of selection, student selection for university entrance... Since KSAT has more influence on the class, the national curriculum tends to be ignored or distorted. (Teacher 9: Male, Upper Sec., 13y teaching exp)

나는 개인적으로 국가수준의 교육과정과 수능, 이 2 가지는 역설이라고 생각하는데. 국가수준의 교육과정은 어떠한 교육과정을 통해서 최종적으로 어떤 수준에 도달해야 한다는 걸 제시해주고 있는데, 거기서 제시해주는 것은 읽기, 쓰기, 말하기, 듣기라는 4 가지 언어기능에 따라서 실용문을 보고 뭘 할 수 있다든지, 다양한 주제에 대해서, 실생활에 관해서 말할 수 있다든지, 들을 수 있다든지, 근데 그 내용하고 실제로 수능에서 평가하는 항목하고는 괴리감 자체가 어마어마하거든... 요즘의 수능은 어떤 선별, 대학입시를 위한 학생 선별에 목적이 크지... 수능이 미치는 수업에 영향이 더 크기 때문에 교육과정이 무시되고 왜곡되는 경향이 있지. (교사 9: 남, 고, 13 년차)

Even though the recent implementation of criterion-referenced assessment reduced the stake of KSAT, the participants still perceived it as dominating assessment practices especially in upper secondary schools. This finding implies that teachers' past assessment practices that involved narrow preparation for KSAT continued to inform their present assessment practices despite the gradual change of the environment. In other words, teachers' past environment regarding KSAT had a steady and strong impact on their perception in assessment practices and constrained teacher agency whilst the supportive assessment policy change in the present environment had a weaker impact on teacher agency.

The incongruence between the curriculum-ideal and the KSAT-real was further exacerbated by the use of standardised materials that maintain adherence to the standardised test. The participants teaching senior students in upper secondary schools, although not in vocational schools (2/2), adopted teaching materials issued by the Korea Educational Broadcasting System as they are included in the coverage of the KSAT and provide an equivalent level of difficulty to the test. As the participants put it, even though regular textbooks were based on the national curriculum, they were not in the coverage of KSAT and much easier than it, so they were easily marginalised in the assessment practice. The pedagogical culture foregrounding the teaching materials related with KSAT was identified in the following extract.

Excerpt 2

As English is taught according to KSAT English, I thought this is not the English class. KSAT questions in the listening part are stereotypical so we teach to the test types. In other words, I teach with those teaching materials, which include stereotypical questions. Reading comprehension is also taught with stereotypical questions. Students should read various materials but the KSAT questions tend to restrict the English class. (Teacher 14: Male, Upper Sec., 30y teaching exp)

영어 수업을 수능영어에 맞춰서 하다 보니까 이게 참 이게 아닌데 영어수업이. 그런 생각이 들었어요. 듣기 말하기 같은 경우도 수능 문제 자체가 유형이 정형화되어 있잖아요. 그렇게 맞게 하는 거예요. 쉽게 말해서 그런 문제집을 가지고 하고, 정형화된 문제집을 가지고 하고, 읽기도 정형화된 문제로 하고, 읽기도 다양한 것을 읽어야 하는데 그러다 보니까 수능의 문제 자체가 영어 수업을 제한한 측면이 있다고 생각합니다. (교사 14: 남, 고, 30년차)

As described in the extract above, an inevitable outcome of high stakes testing, or 'teaching to the test' narrowed down or even neglected the national curriculum depending on upper secondary schools. The strong impact of KSAT created an environment that could limit teachers' options for contents and methods of the assessment. As Teacher 12 and 15 put it, it is ironic that the national curriculum is carried out in the schools with low-achieving students who do not need a good score of KSAT for university admission whilst it is often ignored in the schools with high-achieving students who need a good score from KSAT. The well-established past of using KSAT-friendly materials and activities seems to exert a much stronger influence in the present than the more recently introduced changes in the national curriculum, even with the introduction of criterion-referenced assessment as part of KSAT.

