

# Interaction in online classes during Covid-19: the experiences of newly-arrived migrant students

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# Abstract

**Background:** In order to continue educational provision during the COVID-19 pandemic, many education systems switched to some form of Emergency Remote Teaching (ERT) in 2020. Research suggests that this may have disproportionately affected students from underprivileged communities. In this context there is, therefore, a pressing need to consider how ERT may have impacted learners who are likely to be most affected by educational inequalities, including newly arrived migrant students (NAMS).

**Purpose:** As studies have highlighted the particular importance of interaction for effective distance learning, the research aimed to examine how NAMS in Flemish secondary schools experienced interaction with learning content, teachers and fellow students in online classes during ERT.

**Methods:** A total of 6 semi-structured focus group interviews were conducted with 23 NAMS from 6 secondary schools in Belgium. The interviews were centred on questions about participants' experiences with online interaction and participation. All focus groups were audio recorded and transcribed verbatim, after which transcriptions were coded and analysed qualitatively.

**Findings:** The analysis revealed that, during ERT, participants reported experiencing a higher amount of learner-content interaction, mainly consisting of self-study material and tasks. Participants also indicated a lack of learner-teacher interaction, which was attributed to the shortage of speaking opportunities and students' decreased inclination to interact with instructors. In addition, most participants reportedly experienced few opportunities for learner-learner interaction during online classes.

**Conclusions:** Study findings provided insight into the NAMS' experiences of being suddenly and unexpectedly compelled to be autonomous learners during ERT. Students' reports suggest that the quality of learner-content interaction may have been compromised by limited learner-teacher interaction in the ERT situation. This draws attention more generally to the importance of interactive learning in the support of NAMS, and the need for educators to be empowered to develop interactivity-rich remote learning environments.

**Keywords:** distance learning; interaction; newly arrived migrant students (NAMS); secondary education, emergency remote teaching (ERT), Covid-19

# Introduction

Due to the Covid-19 crisis, Flemish secondary schools switched to part-time remote teaching in November 2020. This meant that high school students had to take online classes 50% of the time. The shift from face-to-face to online classes described here is an example of the international attempt to curb the spread of Covid-19, while continuing to provide instruction to school-age students. Thus, many education systems worldwide switched to some kind of Emergency Remote Teaching (ERT), which is a term widely used for distance educational practices organised in a crisis situation (Hodges et al. 2020). Research suggests that the move to ERT may have negatively impacted underprivileged communities (Aguliera and Nightengale-Lee 2020). Many socially and economically disadvantaged people lack access to technology (Beunoyer, Dupéré, and Guitton 2020; Potyrała et al. 2021), which could lead to fewer learning gains for vulnerable pupils. Furthermore, for children whose first language is not the language of instruction, online learning might be complicated due to language barriers (OECD 2020).

Based on results from standardised tests in Flanders, Maldonado and De Witte (2021) concluded that the remote teaching implemented in the wake of the Covid-19 crisis exacerbated existing educational inequalities. In considering the implications of this, it is vital to better understand how underprivileged students themselves perceived the impact of online lessons on their learning. Newly Arrived Migrant Students (NAMS) represent an underprivileged group within the Flemish school population. With this in mind, the focus of our attention in the research reported here was how NAMS in Flemish secondary education perceived ERT. More specifically, we investigated NAMS' experiences of interaction with teachers, fellow pupils and learning content in online lessons. Before explaining our study in further detail, we situate our research in the context of online learning.

# Background

## *Interaction in distance education*

Whilst concerns about the effectiveness of distance education<sup>1</sup> have doubtlessly been raised, it is also held that teaching ‘from a distance’ can be as effective as non-distanced education, as long as there is high quality interaction (Bernard et al. 2009; Dixon 2010). In their study of effective learning strategies in blended learning, Zhu et al. (2021) found that classroom-like interactions, such as discussions and presentations, can be useful in an online learning environment as a way of helping learners construct knowledge. Elsewhere, it is suggested that students who report having experienced multiple ways of interacting with peers and instructors in an online course also report higher engagement (Dixon 2010), which could lead to better performance. This may resonate with Muilenburg and Berge (2005), where students who reportedly experienced a lack of social interaction in online courses considered that they learnt more successfully in the physical classroom than online.

Interaction frameworks have been operationalised (Moore 1989) to map the concept of interaction in distance education. According to Wagner (1994), interactions occur when there are at least two objects and two actions in which the objects have a reciprocal influence. In classroom interaction studies, a distinction is made between three objects: learner, teacher and content. The interaction framework is based on three types of interaction: learner-learner, learner-teacher and learner-content interaction (Moore and Kearsley 2011). *Learner-learner* interaction refers to interaction among learners in pairs or small groups (Bernard et al. 2009; Lin, Zheng, and Zhang 2017). Peer-group interaction helps learners to actively develop knowledge by discussing and debating subject materials (Parker 1999). Through *learner-teacher* interaction, teachers can present new information and provide feedback, while

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<sup>1</sup> By ‘effectiveness of distance education’, we refer to the level in which educational goals are attained through this form of education (Scheerens and Blömeke 2016).

simultaneously stimulating learners (Anderson 2003). Lastly, *learner-content* interaction is sometimes described as the ‘defining characteristic of education’ (Moore 1989, 1), as learners interact with the course content in order to gain understanding of the subject material (Moore and Kearsley 2011).

