

Gamified socializing in remote education

An exploration of the social affordances of the gamified conference platform Gather



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Abstract

Since the beginning of 2020, the COVID-19 pandemic has forced education to digital platforms. While the great influence gained by economically driven businesses is a problem, another important issue is the lack of social interaction between students in digital environments. Students experience a lower degree of connectedness in online settings compared to traditional, location-bound education. The present study aimed to investigate the gamified conference platform 'Gather' in terms of how it facilitates remote socializing, which is the use of virtual platforms to form relationships and experience relatedness with others. The platform's virtual interface has been analyzed by employing a discursive interface analysis. The functional, sensory, and cognitive affordances that enable social interaction and produce norms about it were evaluated. The results showed that Gather constructs social interaction by trying to replicate how it functions in real life. Two factors emerged most crucial. The first is proximity; interaction through video- and audio-chats is only possible if users are in each other's vicinity. The second is interactivity, as users have to move their virtual avatars through the interface, not only to interact with others but also to use objects, for example for collaborative work. These findings imply that a playful interface on conference platforms has the potential to come closer to replicating real-life interaction and thereby create a higher degree of relatedness between peers.

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Introduction

The COVID-19 pandemic has negatively impacted lives around the world. It impacted people's livelihoods (WHO, 2020), caused social isolation (Walsh, 2021), and moved a great deal of everyday life to online platforms. On the other hand, the pandemic has been an economical blessing for conference platforms such as Microsoft Teams, Zoom, or Google Meet. To give an example, Microsoft Teams more than doubled its user base from November 2019 to March 2020, from 20 million to 44 million users, and by the end of 2020 reached 115 million users (Curry, 2021). An alternative to these 'big players' is the conference platform 'Gather' (<https://gather.town>). Gather is a 2-dimensional virtual space, offering video, text- and audio-based communication. Users can create their own avatars and interactive spaces in which they can move around. Gather's virtual environment as well as some instrumental functions are inspired by videogame aesthetics, which offers a 'gamified' approach to virtual conference platforms.

Digital platforms have become a necessary tool to substitute portions of physical life, such as education. Home-schooling was realized quickly when the pandemic hit, with insufficient regard for the educational and social values of education (Kerssens, 2020). The (scholarly) debates concerning education as a public good being privatized through these platforms is fiercely ongoing (Kerssens & Van Dijck, 2021). Further, the social contact that happens in schools and universities has largely been relocated to these platforms as well. Interacting and being with fellow students is important for their performance as well as their mental health (Garibaldi & Josias, 2015; Jose et al., 2012). Even in mediated environments peers can be perceived. This 'social presence' can be achieved through video-transmission and leads to greater satisfaction and perceived learning (Aandel et al., 2020).

Social presence alone does not, however, encompass a feeling of social connectedness to others. Just like the public values of education, the social interaction and connectedness between students need to be considered for the future of digital or platform pedagogies. Platform pedagogies are digitally mediated pedagogies. They encompass the practices and values in education, which are influenced and altered by the platform on which the digital education takes place (Perotta et al., 2021). Digital platforms that are employed in educational settings need to be capable of accommodating the social needs of students, as social connectedness has been linked to positive academic outcomes (Bower et al., 2015). With its playful design, the conference platform Gather offers new ways to socially connect with others online. The platform makes use of elements that are reminiscent of videogames to create a playful environment that resembles real educational settings. Through these design choices, the

interaction between users takes a fairly different shape than on other conference platforms. Gather subjects social interaction on its interface to logics and restraints similar to those of real-life interactions. I coin the activity of connecting digitally with others 'remote socializing': the use of digital platforms or online environments in order to make, maintain and further relationships. Gather is an interesting object of research as its architecture constructs remote socializing in playful ways. This enriches the existing literature on gamified applications in educational settings by examining how social interaction is framed in such an environment. The aim of this paper is to analyze Gather in terms of its affordances while considering its gamified environment. The question I will be answering is: How do Gather's affordances construct remote socializing?