The incongruence between the environments could be also found in lower secondary schools where KSAT did not have a strong influence. Even though the national English curriculum specified that the main goal of lower secondary English education is to develop students' communicative competence in English (Korean Ministry of Education, 2015), participants indicated that the assessment tended to focus on grammar and reading comprehension tests. The tests were based predominantly on English textbooks. A teacher's agency in assessment was constrained due to the limit of teaching materials as highlighted in the following extract.

Excerpt 3

The biggest constraint is the assessment structure. The curriculum for the 8th and 9th grade is heavily based on paper tests and they must take the paper tests. So, I cannot help depending on the textbooks... I choose one English textbook and follow it so there is a time limit on the activities I would like to implement. (Teacher 8: Female, Lower Sec., 6y teaching exp)

일단 제일 큰 거는 평가의 구조인데, 이제 모든 교육과정이 중학교 2학년이나 3학년의 경우 지필평가에 많이 집중되어 있고 지필평가를 반드시 봐야하기 때문에 어쨌든 교과서 진도에 평장히 의존하게 되고... 교과서 하나를 선정해서 그 교과서를 따라가는 방식이다 보니까 제가 하고 싶은 활동을 하는 데 시간적으로 내용적으로 많이 제한이 돼요. (교사 8: 여, 중, 6년차)

The summative paper tests in lower secondary schools played a parallel role with KSAT in upper secondary schools. Likewise, English textbooks in lower secondary schools replaced the KSAT-friendly materials in the upper secondary

counterpart in terms of standardised learning materials. In sum, the new curricular policy in the present environment challenged teachers to trial individualised and diversified assessment, whilst past environment still extant in the present environment, such as the standardised testing and pedagogical culture, forced teachers to follow conventional assessment practices. Participants felt confused with incongruent messages from different environments and became tentative in enacting their teacher agency. How teachers felt and managed this incongruence between environments through teacher aspiration is addressed in the following sections.

5.2 *Aspiration as the quintessence of agency*

Despite the incongruent environmental influences that inform teachers' assessment practice, almost all participants (13/15) shared the aspiration to exert their teacher agency in assessment. This aspiration was expressed in various ways. First of all, participants' aspiration was based on iterative experiences of their career and even their entire life, such as their role model teachers from school days and positive or negative experiences of English learning and assessment. By critically interpreting the iterative experiences, teachers developed their aspirations regarding assessment in the present environment through reinforcing their positive experiences and reacting against negative ones, as illustrated here:

Excerpt 4

[I hope to be] a teacher who relieves students' resistance to English and makes them feel English is accessible and burden-free. ... A teacher who gives them confidence that they can do it... The reason why I aspire to become this kind of teacher is that after I started teaching English at school, I felt that students consider English too difficult, study grammar predominantly and study English for the sake of the entrance exam at the academy, which made me feel pity for them. ... As I experience students' situation year by year, I guess that kind of thought has developed. (Teacher 8: Female, Lower Sec., 6y teaching exp)

영어를 대해서 심리적으로 조금 거부감을 줄여주고 영어가 가까이 있고, 부담이 없는 것이다 라는 느낌을 갖게 해주는 그런 선생님?... 나도 할 수 있겠다는 자신감을 심어주는 그런 선생님이 되고 싶어서... 이런 방향으로 아이들을 가르치고, 이런 선생님이 되어야겠다고 생각한 것은 실제 가르쳐보니까 애들이 영어를 너무 어렵게 느끼고 문법 위주로만 공부하고, 학원에서 입시위주로만 공부하고, 그런 것들이 안타깝고 느껴지고... 교사가 돼서 한 해 한 해 경험하면서, 애들을 겪으면서 그렇게 된 거 같아요. (교사 8: 여, 중, 6년차)

Teacher 8 had been an autonomous, able English learner who really had fun learning English from her early childhood. However, through her career she realised that her students studied English only for assessment. These iterative experiences in her life course led to the aspiration to implement more formative assessments for learning embedded in her curriculum to build up students' confidence and positive emotion toward English rather than depending predominantly on summative assessments.