Over the last two decades, the implementation of interaction in distance education has been facilitated through the use of online learning platforms and video communication tools. Various studies (Kurucay and Inan 2017; Zimmerman 2012; Zhu, Berri, and Zhang 2021; Quadir, Yang, and Chen 2019) have investigated the impact of learner-learner, learner-teacher and/or learner-content interaction on learning gains in online environments. Although these studies, often differing in research designs and samples, cannot provide us with a conclusive picture of the complex impact of interaction on learning outcomes in a distance education setting, individual findings do contribute interesting and valuable insights in the role of interaction in online learning.

The quasi-experimental study by Kurucay and Inan (2017) investigated how learner-learner interaction affected student satisfaction and learning in an online undergraduate course. It suggested that treatment group students, who completed their assignments in groups, fared better than students in the control group, who were asked to do their assignments individually. Furthermore, the frequency of learner-learner interactions correlated positively with perceived learning, achievement and learner satisfaction (Kurucay and Inan 2017). Zimmerman’s (2012) study investigated the role of interaction by exploring the relationship between the amount of time students spent interacting with the online content (i.e. by posting online discussions, reading files, etc.) and their grades, examining whether learner-content interaction was a contributing success factor to learning. The results suggested a positive correlation between the amount of learner-content interaction students had and their frequency of obtaining a passing grade (Zimmerman 2012).

Interaction thus seems to play a role in effective online education. As learner-learner and learner-teacher interaction are types of interpersonal interaction, they are also of great importance in additional language learning contexts. In his Interaction Hypothesis, Long (1996) describes the value of interpersonal interaction for language learning, especially highlighting the importance of negotiation for meaning (Long 1996). When interacting with a first language interlocutor, an additional language speaker has the opportunity to recognize differences between their own output in the target language and the interlocutor's output. This potentially leads to modifications in the language learner's production of the target language.

Several studies have looked into the value of interaction for language learning in a distance learning environment. For example, Souzanzan and Bagheri's (2017) experimental study investigated the effect of online learner-teacher interaction through videocall sessions on Iranian English as a Foreign Language learners' speaking ability. The high level of online learner-teacher interaction was suggested to improve learners' English speaking proficiency compared with a control group who did not participate in these interactions. Similarly, Yen, Huo and Chang (2013) conducted a study with 42 'English Conversation' students in Taiwan and highlighted the potential of online interaction for additional language acquisition. After one-on-one learner-learner roleplay interaction through videocall sessions, students' accuracy in English-speaking abilities improved: a speaking error analysis indicated a significant reduction in errors following the interactional intervention.

### ***Emergency Remote Teaching (ERT) in relation to distance education***

The aforementioned studies focus on distance education and, as such, need to be distinguished from the specific situation of Emergency Remote Teaching (ERT). Distance education refers to all types of learning initially designed to take place with a physical distance between the learner and the instructor (Aguilera and Nightengale-Lee 2020). ERT, on the other hand, can

be defined as ‘the use of fully remote teaching solutions for instruction or education that would otherwise be delivered face-to-face or as blended or hybrid courses and that will return to that format once the crisis or emergency has abated’ (Hodges et al. 2020, 6).

As distance education and ERT are both characterized by a physical distance between learners and instructors, they both entail a degree of autonomy (Lynch and Dembo 2004). According to self-determination theory, autonomy is one of three basic psychological needs that must be acquired by people to maintain growth (Deci and Ryan 1985). Learner autonomy, which is defined as the learner’s capability to control one’s learning process (Fedj and Bouhass Benaissi 2018), reportedly has a motivating effect on learners, which could lead to efficient and successful learning (Little and Dam 1998). Thus, even though distance education and ERT are clearly separated by the circumstances in which they are organized, they both involve the notion of ‘teaching from a distance’ and require a level of learner autonomy. Based on these similarities, we found it useful to apply the interaction framework, which stems from distance education, to an ERT context.

Since the beginning of the Covid-19 pandemic, several studies have investigated the implications of ERT for learning, engagement and wellbeing from the perspective of teachers (e.g. Alberta Teachers’ Association 2020; MacIntyre, Gregersen, and Mercer 2020; Potyrała et al. 2021). Huang et al. (2020) list three main challenges for teachers having to adapt to ERT: lack of preparation time, teacher/student isolation and need for effective pedagogical approaches. The additional workload has proven to be a big stressor for teachers, often exacerbated by concerns about family health (MacIntyre, Gregersen, and Mercer 2020) and safety and wellbeing (Alberta Teachers’ Association 2020) due to the unprecedented circumstances of the pandemic. Furthermore, teachers are concerned about possible lower learning outcomes for their students (Moser, Wei, and Brenner 2021). Because of the limitations on non-verbal cues and teachers not being able to observe the physical classroom, ERT can

make it more challenging for teachers to monitor students' understanding of subject matter (Yılmaz et al., 2021). This is especially concerning in the context of socially and/or economically disadvantaged pupils, who are reported to experience a wider learning gap due to emergency online lessons (Yılmaz et al., 2021).