Theoretical framework

Digital platforms have found their way into different parts of everyday and social life; into public institutions, working life and education (Perotta et al., 2021) They are omnipresent and actively influence society (Van Dijck et al., 2018). This process of ‘platformisation’ is described as the “the penetration of economic, governmental, and infrastructural extensions of digital platforms into the web and app ecosystems” (Nieborg & Poell, 2018, p. 4276). Platformisation of education is not a new phenomenon, platforms such as Khan Academy offer digital education for over 10 years already (Khan Academy, 2020). However, the pandemic forced a majority of formerly physical education to take place online. This sudden shift to digital education has been termed ‘emergency pedagogies’ (Decuypere et al., 2020). The dependence on economically driven platforms forced students into a pre-established digital architecture of interfaces that do not (always) have educational and pedagogic interests at heart (Kerssens, 2020). These architectures decide what kind of activity is possible on a platform’s interface (Decuypere et al., 2020).

Social connectedness is an important part of education as it improves academic achievements and engagement, while also improving the social competencies of students required to form relationships (Bower et al., 2015). The impact of a lack of social interaction is especially notable during the lockdown: People that are already lonely experience an even greater deterioration of their mental health (Killgore et al., 2020). The research around emergency or platform pedagogies has explored how pedagogic participation of both teachers and students is changing through the use of commercial platforms (Perotta et al., 2021). However, the social interaction between students has changed through these platforms as well.

People are social beings; they have a need to be connected to others. According to the self-determination theory (SDT), people are intrinsically motivated to fulfill their own needs (Ryan et al., 2006) and their fulfillment is crucial for one’s mental health as well as success (Przybylski et al., 2013). Those needs are competence, autonomy, and relatedness, with the latter referring to the need for social connectedness. Remote socializing is built upon relatedness. To experience remote socializing is to feel related and connected to others on digital platforms. This development of relatedness, however, is significantly lower in online environments compared to on-location education (Butz & Stupnisky, 2017). Lower feelings of relatedness can reduce a student’s motivation to engage with school material and can consequently lead to decreased performance (Shi & Cristea, 2016). Platform pedagogies need to incorporate ways to support the forming of meaningful social interaction between students as they play a great role in their academic success.

Digital environments that provide valuable means to socially connect with others are those of videogames. While videogames as a form of entertainment media are not directly applicable to the current research, there are platforms that incorporate videogame aesthetics and design-elements. This phenomenon is called ‘gamification’. I will be using this term defined as "the use of game design elements in non-gaming contexts" (Bouca, 2012, p. 1). Gamification has found its application in many contexts, such as healthcare or education. Meta-analyses on gamification have shown positive results on its application in educational contexts (Dicheva et al., 2015; Sailer & Homner, 2020). The question arises whether the same positive results could be achieved in terms of remote socializing between students. Studies have shown that games which are played cooperatively (instead of competitively) have positive implications for one’s psychological well-being (Halbrook et al., 2019; Granic et al., 2014), they also offer a shared activity for offline friends that can strengthen their bonds (Domahidi et al., 2018). In a similar sense, working together with peers in gamified environments also has positive outcomes for relatedness (Sailer & Homner, 2020).

Research of gamification in education has largely focused on learning applications, not on its use in the context of a conference platform (e.g., Dicheva et al., 2015; Yildirim, 2017; Shi & Cristea, 2016). Platform studies might be enriched by researching a unique platform such as Gather, as it offers an unusual combination of approach (gamification) and application (conference platform). Platforms do not only have an architecture that permits certain actions, but they also act as intermediaries that regulate interactivity within this architecture (Decuyper et al., 2020). Decuyper et al. (2020) note that the opening of the ‘black box’ of digital platforms is necessary to understand how they function and how they create social possibilities. One such possibility is social interaction. By critically analyzing a platform, it is possible to determine the norms it creates about socializing and connectedness between users; what courses of actions it promotes and affords and which actions it does not allow. Through its gamified architecture that tries to replicate the logics of real-life interactions, Gather may hold the potential to allow for greater social connectedness. This could enrich platform pedagogies, especially in times where previously location-bound education needs to be digitized.