Secondly, the KSETs' aspiration in assessment was developed through collegiality and professional development available in their present environment. Teachers' aspirations do not form in a vacuum but seem to be incubated in a positive collegial environment. Particularly, early career teachers such as Teacher 15 developed aspiration in assessment as well as pedagogy through interaction with more experienced colleagues as highlighted in the following extract:

Excerpt 5

I have tremendous support [from my colleagues]. In terms of an English colleague, I receive so much help. When designing my class and undergoing trials and errors, I have abundant help from him. ... it is helpful to listen to other teachers' experiences and ideas ... I can see a different perspective that I couldn't have seen otherwise. (Teacher 15: Female, Upper Sec., 3y teaching exp)

굉장히 많이 도움을 많이 받고 있는 거 같아요. 가까운 영어선생님 같은 경우에는 정말 많은 도움을 받고 있구요. 수업 하나 하나의 구성을 할 때도 시행착오를 겪을 때도 도움을 많이 받고 있구요... 다른 선생님들의 말씀을 듣고 생각을 듣는 게 도움이 많이 되는 것 같아요... 제가 보지 못했던 관점을 보게 되는 것 같아요... (교사 15: 여, 고, 3년차)

This collegiality played a crucial role in achieving teacher agency in that it helped her find the assessment instruments appropriate in her working context and contributed to her aspiration to enact teacher agency in assessment. Moreover, the professional development with colleagues was perceived to help the development of aspiration in assessment. Teacher 13 shared his experience of working at an innovative school, where he learned a variety of teaching and assessment methods through in-service teacher education funded at school and municipality levels and those experiences helped him develop his own assessment methods. The strong aspiration of an individual teacher was developed through the beneficial interaction with the present environmental affordances such as collegiality and professional development.

Finally, teachers' projective orientation toward ideal assessment was another significant aspect of teachers' aspiration in assessment practice. The participants pointed out the importance of inner beliefs for ideal assessment. Findings from this study suggest that present environmental affordances, such as policy change and collegiality, do not work as effectively without teachers' projective aspiration for agentic action, as described in the following extract:

Excerpt 6

When I reflect my inner self rather than external things, it seems that my inner beliefs about the values I'd like to seek help me keep them and nothing external helps that much. I can think of the curriculum or lesson hours as constraints ... but what really makes me do it is my inner beliefs to make my class like this. (Teacher 8: Female, Lower Sec., 6y teaching exp)

외부적인 것 보다는 내부적으로 저의 내면을 성찰해봤을 때, 또는 수업을 설계할 때, 수업 계획을 세울 때 제가 추구하고자 하는 가치에 대한 제 내면의 확신이 그걸 지켜가도록 해주는 것 같고, 외부적으로는 별로 없는 것 같아요. 딱히 방해되는 요소가 있다면 그런 것들을 더 추구할 수 없게 만드는 교육과정이나 부족한 수업 시수 이런 게 있겠지만... 제가 그것을 할 수 있게 하는 것은 이렇게 수업을 만들고 싶다는 저의 내면의 동기 같아요. (교사 8: 여, 중, 6년차)

In the above extract, Teacher 8 projected her inner beliefs regarding ideal assessment practices on the aspired future environment. Even though her projective orientation was not clearly visible in the present environment, she could imagine the future environment based on her valued inner beliefs regarding assessment and reproject the future orientation on present assessment practices. In other words, she believed that the imagined future environment could play a critical role in enacting teacher agency regarding assessment.

5.3 Aspiration compromised

Each participant (15/15) perceived that teachers' aspiration could be not achieved without responding to the considerations of the educational environment such as the validity and reliability of assessment. When they implemented assessment based on their aspiration, they often faced the issue of 'whether it is fair or reliable', an issue usually raised by other educational stakeholders such as students and parents. To meet the sociocultural demand on 'fairness', the KSETs had to ensure reliability at the expense of validity by making it accountable and quantifiable. For example, some English skills, such as speaking and writing, required very reliable and accountable instruments to avoid student or parent complaints. Meanwhile, their agency became compromised as validity and reliability of assessment were hardly compatible with the participants' assessment practices but emphasised by the sociocultural environment. As teachers were affected by their past assessment practices in the previous finding, they had to interact with the sociocultural environment of parents and students who were also familiar with past experiences of traditional assessment.

