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THINKING WITH DELEUZIAN-GUATTARIAN THEORY: AN EXPLORATION OF RHIZOMATIC LANGUAGE LEARNING

ABSTRACT

In today's unpredictable world, students' learning becomes increasingly non-hierarchical, decentralised, and unexpected. This article explores how the "thinking with theory" approach, using concepts such as the rhizome, deterritorialisation, becoming, nomads, and lines of flight, as developed by Deleuze and Guattari, can help to understand the nature of rhizomatic learning of English among secondary school students (aged 18-19 in grades 11-12, representing the final two years of the four-year gymnasium level in Lithuania) in informal settings. We employed rhizoanalysis, which is based on the principles of the rhizome, including connectivity, heterogeneity, multiplicity, rupture, and cartography. We "plugged in" theory and data to one another, reading data across these theoretical concepts. The qualitative interview study involved 38 students from four Lithuanian gymnasiums. To demonstrate the visualisation of students' learning journeys, we present one student's rhizomatic map. Rhizomatic maps depict the assemblage of English skills (e.g., reading-listening or writing-speaking) and how these skills are connected to various informal learning activities. Thinking with Deleuzian-Guattarian theory enabled us to view the students' learning as a process of change, transformation, and becoming, occurring during non-hierarchical, unpredictable, uncontrolled, and inconsistent learning at home, and when communicating with friends and enjoying physical and virtual journeys. Nomadic behaviour and deterritorialisation mark a transformative process involving the opening up of new creative potential and the emergence of new forms of becoming. Self-Other, becoming readers, translators, and artists. Most students learn English informally through activities such as watching films, listening to music and podcasts, playing games, and communicating on social media. This study emphasises the importance of integrating informal learning activities into formal education, even for upper-grade students preparing for high-stakes exams. This study has shown that rhizomatic English learning in an informal context can act as a "war machine" against the state apparatus that maintains structured, controlled, hierarchical education in formal classroom and school settings.

Keywords

Thinking With Theory; Deleuzian-Guattarian Concepts; Rhizomatic Learning; Nomadism; Post-Qualitative.

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1. Introduction

Post-qualitative research, influenced mostly by post-structural and new materialism theories, emphasises 'thinking with theory', experimentation in research practices, and the examination of how knowledge is produced through complex entanglements, materiality, and the researcher (St. Pierre, 2004). Benozzo (2021) points out that "post-qualitative research" helps researchers remain open to creative interaction with the environment, as it embraces the ever-changing, uncertain, and unexpected character of things. Jackson and Mazzei's (2023) 'thinking with theory' approach supplements post-qualitative research by borrowing philosophical and theoretical concepts to achieve breakthroughs in exploring new questions and opening up new areas of knowledge that have not yet been considered. The "post-qualitative research" approach in our study reveals Gilles Deleuze and Félix Guattari's concepts in rhizomatic learning of English among upper-grade secondary school students.

2. Theoretical-Methodological Framework

Thinking with Deleuze and Guattari's theory can help us to make sense of complex and contradictory realities. St. Pierre (2004) proposed the integration of Deleuze and Guattari's (2004) concepts of rhizome, assemblage, lines of flight, and others within educational settings. These concepts facilitate a reflection of the emerging postmodern phenomena, such as the multiplicity, fluidity, and diversity of identities and ways of life, uncertainty, and difference. Educational researchers have described rhizomatic learning as the development of a living network consisting of human and artificial, material objects, and resources (Brailas, 2020). In their work *A Thousand Plateaus* (2004), Gilles Deleuze and Félix Guattari introduce the concepts of rhizome and plateaus: multiple assemblages that reflect interactions without hierarchy, authority, or repressive power. These concepts enable us to map events as they relate to open-endedness, constant change, and "becoming-other".

A rhizome is a plant root that grows horizontally, spreading the shoots in all directions and producing new plants. According to Deleuze and Guattari (2004), it is composed of "lines of flight" and "escape" that embody sudden changes and rapid creative leaps. The rhizome comprises multiplicities, and the overlap of their elements creates assemblages that bring together heterogeneous elements, including human actors, actions, emotions, experiences, and non-human elements such as objects and places. Assemblages are also closely associated with non-linearity and complexity. For example, while learning English, students engage in multiple activities – not only learning in the classroom but also when travelling, watching films, playing games and communicating on social media. These activities do not create linear paths; rather, they form intermingled knots – rhizomes with unexpected and unstructured movements.