Method

To analyze how the affordances on Gather construct remote socializing, the platform's interface will be analyzed. For this purpose, I will use the discursive interface analysis by Stanfill (2005). In this approach, a platform or website is analyzed regarding the affordances it offers to its userbase. Those affordances set limits and expand possibilities for users at the same time. Through them, the website builds normative claims about how users, ideally, interact with it. Stanfill distinguishes three types of affordances for virtual interfaces: Functional affordances (what a site can do and allows users to do), cognitive affordances (the naming and labeling of elements in the interface), and sensory affordances (what can be sensed by the user). By examining the affordances that enable social interaction, I will determine what norms the platform creates in regard to social connectedness and by extension, remote socializing. Stanfill's approach is intended to be used on websites and while Gather is a website, it functions like a conference platform application. However, the method is still suited to analyze the interactive interface. Like a website, a conference platform's architecture is built with certain ideas about its use in mind. By examining how the different affordances enable users to interact with each other, it is possible to evaluate how the platform constructs a 'correct' or intended way to be used. This in turn will reveal how remote socializing is framed on Gather; how users are supposed to socially connect with each other.

In my analysis of Gather's interface, I will focus on the affordances the platform provides to fulfill the need for relatedness or social connectedness. To support the discursive interface analysis, notably concerning the gamified elements, I will use the *motivational gamification strategy* for relatedness by Shi and Cristea (2016). During the analysis, I will evaluate if Gather fulfills these strategies, which gamified applications can implement to fulfill the need for relatedness. Those five strategies are: (1) Opportunities to discover and join learning communities; (2) Connections of interests and goals between students; (3) Tools for interaction, collaboration, discussion, and mutual assistance; (4) Visualization of social status, reputation, and contribution; and (5) Supporting the display of appreciation of others.

Data collection

Gather itself is a website that provides users with options to join or create spaces. As the whole platform and its possibilities to build spaces exceeds the scope of this paper, the analysis will concentrate on the actual interface which allows people to interact with each other, as well as the prerequisite to joining such a space, the character creation. The elements that appear in the character creation as well as the Gather space were analyzed in terms of their functional,

cognitive, and sensory affordances. By doing so, it was possible to determine what each element affords and its purpose on the platform. Accordingly, the elements were sorted into two categories, those that influence the user, social interaction between users and social norms in any way, and those that do not. While the latter will not be considered, the former elements are then analyzed by applying the discursive interface analysis by Stanfill, as well as the motivational gamification strategies by Shi and Cristea. This will be done in steps by splitting the platform in three parts: the static menus, the (interactive) spaces and the objects within a Gather space.

It is important to note that the spaces in Gather (also called ‘Gatherings’) are highly customizable by the creator of each space. As such, the figures and examples I use to illustrate my analysis represent potential educational spaces and are not a definite representation of Gather’s interface.