Excerpt 7

How can teachers be trusted? ... Though there is no problem with reliability of a test, they will complain once they get low scores. The more reliable assessment we try to make, the farther it is from process-oriented assessment. ... How do we assess students' speaking? So, I removed the validity from the test to reassure students. I couldn't check enough. Your speaking score is this because of this and that. It's subjective. ... Mid-term and final exams are the most important. (Teacher 10: Male, Upper Sec., 10y teaching exp)

교사 신뢰를 어떻게 할 것인가?... 신뢰도에 문제제기가 안 될 수도 있겠지만, 지가 점수 못 받으면 complain 걸겠지. 신뢰도를 높이려는 쪽으로 짜면 짤수록 과정중심평가에는 멀어지게 되어 있어... 말하기 태도를 어떻게 평가해? 그래서 애들한테 안심시켜주려고 타당도를 빼버린 거야. 제대로 점검을 못했어. 영어 말하기를 어떻게 했는데 너는 이것 때문에 이 점수야. 주관적이잖아... 중간고사 기말고사가 제일 중요하지. (교사 10: 남, 고, 10년차)

The issue of fairness also affected the reading comprehension in English assessment. Participants preferred making questions regarding grammar points rather than requiring students' reflexive answers to descriptive questions as grammar is more easily quantified and less controversial. In other words, they valued accuracy over fluency in assessment since it can be measured in a more reliable, less disputable manner. Arguably, the dilemmas and compromises of the KSETs also resulted from the sociocultural environment incubated in a highly competitive examination-driven school system in South Korea.

Excerpt 8

In terms of a paper test, if it focuses on accuracy, the assessment criteria can be rigorously presented. Whoever sees it, it is certain whether it is right or wrong, which is easily acceptable to students. However, fluency encompasses a wide range of answers. An expression makes sense in this situation, so does another. ... I guess when it comes to assessment, I would rather value accuracy than fluency since the former can be measured more obviously. (Teacher 2: Female, Lower Sec., 3y teaching exp)

지필고사같은 경우, Accuracy 로 하면, 평가 기준이 정확하게 딱 재단되어 나오잖아요. 누가봐도 이건 맞고 이건 그르다라고 확실하니까 학생들에게도 어떻게 보면 받아들이기 편하구요. "아 난 이래서 틀렸고 이래서 맞았구나"가 쉬운데, Fluency 같은 경우에는 정말

커버할 수 있는 범위가 크잖아요. 아 이렇게 말해도 이 상황에서는 말이 돼. 이렇게 말해도 오케이 돼... 평가할 때, 확실하게 재단할 수 있는 요소가 fluency 쪽에서는 없으니까 Accuracy 쪽으로 가는게 아닌가 하는 생각이 드네요. (교사 2: 여, 중, 3년차)

Excessive lesson hours and class size somehow prevented KSETs from implementing their aspired assessment as pointed out in a different context (van der Nest et al., 2018). For instance, although teachers aspired to adopt portfolio as a process-oriented assessment and give individualised feedback on it, they could hardly implement it under the structural constraints of numerous lesson hours and a large number of students. They compromised to reconsider the realistic assessment type to avoid burnout as indicated in the following extract:

Excerpt 9

I'm satisfied with assessment contents but dissatisfied with the portfolio. I just check the number of hand-outs for the portfolio. ... But it's realistically difficult to check them immediately. I can't do it immediately for 140 students. ... When students participate in an activity and I try to give feedback to every student, it's really difficult although using peer-evaluation or teacher's feedback. ... The different student levels make it challenging to give feedback and reflect them into teaching, so do time and realistic matters. (Teacher 4: Male, Lower Sec., 11y teaching exp)

평가내용에 대해 만족은 해요. 한 가지 불만족스러운 건 포트폴리오. 그런데 포트폴리오를 프린트 매수로 그냥 체크를 하고 있거든요... 근데 이것 즉각적으로 확인하기가 어렵거든요 현실적으로. 140명 정도 되는 학생들을 일일이 바로 바로 할 수 없거든요... 애들이 활동할 때 피드백을 다 주려면 물론 동료평가도 할 수 있고 교사가 보고 평가를 할 수 있지만 현실적으로 좀 어렵거든요... 피드백을 주고 학습에 반영하기에는 학생들의 수준차, 그런 걸 어렵게 하는 요인 중의 하나이고, 시간적인 문제, 현실적인 문제도 있고. (교사 4: 남, 중, 11년차)