While discussing rhizomatic moves, Deleuze and Guattari (2004) introduce a diverse array of lines, including *molar lines*, *molecular lines*, and *lines of flight*, which reflect transformations and different modes of stability and change.

The molar line with segments represents stability, hierarchies, normalisation, and repression. According to Windsor (2015), *molecular lines* exhibit a greater degree of fluidity in comparison to segmentary lines, thereby facilitating the elasticity of a rigid segmentation. *The lines of flight* constitute the movements of *deterritorialisation*, involving the escape from a given territory and indicating change and transformation. *Lines of flight* embody decentring and dispersing discourses and practices (Martin & Kamberelis, 2013). These concepts enable us to recognise the various spaces in which learning can take place. This might include structured, normative formal learning in a classroom setting, and self-directed, fluid, unstructured informal learning, which gives learners the freedom to decide which activities to engage in.

Development of the *rhizome* is associated with the concept of the *nomad*, as proposed by Deleuze and Guattari (2004). Nomads are defined as travellers who move across different territories. Within deterritorialisation, the transformation of Self-Other occurs through *becoming*. These processes are not predicated on a steady self; rather, the self is always in a state of flux, undergoing constant variation, and can transform in unpredictable directions. The concept of *territory* is not confined to a physical and spatial understanding; it can also be viewed as a domain where static properties and stability prevail, with no movement or change. Deterritorialisation is defined as the process of leaving a territory, breaking hierarchical boundaries and evoking change, and a creative leap. These concepts provide an analytical basis for viewing informal learning as a process of becoming, change and transformation while acquiring new roles, experiences and identities.

The developing and spreading rhizome enters various *planes*. Deleuze and Guattari (2004) describe the *striated planes* as functioning territories with static spaces that are devoid of change. The striated plane is predicated on the state apparatus and is measured and controlled by state powers, for example, high-stakes exams. The “plane of immanence” entails the non-hierarchical growth, for example, informal learning outside the school.

Deleuzian-Guattarian rhizomatic thinking disrupts the conventional, linear approach that dominates in education. As stated by Lian & Pineda (2014), English learning is characterised by its rhizomatic features, referring to learning in unpredictable and non-hierarchical ways. During rhizomatic learning, learners create a personal learning network to fulfil their needs (Lian & Pineda, 2014). This concept has been applied to analyse creativity development (Lu et al., 2022), learning through play (Sanford et al., 2011), as well as enacting personal learning environments (Lian & Pineda, 2014). As Boileau (2017) asserts, informal learning is defined by its flexibility, spontaneity, and absence of fixed structure. This type of learning usually takes place outside of formal and non-formal programmes, anywhere, at any pace, and in any place. This involves balancing enjoyable, spontaneous, self-directed informal learning during leisure time with formal and disciplined, structured learning during the final years of study while preparing for high-stakes exams.

Thus, the aforementioned aspects allow us to formulate research questions:

1. How can Gilles Deleuze and Félix Guattari's concepts contribute to the understanding of learning English among upper-grade secondary school students?

2. What is the methodological potential of combining thinking with a theory approach, empirical data (students' interviews) and rhizomatic cartography?

The research aim – to explore rhizomatic English language learning among upper-grade secondary school students in informal settings by ‘thinking with theory’ of Gilles Deleuze and Félix Guattari and integrating it with empirical data and rhizomatic mapping as a methodological approach.

3. Methodology

The participants. The participants were selected according to criteria, such as school type and grade. A total of 38 upper-grade secondary school students in grades 11–12 from four Lithuanian gymnasiums participated in the research (Table 1). The participants were aged 18–19. The majority were in the twelfth grade (35), while the eleventh grade was represented by a smaller number (3). The students came from gymnasiums of different profiles: two from big cities, one from a suburban area, and one from a small city. 24 girls and 14 boys participated in this research. For the qualitative study, purposeful sampling was used. Researchers use their judgment to select participants whom they believe are most representative or relevant to the study (Tiwari & Tripathi, 2024). The average interview lasted 45 minutes. All of the interviews together lasted approximately 30 hours. The interview continued until data saturation was reached, i.e., when the same information started to be repeated (Mwita, 2022).