### ***Students' perceptions of ERT and interaction***

Much research on ERT helps us to gain insight into student experiences from the perspective of instructors (e.g. Alberta Teachers' Association, 2020; Hargreaves and Fullan, 2020; Potyrała et al., 2021; Z. Yılmaz et al., 2021). Teachers report a lack of student participation and engagement since the implementation of ERT (Hargreaves and Fullan 2020), which suggests limited interpersonal interaction from students. Moreover, according to teachers, pupils' ERT-specific competences may not be strong: for example, some students might not possess the IT skills to participate in online lessons successfully, and may not yet have acquired the necessary discipline to engage in self-education (Potyrała et al. 2021). Referring back to Moore's (1989) interaction framework, this could affect learner-content interaction negatively.

However, more needs to be understood about the impact of ERT from the students' perspectives. A particularly helpful study in this regard is Thomas et al. (2021), which focuses on the experiences of primary school-aged children in remote English as an Additional Language (EAL) classes. In this study, seven pupils with EAL were interviewed about their perceptions of remote classes. Generally, the pupils had positive experiences with these lessons: they were happy to be learning regardless of the circumstances and described the lessons as beneficial to their additional language acquisition process. Some pupils, though, revealed how technological issues often occurred during online synchronous lessons, and how they felt more distracted at home than in the classroom. One pupil mentioned feeling disconnected from peers because talking to peers in online lessons was not possible.



Other research offers a view into language learners' perceptions of interaction in a non-ERT context. For example, in An and Thomas' (2021) study of secondary school pupils' perceptions of interaction in English Medium Instruction (EMI) classrooms in China, most students believed interaction with teachers and peers was important for learning. At the same time, these students admitted to not often engaging in interactions with teachers because they had 'limited general English proficiency to comprehend the teacher and to express ideas clearly and quickly' (An and Thomas 2021, 6). For instance, students reported avoiding asking the teacher questions, because both phrasing questions in English and understanding the teacher's answers were considered too difficult. As a result, these students preferred to have more peer interaction in their first language in order to understand the subject material. Thus, even though interpersonal interaction is considered crucial for language learners, this study demonstrates how interaction with teachers in an additional language context has challenges and complexities, even in a non-ERT context. It is, therefore, important to bear this wider context in mind when investigating how language learners experience interaction in an ERT context.

### ***Research context***

Currently, Newly Arrived Migrant Students (NAMS) make up a notable part of Flemish schools' vulnerable student population. Every year, a rising number of migrant students enter reception education<sup>2</sup> in Flanders. After approximately one year, most high school-aged NAMS enter regular secondary education, where they continue their social integration and language learning processes. This transition from reception education to regular education is often far from smooth. In Flanders, NAMS are overrepresented in the vocational – and least prestigious – track (Emery et al. 2020) and they are more likely to have to repeat a year (Van Avermaet et al. 2017). This resonates with broader findings related to the tendency for students with an

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<sup>2</sup> In this context, reception education refers to separately-organised reception education classes for NAMS aimed at (1) helping the students with the learning of Dutch and (2) reinforcing NAMS' social integration process.

immigrant background to underperform at school. It is noteworthy that, on average across OECD countries, around half of first generation immigrant students (defined as foreign-born students of foreign-born parents) did not attain baseline proficiency for mathematics, science and reading, whereas this was the case for 28% percent of students without an immigrant background who failed to attain that level (OECD 2018).

From November 2020 until May 2021, Flanders implemented blended ERT for high school pupils, due to the second wave of the Covid-19 crisis. Traditional classroom instruction was allowed 50% of the time, while pupils spent the other 50% learning from home (Maenhout 2020). Although schools received no strict guidelines on how to organize blended ERT, the Flemish Department of Education suggested working with digital learning platforms (Onderwijs Vlaanderen 2020), which mainly included video conferencing tools. Thus, in the case of Flanders, ERT corresponded with blended online learning.

In the context of the pandemic, a great deal of academic attention has been paid to the impact of ERT on education and learning outcomes. Numerous studies have reported a possible exacerbation of educational inequalities in relation to ERT (Drane, Vernon, and O'Shea 2020; OECD 2020; Yilmaz et al. 2021). There is, therefore, a pressing need to consider groups of learners who are likely to be most affected by educational inequalities, including NAMS (OECD 2018; Van Avermaet et al. 2017). Importantly, it is argued that NAMS benefit especially from interaction in class, as they are still acquiring the language of instruction.