The administrative work was another consideration that KSETs took in undertaking assessment. Administration work is assigned to all teachers in Korean secondary schools and they spend an average of six hours a week on it (OECD, 2014). Almost all participants (14/15) addressed that this inevitable workload affected KSETs' teacher agency in assessment as this took up a significant amount of time and considerably deprived them of the time for designing assessment or checking its results although it depended on the level of difficulty of the assigned work. Furthermore, this study identified a collective perception in Korean school culture that doing the administrative work well was an accountable and significant scale for a competent teacher, so KSETs tended to spend more time doing it than devising or checking assessment which is less accountable as indicated in the following extract.

Excerpt 10

Anyway, it is important to do visible administrative work, at least I don't make a mistake in assessment or get involved with such a strange behaviour. I'd better spend my energy in what people evaluate and get a good reputation. Do I have to spend my energy to design innovative class or game for students? ... It's challenging and invisible. Nobody recognises me (for doing it). Rather, I unconsciously spend my energy doing such a thing (administrative work). It seems to be more important for teachers to do administrative or computer work than to teach. (Teacher 11: Male, Upper Sec., 1y teaching exp)

어찌 됐건 눈에 보이는 일처리가 중요하죠. 시험 문제 잘못 내지 않고, 애들 이상한 그런 거만 아니면 문제만 안 일으키면, 그러다 보니까 내 에너지를 평가받는 여기에 쏟아서 좋은 평가 받아야지, 수업, 게임 만들고 애들 좋아하게 혁신적으로 하는 데 에너지를 쏟아야 되나?...

힘도 들고, 눈에 보이지도 않고, 내가 그런다고 누가 나한테. 그거보다는 눈에 보이는 그런 거에 저도 모르게. 교사는 수업보다 일 잘 하는 거 컴퓨터 잘 하는 게 더 중요한 거 같아요. (교사 11: 남, 고, 1년차)

Finally, collegial consensus was a crucial factor that KSETs took into account in assessment. In South Korea, English teachers that are assigned to teach in the same grade at a secondary school should reach collegial consensus regarding what is assessed (Namgung et al., 2020). Under the structure of collegial consensus, KSETs often had to compromise their aspired assessment ways with those of the colleagues in case what a KSET wanted to teach and assess conflicted with what a colleague did.

Excerpt 11

I don't do the assessment as I want. When a test question is controversial, even if I think it's right but my colleague disagrees, that's the problem. Teaching with another English teacher in a same grade is sometimes helpful but surely constraining. (Teacher 11: Male, Upper Sec., 1y teaching exp)

제가 원하는 대로 평가를 못 하고 있어서. 왜냐하면 시험문제 시비가 걸려서 싸우는 데 나는 맞는 것 같아도 다른 쌤이 아닌 것 같다고 하면, 그것도 문제죠. 동학년 동교과 쌤들이 한 학년에 들어가는게 도움도 되지만 방해도 되는 것 같아요. (교사 11: 남, 고, 1년차)

The current study found that most participants (13/15) referred to this issue of collegial consensus in assessment because it tended to even restrict teachers' autonomous selection of teaching materials as well as learning activities, although it might enhance the reliability of assessment. This environment of obligatory reciprocal supervision and control between teachers significantly affected the compromise of an individual teacher's idiosyncratic aspiration regarding assessment and constrained teacher agency.

5.4 Emergence of transformative agency

In the participants' responses, more than half (8/15) addressed that they not only adjusted themselves to respond to the environment regarding assessment but also put their assessment aspiration into practice and transformed the assessment ecosystem by means of the environment. This transformative agency was not created in a vacuum but the teachers' aspirations emerged through the interplay of the teachers' continuous action directed by their aspiration and other environmental affordances. Participant responses suggest that an important source of this transformative teacher agency was their beliefs:

Excerpt 12

Perseverance. When students do [a performance assessment] and say to me, "Teacher, I don't wanna do it. Is it okay that we don't do it?", I respond patiently to them, "Just do it and something will come out." I need to push them, otherwise they might think, "What is this worth?" But when they finish it, they often say to me, "Something happened." ... The problem is that students don't know such a future. I expected such a future and assigned them the project [a performance assessment]. Perseverance to say to them, "Sorry but keep calm and just do it." is a supporting factor. Moreover, I'm grateful for collegial support. I really feel supported when they encourage me by saying "Try it. It sounds great." (Teacher 2: Female, Lower Sec., 3y teaching exp)

뚝심이요. 애들이 하면서 쌤, 그거 하기 싫어요. 안하면 안되요? 얘기할 때 뚝심있게 일단 해봐 뭔가 나올거야. 애들을 밀어줘야 되니까 제가. 아니면 애들이 이거 해서 뭐가 돼? 라고

생각할텐데, 막상 다 끝나고 나면 뭐가 됐어요. 하는 경우가 많아요... 문제는 애들은 그런 미래를 모르잖아요. 저는 그런 미래를 그리고서 한 건데. 그 때 미안하지만 딱치고 해라. 라고 할 수 있는篤심이 도와주는 요소이고, 또 주변 쌤들이 지지해주시는 것도 감사하죠. 한번 해보라 괜찮을 것 같다. 하면서 좋은 의견을 주실 때. 힘이 되죠. (교사 2: 여, 중, 3년차)

Even though Teacher 2 faced student resistance to accept a new type of assessment because of its laborious process, she managed to implement it since she had a strong belief that it would finally work through the discipline and students would recognise the educational value throughout the inevitable learning process required by the process-oriented assessment. Meanwhile, her personal belief significantly affected the formation of new environment such as the change of students' perception and her teacher agency was achieved.

On the other hand, some participants had an awareness of a variety of environmental affordances which were available and appropriate in their context and utilised them to exercise teacher agency. Based on the contextual understanding of KSETs, the transformative agency emerged from the harmonious combination of the individual teacher's beliefs and the environmental affordances.

Excerpt 13

I think we should teach appropriately suited to the school where we move. I might have my own ideal class but if the ideal class doesn't suit to the reality of the school, it's inappropriate and unsuccessful. You know it's like "appropriate technology" ... Considering the context of my school, there are many but the most important thing is the student factor: what their level is, how their attitude is, how many student punishments are in a year and how students' attendance record is. Then, the second is the collegial atmosphere. ... The third is school leadership's attitude... Even though they're unsupportive, it doesn't mean I don't teach well but I teach somehow adjusting to the school atmosphere. (Teacher 9: Male, Upper Sec., 13y teaching exp)

학교를 옮길 때마다 그 학교의 적절한 수업을 해야 된다고 생각해. 내가 생각하는 이상적인 수업이 있겠지만 그 이상적인 수업이 그 학교의 현실에 맞지 않는다면 그것은 부적절한 거고 그거는 성공하지 못할 수업이라고 생각해. 마치 우리가 적정기술이라는 게 있잖아... 내가 근무하는 학교의 context 라고 하는 것은 여러 가지가 있겠지만, 가장 중요한 것은 학생요소가 있겠지. 학생들의 수준이 어떠한, 태도면에서 어떠한, 일년의 징계건수가 어떠한, 출결 상황은 어떠한, 그 다음에 두 번째로는 동료들과의 분위기가 있겠지... 세 번째 중요한 건 관리자들과의 마음가짐인 것 같아... 반지원적 환경이라고 할지라도 내가 제대로 안 가르친다는 게 아니고 그 분위기 맞게 어느 정도 조절해서 가르친다는 거지. (교사 9: 남, 고, 13년차)

Teacher 9 compared the achievement of teacher agency with the concept of 'appropriate technology'. As appropriate technology makes use of the skills and knowledge available in the local community considering its cultural, political and environmental aspects, he contended that teacher agency was also achieved by taking advantage of the environmental affordances on the basis of contextual understanding.