Table 1. Number of participants

Gymnasium (total number of students in gymnasium)	Number of participants	Grade
Gymnasium in a suburban area (983)	12	12
Gymnasium in a big city (1000)	15	11-12
Gymnasium in a big city (600)	7	12
Gymnasium in a small city (400)	4	12
Total	38	

In a qualitative interview, the students were invited to describe their English language learning in an informal learning context outside of the classroom. In this research, we applied the thinking with theory approach (Jackson & Mazzei, 2012), which involves the “plugging in” technique of embedding philosophical concepts into empirical research. As Jackson and Mazzei (2012) argue, this way of thinking is both methodological and philosophical, involving reading data across theorists by plugging the theory and the data into one another and undertaking methodological manoeuvres.

In the 'thinking with theory' approach, theory is plugged into the data, and the data is connected back into the theory. Theory and data constitute one another (Jackson & Mazzei, 2012). Unlike traditional thematic analysis, which produces themes as the outcome of the research process, the process of plugging in theory to analyse students' interviews involved repeatedly reading the data through concepts, revisiting the same "data chunks", and creating new insights. "Plugging in to produce something new is a constant, continuous process of making and unmaking. An assemblage isn't a thing – it is the process of making and unmaking the thing. It is the process of arranging, organizing, fitting together" (Jackson & Mazzei, 2013, p. 262). Other features of thinking with theory include moving in the "threshold", where temporary meanings emerge and brief pauses occur in the continuous transformation of meaning, and "folding and flattening", which refers to Barad's (2007) concept of "intra-action", where meaning is constituted as "happening in-between researcher/ researched; data/theory; and inside/outside" (Jackson & Mazzei, 2013, p. 266). In this approach, the research is understood as the process of creating something through arranging assemblages. "We characterise this reading-the-data-while-thinking-the-theory as a moment of plugging in, of entering the assemblage, of making new connectives" (Jackson & Mazzei, 2012, p. 264). In our research, we engaged with an emerging assemblage, including ourselves and our positionalities, theory, and data. This involved reading data on students' insights into their English skills development and learning activities through Deleuzian-Guattarian philosophical concepts such as the rhizome, lines of flight, assemblages, becoming, deterritorialisation, reterritorialisation, the war machine, the state apparatus, and the striated territory. We also employed the concept of rhizomatic learning, which was introduced and applied to English language learning and other areas of learning by educational researchers such as Cormier (2008), Lian and Pineda (2014), and others. Also, we have conducted rhizoanalysis (Masny, 2015) in accordance with Deleuze and Guattari's rhizome principles and philosophical concepts.

To illustrate Deleuze and Guattari's (2004) principles of the rhizome – connectivity, heterogeneity, multiplicity, rupture and cartography – we created rhizomatic maps to visualise students' educational journeys, learning activities, and developed skills using graphical features. (Kairienė & Mažeikienė, 2023, 2024). In a rhizome, any point can be connected to any other point, whereas human and/or artificial elements are connected in learning. The heterogeneity of learning denotes non-uniformity, difference, and diversity. The principle of multiplicity within a rhizome enabled us to recognise combinations of English language learning skills. The principle of rupture implies that a language-learning rhizome can be broken, interrupted at any point, and restarted from an old or new node.

Cartography is a method for representing research data on a plane or other surface (Okada et al., 2014). In this article, we present a map of one student to showcase how the maps were created and how they depict rhizomatic learning. Maps in our research were drawn visualising the use of English language skills and their combinations (assemblages), and the English language learning activities. Rhizomatic maps were created by using the *Pajek* program.