### ***Purpose***

Against this backdrop, the present study sought to better understand NAMS' experiences with interaction in online learning environments during ERT, in the context of Flemish secondary schools. The following research question was addressed: *How do NAMS in upper secondary*

*education perceive the impact of ERT on learner-content interaction, learner-teacher interaction and learner-learner interaction?*

## **Method**

### ***Ethical Considerations***

Prior to the research, the first author's university ethical committee granted institutional review board approval based on a detailed research plan reflecting on the study's ethical aspects. School counsellors were given an information sheet about the study, which they provided to prospective participants. This sheet offered information about the study goals and participation. Moreover, it informed participants that the focus groups would be audio recorded for transcription purposes and explained how anonymity would be guaranteed. The information sheet also guaranteed the protection of participants' personal information and reassured participants that they could refuse participation at any moment. In addition, the information form declared that participants could withdraw from the study at any point, without any consequences in terms of their school results. Lastly, the primary researcher's contact information was provided so participants could get in touch with any additional questions. Pupils who agreed to participate signed an informed consent form. Students who were minors at the time of data collection were given an additional information sheet for their parents, who signed the informed consent sheet prior to their child's participation. Anonymity of the study participants and locations was assured by using pseudonyms and descriptions in the transcriptions and the reported data.

### ***Participants***

Our research was carried out in six secondary schools in Flanders, Belgium. The study required NAMS who attended remote classes half of the time as participants. High school pupils were

the only ones to take ERT classes 50% of the time, and schools offering a vocational track often deviated from the ERT rules in order to organize hands-on classes. We thus sought to include in our study NAMS who were in high school and following a technical or general track course. In order to identify our sample, we contacted two reception education schools<sup>3</sup> in city A (a Flemish medium-sized city) to determine the secondary schools to which most of their NAMS transitioned after finishing reception education. We received a list of ten schools and contacted them, after which four agreed to participate. As we wanted to conduct more than four focus groups, we expanded our study to small cities B and C, as they were located in the same province as city A. In both of these small cities, we contacted one large school with a NAMS population that met our inclusion criteria. Both schools B and C participated in our study.

In each school, a student counsellor was contacted and informed about the study. We asked each counsellor if we could visit the school to undertake recruitment of participants, but this was not possible due to COVID-measures. Each counsellor thus recruited a group of NAMS for our study. It is important to note that this may have impacted the selection and the profile of participants: counsellors may have selected pupils who were more easy to reach, more responsive or more fluent in Dutch. In total, 23 NAMS (5 male, 18 female) agreed to take part in the research. All participants were between 16 and 20 years old and had finished their reception education one to five years prior to data collection. Most participants were following a technical track. There was a diverse range of primary first languages within the participant population, including Arabic, French and Persian.

### ***Data collection***

Each participant took part in one of six in-person focus group interviews, one in each participating school. In order to provide a safe environment where vulnerable pupils would feel

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<sup>3</sup> Reception education schools in this context are schools providing separately-organised reception education classes for NAMS.

as enabled as possible to share their experiences, focus groups - rather than individual interviews - were chosen as a data collection method (Guest et al. 2017). Moreover, as the focus groups were conducted in Dutch, which was the participants' additional language, peer scaffolding could facilitate the interaction between the participants and the interviewer.

The focus group interviews were semi-structured. They were based on a predetermined interview schedule, but the interviewer allowed for additional themes to be brought up by the participants. The interview schedule was centred on gaining the participants' perspectives on their experiences with online interaction, online participation and their perceptions of the possible impact of remote teaching on their Dutch proficiency. It included questions such as “*What do you think of when I say: online classes?*” and “*What has ERT changed about the way you feel in your class group?*”. As the interviews were conducted in Dutch, the interviewer sometimes needed to repeat or clarify questions. Overall, however, the communication during the interviews was relatively fluent.

### ***Data analysis***

All interviews were audio recorded and transcribed verbatim. Data were analysed qualitatively, with the analysis based on the Constant Comparison Method (CCM). CCM ‘combines inductive category coding with a simultaneous comparison of all social incidents observed’ (Goetz and LeCompte 1981, 58). In other words, through building categories, relationships within the data can be discovered. The data were coded using qualitative data analysis software (NVivo 12; QSR International Pty Ltd 2020). To explore the data, the first and second author independently carried out the initial coding process using open coding. Next, they grouped together codes in order to synthesize the data into coherent categories: for instance, codes such as ‘webcam’ and ‘emails’ were combined in an overarching category ‘technical aspects’. This finalised codebook was then used by the primary researcher to recode the data.

To support consistency of coding, we undertook reliability checks as part of our procedure (Memon, Umrani, and Pathan 2017). As part of this, a research assistant was recruited and trained on how to code the data using the codebook. After the research assistant had coded the data, any inconsistencies that were identified (e.g. mixing two coding categories) were discussed and ultimately resolved by going over the codebook again. Eventually, the proportion of agreement between the research assistant and the primary researcher's coding was calculated. This inter-coder reliability of  $K = 0.92$  was considered high (Fleiss, Cohen, and Everitt 1969). The last step of the process was to interpret the data by means of the codebook and categories (see Appendix). The primary researcher analysed the coded data by relating the coding categories to the three interaction types. The participants' experiences with these interaction types were interpreted by the primary researcher through the most broadly-discussed coding categories, i.e. themes that were discussed by participants in various focus groups.