6 Discussion

This study investigated the ways in which the KSETs perceived and enacted their agency in the environments that put contradictory demands on them. The findings suggest that the teachers and environment maintained a dynamic interplay within the Korean educational ecosystem. Despite the curricular policy reforms and the revised KSAT in the present environment, past environment such as traditional

assessment practices, test-oriented culture and high-stakes KSAT significantly influenced teacher perceptions and teacher agency in their assessment practices. The incongruent messages teachers perceived were exacerbated by other constraints of the school environment and the pressure of parents and students who valued traditional assessment over innovative assessment. Nevertheless, KSETs developed their aspiration to enact teacher agency in their assessment practices through the critical interpretation of their iterative experiences, present affordances, and projective orientation regarding assessment.

Figure 1 depicts the complex and dynamic interplay between teachers and temporal environments as well as inter-environmental influence within the Korean educational ecosystem found in this study. The arrows are indicative of the strength of influence, the greater the influence, the thicker the arrow. KSETs perceived incongruent influence from past and present environment. However, they developed the aspiration of assessment through critical interpretation of iterative experiences, current collegiality and professional development, and projective orientation of ideal assessment. Teacher agency was enacted out of teacher aspiration, but it was compromised, indicated by the divided arrows in Figure 1, as teachers negotiated with the environmental conditions. However, as the teachers worked to reform the present environment, the transformative agency of teachers develops, although it is weaker in practice than they had aspired. The findings imply that there is a temporal and situational critical point where teachers' aspiration on assessment turns into practice and the whole assessment ecosystem can be transformed. To reach this critical point requires teachers' continuous attempts of teacher agency sustained by their aspiration and fostered by other ecological affordances to support it.

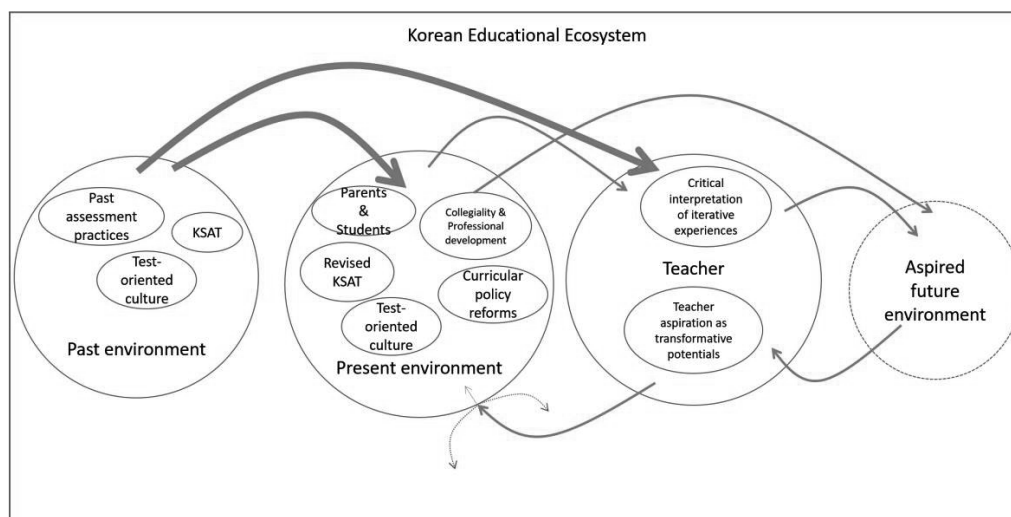


Figure 1. The interplay between KSETs and temporal environments within Korean educational ecosystem.

The incongruence between the curricular policy reforms and the actual assessment revealed in this study resulted from a variety of environments within the Korean educational ecosystem. This study demonstrates how features of the present environment, such as high-stakes testing and collegial consensus in assessment, standardised assessment in a neoliberal manner that has been identified as

characteristic of the performative and accountable sociocultural environment prevalent in Korean education (Son, 2010). If assessment is not objectified through standardisation, teachers struggle to satisfy social demands to stratify students for selection and placement. In this sociocultural environment, the new assessment orientation to support all learners' development does not obtain its legitimacy from either inside or outside schools.

The findings from this study similarly suggest that the standardisation of learning materials is derived from the sociocultural demands of the environment for 'fair' assessment (Davison, 2007). The standardisation of materials and testing easily falls into step with the market mode of neoliberalism exacerbating the process of turning schools into commodities, rather than the professional mode of education (Apple, 2004; Biesta, 2004). Standardisation is also vital in the perpetuation and prosperity of private education market, a prevalent and extravagant part in Korean education (Statistics Korea, 2020). These complex sociocultural conditions indicate the need to restructure the complex environment and to be aware of the interplay of individual-environment in Korean education in order to create an ecosystem that supports the development of all learners.