The interviews were read several times, identifying English language activities, language skills and their connections and visualising them as nodes. These elements were connected according to the logic of assemblage. Different colours highlight diverging interacting skills and activities. The names of assemblages and combinations of English language skills are marked in blue. Yellow indicates the area in which the assemblage operates. The skills and activities are connected by lines. Four types of lines show different relationships: blue indicates a strong relationship between English skills and activities; a rupture line depicts a new order emerging; green indicates escaping from English learning activities; and a purple line of flight shows becoming other. This data analysis differs significantly from traditional coding, where codes are organised and ordered hierarchically in a 'code tree' and data is reduced to themes. In a rhizomatic analysis, which follows the concept of the rhizome (not a 'tree!'), a network of relations between elements (language skills, language activities and learning settings) resembles complex, non-linear and 'messy' connections and assemblages. This reflects the very nature of informal learning, which allows new, unexpected experiences to emerge.

In terms of our positionality, we immersed ourselves in the rhizome and assemblage of this research as researchers with backgrounds in philosophy, philology, and education, with academic experience in intercultural communication and English language teaching. We view our own educational journeys and learning paths as rhizomatic movements across disciplines, languages, institutions, networks, research traditions, and methodologies. These are characterised by ruptures, lines of flight and escape, deterritorialisation and resistance to the rules of normative research "technologies". Our own experiences of rhizomatic learning and career trajectories have enabled us to better understand students' experiences of learning English in informal settings as an unpredictable process of "becoming-other".

With regard to ethical conduct, the research was carried out in accordance with Wiles' (2013) ethical principles of informed consent, confidentiality, anonymity, and risk assessment, thereby ensuring the safety and well-being of the research participants. Participants were informed about the research process and possibilities, and their consent was obtained. Anonymity was created using coded names for research participants, organisations, and locations, with the guarantee that identities would not be revealed.

4. Empirical Analysis

The study shows that students' English learning is inconsistent and largely accidental. They learn by watching films and other visual content on YouTube, TikTok, TED Talks, TV, and other platforms. They also learn English online and on social media by watching BBC and CNN programmes, buying things from online shops, communicating with friends on Facebook and Instagram, listening to podcasts, and reading Manga. Some of them also listen to audiobooks and music. They learn English by travelling, living in other countries, and playing computer games. However, they are less likely to engage in self-directed learning activities such as reading books or doing grammar exercises independently.

4.1. The Rhizomatic Map: An Individual Rhizomatic Journey in Unpredictable Directions

To disclose the rhizomatic learning processes of upper-grade secondary school students, 38 maps were created. Researchers of rhizomatic learning (Lu et al., 2022; Cronje, 2021) suggest analysing the individual learning trajectories of students. Here, we present Rugilè's map, which illustrates a student's unique learning journey. The map depicts how multiple assemblages of English language skills and activities work together (Figure 1). Both combinations of skills (assemblages) and individual skills form links with students' activities. Various student activities belong to multiple assemblages. The learner creates reading-listening, listening-speaking, and writing-reading assemblages. The student most often creates connections between reading and listening skills and activities when watching films with subtitles.