## Findings

The in-depth, qualitative analysis gave insight into the NAMS' perceptions of the impact of ERT on their learning. In the subsections below, the study findings are presented thematically: for each interaction type (i.e. learner-content, learner-teacher and learner-learner), we interpret participants' experiences by referring to the most broadly discussed themes that emerged from the analysis. We also present participants' reflections on how ERT had affected their Dutch language proficiency. The main findings are further illuminated by the inclusion of brief quotations from focus group participants. These anonymised quotations have been translated from Dutch (and slightly adjusted where necessary for readability).

### ***Learner-content interaction***

In terms of learner-content interaction, the analysis indicated that participants mainly discussed their workload, their focus during online classes, the combination of online and offline classes and their autonomy during ERT. First, participants' perception was that ~~that~~ during ERT their workload was higher than it had been in their non-ERT education. Nearly all participants agreed that self-study tasks comprised the bulk of the additional workload. According to some participants, the higher workload was caused by the combination of online and in-class education, explaining that ERT consisted of many self-study tasks, while days in the classroom were often largely devoted to tests. As one participant observed:

The problem is not that it's face-to-face or remote teaching. The problem is that *the combination of everything* is working against each other. That *makes your time little* and because there is a combination of the two, you have to work for two things at the same time. That's just difficult.

Moreover, because of the high workload, some participants believed they were not able to perform as well in school as they were prior to ERT, with another participant commenting that 'My results have dropped (...) because of these tasks. I cannot hand in all tasks'.

In addition, many participants reflected that they felt they had difficulties staying focused in synchronous sessions. This was attributed to a perceived lack of control from the instructors; participants explained that, as teachers could not see what their pupils were doing as cameras were switched off, this could lead to students getting distracted by their phones or computer devices. Participants considered, too, that it may be difficult to pay attention to what instructors were saying in situations where the instructors could not be seen: according to the participants, many teachers had their cameras turned off or primarily shared the learning materials on screen.

Furthermore, the absence of non-verbal cues in instances when teachers' cameras were not turned on was spontaneously mentioned as a specific disadvantage for additional language learners. Some participants commented that non-verbal cues would be especially necessary for

non-first language speakers to better understand the speech of the instructor. Thus, the inability to see the instructor through a computer screen complicated this non-verbal interaction, and therefore also the processing of subject matter. Interestingly, while the *quantity* of learner-content interaction was reported to have increased during ERT, participants suggested that the *quality* of the interaction had decreased.

The analysis identified that, throughout several focus group interviews, learner-content interaction was linked to autonomy. According to the participants' views, the higher workload and, therefore, the higher amount of learner-content interaction led to an increased expectation of autonomy in school-related work. For a few participants, this was a positive aspect of ERT: i.e. it supported them to become more independent and responsible students. However, others suggested that the greater expected autonomy went in tandem with a reduction in quality learner-content interaction, for example through the lack of corrective feedback. One participant described this as follows:

Participant: Sometimes when we receive tasks, we don't have to upload them and then we also don't get a key and then *I don't know if I did something right* or...

Interviewer: And if you were to do a task in class, would you get the key then?

Participant: No, but we would go over it together.

In sum, the analysis indicated that participants felt that the perceived quantity of learner-content interaction increased during ERT, mainly in the form of self-study tasks to be completed autonomously. At the same time, the perceived quality of learner-content interaction decreased due to the participants' higher workload and their lack of focus in online synchronous sessions.

### ***Learner-teacher interaction***

Learner-teacher interaction was the subject of intense discussion during the focus groups. These deliberations centred on the topics of speaking opportunities, willingness to interact, asking questions and autonomy. Participants reported experiencing an asymmetry in learner-teacher interaction, with there mainly being an information flow from the instructor to the learners,



which seems to have led to a lack of speaking opportunities for learners. For example, one participant described how a one-way information flow from the teacher to the students seemed to leave little room for learners to interact with their teachers:

Teachers give *so much information themselves* and then you can't ask something or say something or *the teacher does not ask you anything*. Then I just have to take notes and concentrate.

This student's experience represents something that was evident amongst other participants: several participants indirectly discussed how they received fewer speaking opportunities in online classes than in the physical classroom. According to participants, several teachers reportedly turned the students' microphones off so that they would not disturb the live session.

It was noteworthy that many participants reported not only a lack of speaking opportunities, but also a decreased willingness on the part of students to interact with their teachers. As one participant described:

In class [teacher] says 'are you following?' And then there is someone who will say it anyway but during a live session the pupils are just on their phone or something (...). *Nobody answers his question* and he just moves on.

In contrast with the student quoted earlier, this participant's teacher seemed to create speaking opportunities in the online classroom, but pupils did not seize these opportunities as an invitation to interact. According to our analysis, three reasons were given for this reduced inclination to interact: (i) Interaction was impeded because the instructor could not see the pupils during online classes; (ii) Speaking in an online classroom environment was considered 'exposing': as one student explained, 'You're more exposed to your classmates when you ask questions. Because uh they listen more. They can hear you more.'; and (iii) Participants did not interact with their teachers because they were not paying attention to what was going on in the online classroom.