In contrast with the dualistic separation between individuals and environment in the traditional approach to agency (Ahearn, 2001; Archer, 2007; Eteläpelto et al, 2013), an ecological approach foregrounds the complex and dynamic interplay between them in a more integrative way (Priestley et al, 2015). By adopting an ecological lens for the analysis, this study recognised the critical interrelationship between teachers and the environment but also pays attention to the aspiration in assessment that teachers have as a significant entity of the whole educational ecosystem. The inseparability between teachers and environment is supported by the finding of this study that teacher aspiration in assessment has been formed under the influence of the complex environmental conditions in their life trajectory and it can conversely affect the environment in positive as well as negative ways. This finding supported the complexity of teacher beliefs (Remesal, 2011; Ruohotie-Lyhty et al., 2016) but teacher aspiration is differentiated from teacher beliefs in that the former has more oriented and transformative nature than the latter. It also confirmed van Lier's (2004) argument that the educational ecosystem does not go through gradual or linear transformation but is ongoing and emergent through the complex and dynamic interplay between individuals and their environment.

The social perception of the teachers' agentic position in assessment seems to vary considerably across contexts (Davison, 2004). Indeed, this study indicates that teacher-based assessment faced sociocultural resistance in South Korea as in other East Asian societies, such as Hong Kong and Singapore, which have traditionally assessed English language development in high-stakes contexts (Cheng et al., 2010; Mee, 1998). The finding implies that enhancing teacher agency in assessment requires a careful and significant consideration on how to make validity and reliability in assessment compatible and how to reconceptualise the established sociocultural conceptions of 'fairness' (Davison, 2004). This extremely important task should be carried out in collaboration with teachers, assessment specialists and curriculum developers. Furthermore, it is necessary to involve two major stakeholders, students and parents, in the dialogue on assessment orientations and practice (Cheng et al., 2010). It is hoped that a more acceptable and nuanced assessment orientation for enhancing teacher agency in assessment can be developed through democratic deliberation between educational stakeholders.

7 Conclusion

This study explored the ecological relationship between KSETs and their environment in terms of teacher agency in assessment. As an ecological approach seeks to take account of the full complexity and interrelatedness between organisms and environment (van Lier, 2004), this study explicated the complex and dynamic interplay between KSETs and the environment regarding teacher agency in assessment. Fostering a new ecosystem should help bring about the practical improvement of teacher agency in assessment (van der Nest et al., 2018). The findings suggest that ecological reformation requires the deliberative discussions between educational stakeholders on multi-dimensional measures, including assessment initiatives to improve structural conditions such as optimising lesson hours and class size, revising the policy of the collegial consensus in assessment, and alleviating excessive teachers' administrative work, and actions to improve the sociocultural environment such as public perception on assessment through continuous education or grassroots movements.

Teachers can experience helplessness or depression due to constraints in assessment but struggle to enact teacher agency by means of the environment. Although the ecological approach to teacher agency has been criticised for the relational agency it implies (Stetsenko, 2019), this study suggests that teachers as part of the educational ecosystem can affect the transformation of the overall educational ecosystem. This can be a significant update for the theorisation of the ecological approach to teacher agency. However, this study still calls for follow-up future research in diverse contexts to develop a more comprehensive understanding of the dynamic interplay between teachers and the environment regarding teacher agency in assessment. Moreover, this study foregrounds teacher agency as part of assessment practice with regard to assessment for learning, however, at the same time students' active involvement in their learning and assessment processes is also crucial. This leaves the door open for further research regarding the relationship between teacher agency and learner agency in assessment for learning. Last but not least, it is vital to provide teachers with systematic support and professional development opportunities in order for their educational ideals to flourish and encourage their active participation and agency at work, in turn beneficially contributing to the prosperity of the whole educational ecosystem.

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Received January 21, 2021
 Revision received June 9, 2021
 Accepted July 5, 2021