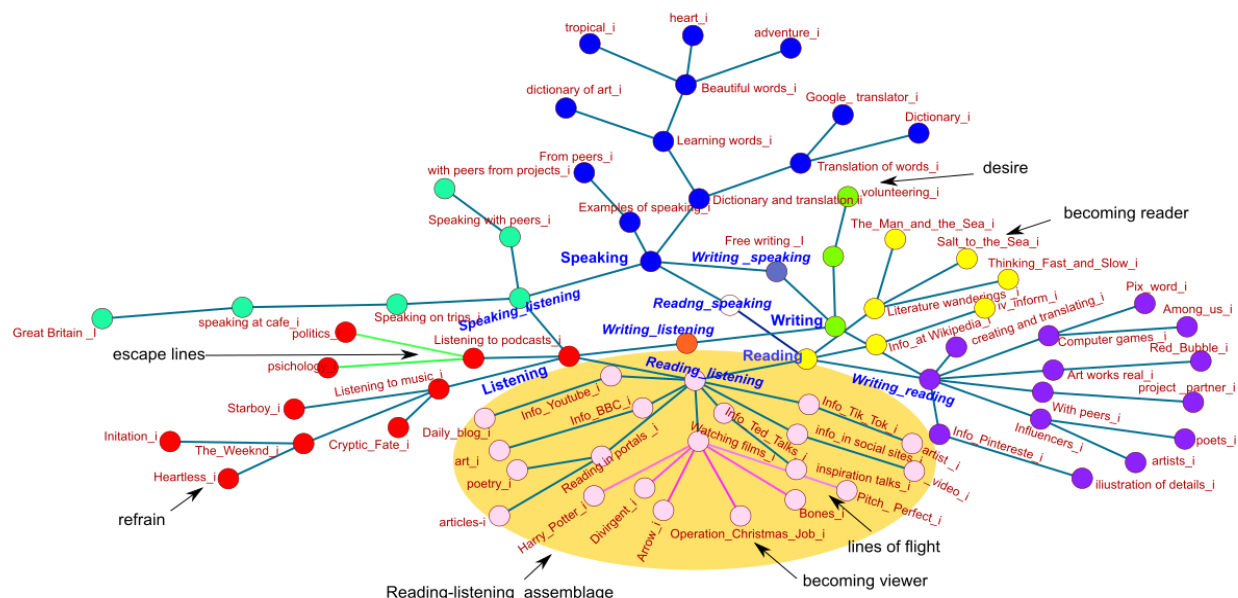
I'm very fond of Pitch Perfect, the one about singers – and I watch it from time to time. I also like the Divergent series, and all the Harry Potter films, which I watch every year at Christmas. There are some shows I've watched a few times, the same ones, such as Bones and Arrow. I watch them a few times because I like them, and you remember what happened, and you remember that you liked the film, but you don't remember what happened, and then you watch it again. (student Rugilè).

Clearly, the learner constructs multiple assemblages, interweaving different elements such as TV programmes, film platforms, film genres, film actors, film plots, languages, subtitles, viewing habits, and practices in complex ways.

According to Deleuze and Guattari (2004), each multiplicity in symbiosis is made up of heterogeneous concepts and is constantly evolving into a series of additional multiplicities. This is where Deleuze's (1994) concept of difference and repetition comes in. The student watches the same films several times. Moreover, the student Rugilè goes through a process of becoming a spectator through lines of flight. The molecular lines connect the assemblage to other activities, such as reading material on portals, watching inspiring talks on the TED Talks platform, or watching daily videos on YouTube.

The student creates listening-speaking activities and skills assemblage by communicating with peers from other countries.

I admire my peers who speak English fluently, because I don't. I'm trying to improve my English to feel better, but I'm still struggling. I'm trying very hard to reach my peers' level. (Student Rugilè)



Marking:

Letter at the end of the keyword: i - informal learning context. Different colours are used to highlight interacting skills and activities. The yellow shape indicates the area of the assemblage in which it operates.

Lines:

- | | | | |
|--|---|--|--|
| | - A strong relationship between English language skills and activities. | | - A rupture line (a broken link between English language skills and activities), which allows a new order to emerge. |
| | - An escape line (an escape from traditional English learning activities) | | - Line of flight (toward becoming Self-Other). |

Figure 1. The map of upper-grade student English rhizomatic learning

This means that students participate in building and arranging multiple assemblages with their friends, computers, and computer programs, as well as social media elements. These assemblages demonstrate that, rather than the binary logic of human and non-human, we see the process through the lens of the multiplicity logic 'and..and'. It should be noted that self-confidence, the effort to learn English, peer support, and understanding are all important factors for students. There is also a desire to speak freely, which can lead in many unpredictable directions.

One of the most popular sources of creative ideas is the Pinterest platform, where students create writing-reading assemblages.

I like to illustrate a lot, and I also look for some details and examples on apps. My favourite is Pinterest – there is a lot to find there, and in articles <...>. (Student Rugilė)

It should be noted that the learner is more interested in learning about subjects that interest her than in learning the intricacies of the English language. She forms an assemblage with the Pinterest platform, its images, and its artworks. She learns English in a rhizomatic way – without even noticing and realising it.