Another heavily-discussed aspect of learner-teacher interaction was asking questions. In general, the participants considered that they tended to ask questions less frequently in online

classes than in the physical classroom, because they believed asking questions would interrupt the information flow. This was described by one participant as follows:

If there's something I don't understand and I then ask for clarification... [teacher] explains, I still don't understand. Then *I just keep silent because I'm disturbing [teacher]*.

About half of the participants resolved this by asking their questions at a later time in the physical classroom. However, the other half reported that they never asked questions or never asked for clarification on subject matter they did not understand.

Participants thought that they generally experienced a higher expectation of learner autonomy by teachers during ERT, in comparison with the physical classroom. This seemed related to the lack of learner-teacher interaction. One participant compared learner-teacher interaction when receiving a task online versus in the classroom. This participant described being expected to work more autonomously in the online than in the physical classroom, which translated into receiving less help from teachers:

*The help that we receive is really small (...) in comparison to what we have to do. We receive such big tasks and the help we get is just a little Word document with the line 'this task has to be uploaded by this date'. That's all. But when you're in class you can just ask your questions.*

Although the data reflect a decreased level of learner-teacher interaction in online classes, this does not imply that the participants did not enjoy interacting with teachers. On the contrary, when asked about their favourite online classes, a few participants mentioned as favourites classes with a high amount of learner-teacher interaction. In one of the focus group interviews, participants explained how a teacher would ask pupils to share what they remembered of the online session, at the end of the class. As one student put it, 'After class (...) we have a minute to type everything in the chat box. (...) And we have to write key words that still...' and another student continued '...That we've just seen. (...) It's a way *to prove to [teacher] that we were paying attention*. Not just "ok, class is over, bye see you next week"'.

In sum, participants reported that they experienced a lack of learner-teacher interaction in online classes, with most participants considering that there were few or no speaking opportunities in the online setting. Moreover, some felt that they experienced a reduced inclination to interact with teachers. Because of the absence of speaking opportunities and the decreased willingness to interact, some participants reported not talking at all during online synchronous sessions.

### ***Learner-learner Interaction***

Discussions of learner-learner interaction mainly revolved around issues of interaction within the classroom, interaction beyond the classroom, working together, and classroom atmosphere. In terms of interaction within the classroom, most participants only mentioned staying in touch with peers via private, commonly-used online messaging services, where they discussed what was happening during the live session. The online learning platform thus rarely seemed to be used for peer interaction, as, according to the participants, teachers did not allow spoken communication between learners in the online classroom. Some participants indicated that this was essentially a technical issue: the online learning platform did not usually support several microphones and cameras being turned on at the same time, so teachers requested that the students to turn these off during live sessions. It is possible that the use of breakout rooms could offer some kind of solution for these technical issues, but only a few participants mentioned these being used as part of synchronous online classes.

Verbal peer interaction therefore mainly took place outside of the online classroom, usually in the form of group tasks, where students explained, the expectation was that they should work together without the teacher's help. Generally, participants seemed to enjoy working together with peers. As four participants mentioned, this meant they could 'share ideas' and, as another noted, 'brainstorm'. However, one participant observed that they did not enjoy

group tasks, because the language barrier between this participant and their peers seemed to slow down the process of the group.

The topic of class atmosphere was discussed several times. According to some participants, the class atmosphere of the physical classroom was itself affected by the lack of online peer interaction. Two participants discussed how ‘being alone’ had become a habit, which caused pupils to interact less frequently when they were physically at school. As one of the participants reflected:

Previous years, *we were really talking more*. But now in the break, everyone is on their phone because we are used to just being on the phone in the break and no one talks because you have less contact with people.

whilst the other participant observed, ‘It becomes *a habit to always be alone*. And when we are always alone, then you’ll say “I also want to be alone at school”’.

In conclusion, participants reported few opportunities for learner-learner interaction during online classes. Talking to peers in an online class was often reported not to be allowed. According to the participants, peer interaction was only possible in the form of group tasks. However, these group tasks mostly took place after classroom hours with little guidance from the instructor.

### ***Reflections on ERT and additional language acquisition***

As discussed in the subsections above, participants felt that they experienced less interpersonal interaction during online classes. Because interaction can facilitate language learning, we wondered how participants perceived the impact of ERT on their additional language acquisition. Participants agreed that their Dutch language proficiency had not developed throughout ERT. About half of the participants argued that their language skills would have improved if they had had fulltime face-to-face instruction in the physical classroom instead of blended online learning, because they felt there was a higher amount of speaking opportunities and better focus in the classroom. As one student put it, ‘In online classes, you don’t talk a lot.

And when you're not focused, you're thinking less. So your Dutch will not improve'. This suggested that many participants seemed to place value on physical in-classroom interaction for additional language acquisition.

## Discussion

This paper has reported on the analysis of qualitative data from focus groups with 23 NAMS in six Flemish secondary schools. It focused on the NAMS' experiences with interaction in an ERT context. In doing so, it offers in-depth consideration of the voices of a vulnerable student population. In the discussion below, we seek to contextualise and interpret our findings and their implications with reference to the wider literature.

According to Bernard et al. (2009), the effectiveness of distance teaching depends on the quality and quantity of interaction. In our analysis, we applied this to ERT by operationalising three types of interaction as described by Moore (1989): learner-content, learner-teacher and learner-learner interaction. In terms of interaction with learning content, it is interesting to note that teachers in the study by MacIntyre, Gregersen and Mercer (2020) reported lack of training and preparation time in relation to ~~to~~ additional workload for teachers. In our study, students felt that they had a higher workload during ERT, feeling that learner-content interaction increased substantially in the online classroom due to a higher number of tests and self-study tasks. Additionally, Yılmaz et al. (2021) report an absence of non-verbal cues and teachers not being able to observe the classroom in online ERT classes. This resonates with our study, where students indicated a lack of non-verbal cues and less visibility by teachers. Students in our study felt that the sense of focus was decreased, which chimes with an issue reported in Thomas et al. (2021).

Participants ~~in~~ our study felt that they experienced a lack of learner-teacher interaction in ERT. This appeared to be linked to a disinclination to interact with their teachers, as students

felt uncomfortable when communicating with teachers through a microphone, and students reportedly engaged less actively in online classes. This lack of student participation reflects earlier findings by An and Thomas (2021) and, in addition, highlights a link with a reported absence of speaking opportunities for learners in the online classroom. In terms of learner-learner interaction, one pupil in the study by Thomas et al. (2021) reported feeling disconnected from peers due to not being able to talk to them in online classes. Our study found similar results: talking to peers in the online classroom was not allowed, which reportedly negatively affected the class atmosphere. Furthermore, the part-time education in the physical classroom does not seem to have compensated for the lack of interpersonal interaction during online classes.

Although all the interaction types may contribute to the effectiveness or otherwise of distance education, a question arises as to what extent they would need to be implemented for online learning to be successful. According to Anderson's Equivalency Theorem, not all types have to be strongly embedded in distance education for it to lead to successful learning: 'Deep and meaningful formal learning is supported as long as one of the three forms of interaction is at a high level' (Anderson 2003, 4). When one interaction form is heavily implemented in a course (in this case: learner-content interaction), it may perhaps be the case that the other two could be brought to a minimal level without having undue influence on the educational efficacy of the course. Nonetheless, our study suggests that the participating NAMS felt that the combination of high levels of learner-content interaction and a lack of interpersonal interaction in online classes was less conducive to learning compared with their experiences in the physical classroom. The participants considered that there was a high expectation for learner autonomy by teachers, which, in combination with a lack of learner-teacher interaction, may have influenced the quality of experiences. Although autonomy may be defined as the learner's capability to control one's learning process (Fedj and Bouhass Benaissi 2018), it is important

to consider this in context. While learning autonomy is undoubtedly an important skill for students to learn, the participating NAMS were very abruptly expected to learn autonomously due to the unexpected implementation of ERT, which most participants indicated they did not feel ready for. It is also the case that NAMS might be more negatively affected by a lack of interpersonal interaction than would be the case for other students. When NAMS enter regular secondary education, they are still in the process of learning Dutch and of socially integrating in Flemish society. Because there was less interpersonal interaction, ERT appeared to make it more difficult for the participating NAMS to work on their language acquisition. Moreover, the limited peer interaction in the online classroom seemed to have seeped through into the physical classes, which reportedly led to further limitations on opportunities for interaction.

### ***Limitations***

While this qualitative study provides in-depth insights in NAMS' experiences with interaction in ERT, it has some limitations. The study focuses on a limited number of participants; it is possible that the counsellors responsible for recruiting participants selected pupils with certain qualities, such as a fluent Dutch proficiency or a positive attitude towards learning, which might have influenced the study findings. Moreover, as this study solely focus on the perceptions of NAMS, it remains unclear whether NAMS' experiences of classroom interaction during ERT differ from those of other students. There is therefore a need for further, larger-scale research to investigate this important area.

## **Conclusions**

This study has allowed us to gain insight into the learning experiences of NAMS during the unprecedented period of ERT, when Flemish secondary schools moved to part-time remote teaching due to the Covid-19 pandemic. It is clearly important to bear in mind the difficult

circumstances in which the ERT took place, placing unfamiliar and unexpected demands on teachers and students alike. The sudden, widespread implementation of ERT certainly posed considerable educational challenges: for example, teachers across many educational systems worldwide were expected to deliver ERT without necessarily having training, professional development or support. Moreover, during the pandemic, concerns about health and social distancing were extra stress factors for students and teachers (MacIntyre, Gregersen, and Mercer 2020). Thankfully, ERT was a temporary measure. However, it is possible that some of the insights gleaned from analysis of ERT experiences during the pandemic may be of value more widely.