The student is also involved in activities that support her reading, listening, and speaking skills. She enjoys reading books in English such as Sepetys's *Salt to the Sea*, Hemingway's *The Old Man and the Sea*, and Kahneman's *Thinking, Fast and Slow*. Through reading, students form multiple assemblages with books, literary characters, genres, places, and time periods. Moreover, through lines of flight, the learner tries to escape from traditional activities and engages by listening to podcasts about politics and psychology. She develops her free writing skills when writing about volunteering.

4.2. The Deleuzian-Guattarian Concepts in English Rhizomatic Learning of Students

Reading-listening assemblages are the most prevalent in students' English learning. Students create them when they watch films, travel, and communicate with friends. Watching films and TV series is one of the students' favourite activities. The video content of films shows the action, evokes strong feelings, and helps students to understand the plot. Learners create reading-listening assemblages when they watch films with subtitles.

Sometimes I watch movies with subtitles, sometimes they turn on by themselves and you leave them on, sometimes they stutter because you can't read them when they're on, then you read them, and then they stutter and turn off, or turn on when you are in a noisy place, or there is a heavy accent, then you turn on that movie. <...>. (Student Giedrius)

In addition, the students created multiple assemblages of TV programmes and film platforms, films, stories and plots, film actors, chosen languages, spoken texts, and subtitles. Students create reading-listening assemblages on trips and journeys.

I was in Turkey on a leisure trip. I had to speak English in hotels, or when I was ordering from the menu in a café, or in a shop, or on the street, when someone spoke to me. (Student Gediminas)

The student creates multiple assemblages with Turkey as a country and place, including hotels, cafés, streets, and people, by engaging in casual conversations.

Students speak colloquial English in various places and locations during their travels, getting the opportunity to learn about other cultures' culinary heritage and architecture, and to use English in real-life situations.

This intensive trip can increase English vocabulary, help students to understand other cultures and learn about the history of other countries, or simply allow them to relax. The students create writing-reading assemblages by playing games or by communicating with their peers in English on social media.

I often express my opinion; for example, it often happens that I have a friend who is communicative, and we often correspond in English, and it's happening now: he's often pro-Trump, and I'm pro-Biden, and I've been writing a litany of what's wrong. It's usually my longer essays, without school. For writing, practice is the best, because the tendency is that the more you write, the more you learn, the more you read, the fewer mistakes you make. (student Deimantas)

This excerpt shows that students compose assemblages with their peers, as well as with computers and other devices. They engage in communication activities, express their opinions, and learn through real-life experiences. Their communication partners are mainly from English-speaking countries, such as the United States and the United Kingdom. The students discuss political issues, exchanging arguments on cultural and political realities and using different English expressions. This shows that the students write in English as frequently as possible because they recognise that developing English language skills requires practice. In addition, students attempt to identify peculiarities in American writing. Students create speaking-listening assemblages by talking and interacting extensively with their peers, playing computer games, and travelling. They also create speaking-listening assemblages by travelling to countries such as the Czech Republic, Poland, Ireland, and Croatia, where they try to communicate in English.

I've been to Germany, the Czech Republic, Austria, Poland. And it was a very fun trip, because I travelled to 4 countries in two weeks. We were in a motorhome, so we also spoke English everywhere, so we talked about the simplest things: where to park the car, where to put the tent. Yes, we used all kinds of English words (student Jurgita)

In the Deleuzian-Guattarian sense, the travelling experiences of the student reflect a nomadic process of Self-Other transformation. She composes multiple, overlapping assemblages with the motorhome, the countries in Europe, new places, casual conversations, events, and unexpected situations.

Conversely, writing-listening assemblages are not prevalent in students' experiences. The learners use Duolingo language learning application, which encourages them 'to write and listen for new words or phrases'.

I like to learn languages, so I use the Duolingo app, but it's not in Lithuanian, so when I'm studying other languages, I use English as my main one. I'm learning a couple of languages: German, Polish, and I've been learning Spanish as well, because there are quite a lot of languages. I love learning languages, and language is very important because you can converse a lot; it just makes things easier. If you know it, you can converse in every country; you can converse in most countries. That's why I'm learning languages through Duolingo (student Kristina)

It should be noted that multiple assemblages occur when students develop writing-listening skills, as well as create overlapping assemblages of reading, writing, listening, and speaking skills and practices. Writing-speaking assemblages are also not prevalent in students' English learning. Learners create these assemblages through molecular lines when engaging in various social media activities.