As discussed at the start of this paper, there is evidence to suggest that the move to ERT disproportionately impacted underprivileged communities and worsened existing educational inequalities. Given that NAMS represent an underprivileged group within the Flemish school population, it is vital to understand their learning experiences. Overall, our detailed analysis of NAMS' perceptions of learning during the period of ERT highlights the significance of interactive learning and the importance of supporting the learning needs of this underprivileged group within the school population.



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## 1. Appendix

**Table 1.** *Details of the codebook from the analysis process (translated).*

Code name	Description
<b>General impression online vs. on campus</b>	The students share their general impressions of and experiences with online classes, and compare online classes to on campus classes.
Presence	The students discuss their presence in online classes.
Combination online and on campus	The students discuss the combination of 50% online and 50% on campus classes.
Focus	The students discuss their focus and concentration during online and on campus classes.
Additional learning moments	The students discuss the additional learning moments their teachers organize for them.
Characteristics good and bad online class	The students discuss what they think makes an online class good or bad.
Difficulty	The students discuss the difficulty of online classes compared to on campus classes.
Boring	The students discuss the dullness of online and off campus classes, and what it is that they find boring.
Spontaneous associations online classes	The students discuss what they think of when they hear the term 'online classes'.
Class pace	The students discuss the pace with which teachers share the subject matter in online classes and in what way this differs with the pace in on campus classes.
Workload	The students discuss the workload they experience during ERT: how many tasks and tests do they get, how long do they take?
<b>Communication with teacher</b>	The students discuss their communication and interactions with teachers during online and on campus classes.
Clarity	The students discuss the clarity of teachers in class: when is the teacher most clear? what makes a teacher clear?
Speaking opportunities	The students discuss the speaking opportunities teachers give them in online and on campus classes.
Supralinguistic cues	The students discuss (the importance of) their teachers' body language.
Asking questions	The students discuss the questions they ask during class: when do they ask questions? how? how often? how do their teachers answer these questions? They also compare asking questions online versus in the physical classroom.
Willingness to interact	The students discuss to what extent they want to interact with teachers: do they want to react to speaking opportunities? why/why not? do they dare to speak? The notion of "wasting the teacher's time" is also captured here.
<b>Communication with students</b>	The students discuss their interaction with peers during online and on campus classes.
Interaction beyond the classroom	The students discuss the way in which they're in contact with peers beyond the classroom.
Interaction within the classroom	The students discuss the way in which they interact and communicate with peers in the classroom.
Working together	The students discuss how they experience working together with peers, for example in a group task or a collaborative assignment in class.
<b>Consequences ERT</b>	The students discuss the consequences ERT has had.
Productivity	The students discuss in what way and to what extent ERT has had an influence on their productivity.
School results	The students discuss in what way and to what extent ERT has had an influence on their school results.
Stress	The students discuss the stress they experience due to ERT.
Autonomy	The students discuss the autonomy in their school-related work they have experienced since ERT.

<b>Relaxing time</b>	The students discuss what they do to relax in times of ERT.
<b>Language</b>	The students discuss everything that has to do with language inside and outside the (online) classroom.
Impact L2 on processing	The students discuss the fact that they have a different first language than Dutch and to what extent this has disadvantages in terms of the processing of learning materials.
Impact online classes on Dutch language acquisition	The students discuss in what way and to what extent online classes have had an impact on their Dutch language proficiency.
Implicit learning	The students discuss how they can pick up Dutch beyond the classroom.
Metalinguistic strategies	The students are very aware of their so-called 'linguistic foreigner' status. Here they discuss which strategies they use to deal with this and what strategies they use to improve their Dutch skills.
Ready for regular education after reception education	The students discuss learning a language in reception education, if they were linguistically prepared for regular secondary education after reception education, and the evolution of their Dutch proficiency after reception education.
Language barrier in communication	The students discuss the language barriers they do or do not experience when interacting with teachers and peers, and how they deal with them.
Conditions second language acquisition	The students discuss what they believe are the conditions to learn a language.
<b>Technical aspects of online classes</b>	The students discuss the technical aspects of following classes online.
Audio	The students discuss the audio quality during online classes.
Camera	The students discuss whether their or their teachers' cameras are turned on, and what they think of that.
Communication and planning	The students discuss the communication with their teachers concerning planning tasks and tests.
The blackboard	The students discuss the importance of the blackboard in the classroom and the presence or absence of a blackboard in online classes.
Internet	The students discuss the issues they have had with their internet connection during online classes.
Online learning environment	The students discuss the use of different online learning environments during ERT.
Online test	The students discuss whether they have taken online tests.
Pre-recorded videos	The students discuss the pre-recorded videos they receive from teachers during ERT.
Wasting time	The students discuss the waste of time during online classes due to all sorts of technical issues.
<b>Wellbeing</b>	The students discuss how they feel in the classroom and in COVID-times.
COVID-measures	The students discuss the COVID-measures at their school and how these impact them.
Class atmosphere	The students discuss the class atmosphere in their class group and how they experience it.