Anyway, I correspond with my peers via Facebook and Instagram. I communicate because, especially <...>we created a group where we talk virtually with people from Erasmus; we correspond. (student Vytas)

Notably, the students create assemblages and express the “being with”. They compose assemblages with students from other countries who are participating in Erasmus projects, discussing not only professional matters but also other interests and topics. Reading-speaking assemblages are also less common. Students create these through molecular lines when playing board games such as Alias. The students built multiple assemblages with other players, game cards, words, pictures, and so on. Playing this game helps students not only learn English but also develop various cognitive and communicative skills. These activities stimulate curiosity, develop critical thinking, and build a sense of community.

5. Methodological Reflection

In this study, we introduced a methodological innovation through Jackson and Mazzei's (2023) ‘thinking with theory’ approach, in which theory and data are understood as complementary, interacting dynamically and productively. ‘Thinking with theory’ allowed us as educational researchers to look at the data in a different and experimental way. In this way, rather than treating theory as a prism through which to examine data, this study shows how Deleuze and Guattari's (2004) concepts, such as rhizome, nomadism, and lines of flight, actively create a constant movement, reshaping both the data and the research process itself. In this respect, the analysis depicts the emergence of the analysed phenomena (in this case, informal learning) as dynamic entities, which lends dynamism to methodological practice, thus expanding the possibilities of post-qualitative research. Also, this study contributes a new methodological pathway for researchers seeking to transition from representational analysis toward post-qualitative experimentation.

The combination of ‘thinking with theory’ (Jackson & Mazzei, 2023) with rhizomatic cartography (Corner, 2011) demonstrates how these approaches can function together as a coherent analytic practice. Cartography is applied as a method in this study, which involves the integration of interview data, theoretical concepts and digital visualisation tools. The maps show multiplicities, ruptures and lines of flight, as described by Deleuze and Guattari. It enables a shift from representational analysis toward tracing processes of becoming, movement, and relationality. Especially, this study demonstrates how these approaches can be applied in the context of informal English learning outside the classroom.

This research position not only contributes to the methodological development of language learning research, going beyond the traditional understanding of the acquisition of linguistic competence, but also expands the analytical perspective focused on the mapping of learning processes.

The study has shown that post-qualitative research can emerge from traditional qualitative research. Beginning with Braun and Clarke's (2006) thematic analysis, the study established a structured understanding of the data; however, the subsequent creation of rhizomatic maps allowed patterns, connections, and multiplicities to be revealed. This evokes tension between these two research approaches. Traditional qualitative research emphasises methodological rigour through established procedures such as coding, categorisation, and interpretation (Denzin & Lincoln, 2011). Meanwhile, St. Pierre (2011), a key figure in the development of post-qualitative inquiry, challenges these conventions by rejecting pre-defined methods and questioning the very foundations of knowledge production. Drawing on 'post' philosophy, St. Pierre (2011) reconceptualises research not as the application of method, but as an ontological and epistemological practice. Thus, in this research, we have shown how students gain English knowledge in informal settings and develop their rhizomatic learning in unpredictable ways. In the context of language learning, this approach enabled us as researchers to move beyond viewing language as a stable system to be acquired and instead to understand it as a dynamic, emergent, and relational process. Influenced by poststructuralist theory, the post-qualitative approach explores how language learning is entangled with material, social, and discursive practices. This pathway allowed us, as researchers, to capture connections, heterogeneity, multiplicities, and ruptures in a rhizomatic manner.

Post-qualitative research builds qualitative methods in its concern with exploring human and social phenomena, but it moves beyond method; it mostly focuses on relations and processes. This study illustrates how a post-qualitative approach can change methodological thinking. Researchers can adopt a post-qualitative stance by prioritising flexible, theory-informed inquiry, treating data not as static representations but as entangled with social, material, and discursive processes. It evokes methodological flexibility, enhancing both transparency and transferability. Moreover, this research demonstrates transferable methodological insights: rhizomatic mapping, according to the principles of the rhizome, can be applied not only in language learning but also in digital education, cross-cultural studies, and other practices for the exploration of complex, assemblage-like phenomena, applying the concepts of heterogeneity, multiplicity, and becoming.

Overall, this study contributes to methodological innovation by showing how post-qualitative research can extend, enrich, and transform qualitative research by maintaining transparency in the research design.

6. Final considerations

This post-qualitative research, based on the ideas of Gilles Deleuze and Félix Guattari, presents methodology as a nonlinear and heterogeneous inquiry. It explores learning as an assemblage produced through interactions among students, activities, and technologies. Methodologically, such research moves beyond traditional research toward tracing connections, movements, disruptions, and “lines of flight”.

This combination of thinking with theory, empirical data and rhizomatic cartography strengthens the post-qualitative inquiry, which is capable of moving beyond representation and linear interpretation toward relations and emergent meanings.

The concept of the rhizome illuminates the analysed phenomena (in this case, rhizomatic learning) as a loose, unpredictable, inconsistent, and unstructured endeavour, characterised by interconnectedness, volatility, and constant movement (Brailas, 2020; Cronje, 2021; Cormier, 2008). Students are seen as the creators of their own learning trajectories and paths, charting new directions of deterritorialisation and creating new becomings. Like nomads, they not only move physically through territories but also wander through digital platforms, literary works, films, and games. They travel along their own learning paths, where they can feel free and independent of school control and discipline.

Students' rhizomatic learning of the English language is defined as the creation and emergence of assemblages, where different linguistic abilities, activities, and life experiences overlap. Lines of escape not only mark deterritorialisation through the abandoning of the controlled territory but also bring about significant changes in students' activities. Nomadism and deterritorialisation imply transformation and the opening up of a new creative potential, creation of becomings. This engenders innovation and new becomings in English language learning, as students try out different activities and roles and gain new experiences. They become Self-Other, becoming readers, translators, artists, and so on.

Students' nomadic journeys take place everywhere: travelling in other countries, on the Internet, on social media, and in other digital and virtual environments. Nomadic wandering enables English language learners to experience unconstrained, free learning through a wide range of activities, as opposed to the structured and controlled formal hierarchical learning in a classroom context, where learning is tied to regulatory documents and programmes, and where the power mechanisms of the educational structures are in place (testing, the examination system, standardisation, and structured and regulated interactions). Students have been observed to learn in the most rhizomatic way in a nomadic pleasure machine, engaging in enjoyable activities that allow them to relax and experience the excitement of play, creating a cosy atmosphere. Thus, rhizomatic learning of English enables students to transform, form assemblages, and learn in new, exploratory, and unpredictable ways. Therefore, the incorporation of rhizomatic learning into the English curriculum, along with the integration of real-life activities into formal assessments, is a recommended practice.

This research has shown that combining ‘thinking with theory’ approach, empirical data (students’ interviews) and rhizomatic cartography allowed us to disclose trajectories of students’ learning of English in a deeper post-qualitative research manner.

This post-qualitative research contributes to the field of qualitative research by expanding researchers’ understanding of knowledge production, relationships, and learning processes. Drawing on the rhizomatic ideas of Gilles Deleuze and Félix Guattari, social actors engage in networking, relationships and connections. In this way, post-qualitative inquiry examines dynamic networks among people, technologies, spaces, and environments. Post-qualitative research can strengthen qualitative methodology by encouraging methodological creativity and philosophical reflexivity. This means that special attention should be paid to methodological learning of qualitative research, including innovative forms of research, collaborative, network-based, and interdisciplinary research practices. These methodological insights can enrich many qualitative traditions by making research more flexible, context-sensitive, and critically reflective.

Ethical Approval: The study was conducted in secondary schools that have an agreement with Vytautas Magnus University. The researchers followed the Code of Ethics (2023) of Vytautas Magnus University. Each participant was informed about the research goals, methods, duration, and possibilities, and consent was obtained from each participant.

Informed Consent: Informed consent was obtained from all participants involved in the study, ensuring respect for the principles of confidentiality, voluntariness, and anonymity.

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