Gamified reality

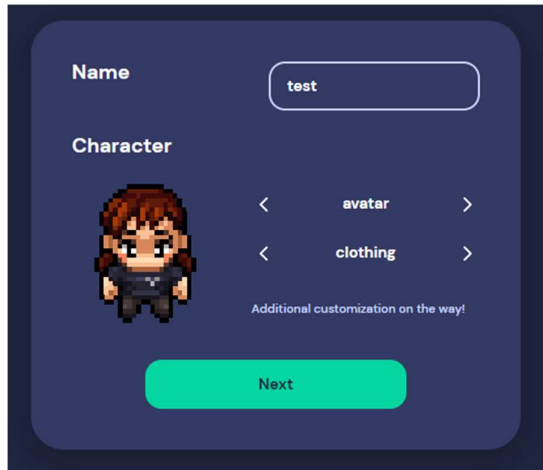
Gather frames itself as a digital replica of real-life interactions. I will argue that this is achieved through the interactions that are made possible by the affordances and the norms the platform creates around socializing. This analysis of the social affordances of Gather will be carried out in three parts. Each part plays a distinct role in creating social connectedness and promotes a sense of ‘offline’ socializing. In the first section, the static elements of the interface will be analyzed. Static in this context means that these elements cannot be altered by users and are the same in every space. They provide the basis for the interactivity happening in the spaces itself. The second section of the analysis concerns different kinds of interactive spaces within the virtual environments of Gather. It will focus on the affordances that enable social interaction and how the social norms established reflect the logics of real-life interactions. The last section is about objects on the interface itself and how they contribute to the established norms and support the feeling of real-life interaction through their design choices.

Static Elements: Character Creation and Menus

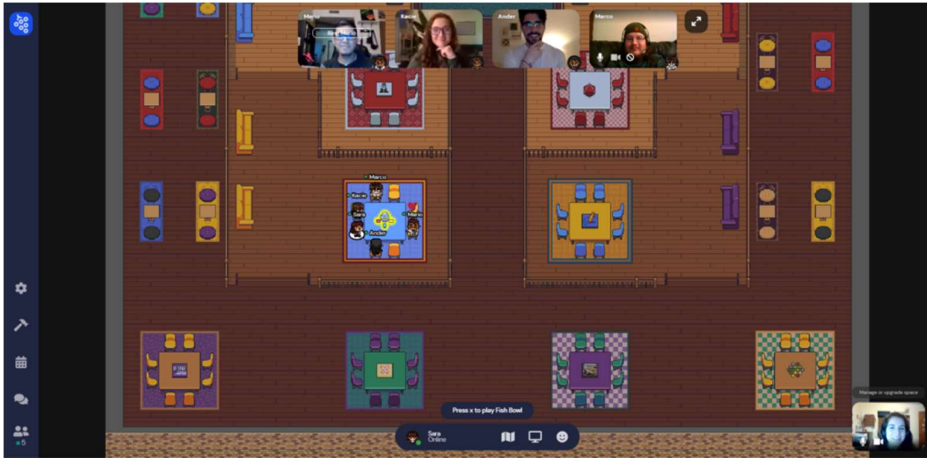
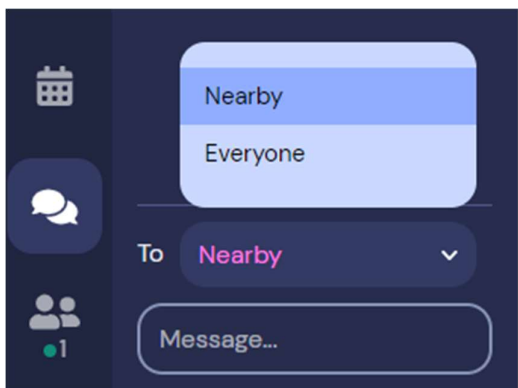
This section lays the groundwork for using any of Gather’s spaces. The static elements indicate that the platform’s emphasis lays on interaction with other users and the interface itself. The design choices reveal that the static elements play a subordinate role and that other forms of interaction are encouraged, rather than maneuvering menus and messaging people.

Character creation

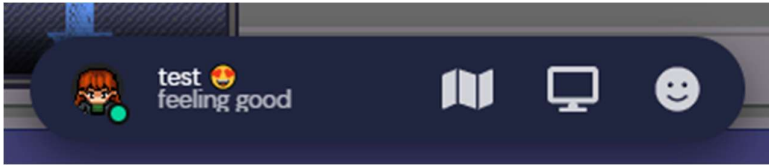
Prior to entering a space, the user is asked to create a character that will represent them on the Gather interface (Figure 1). They can pick a name as well as choose from several pre-set customizations to change their appearance. This is the first important sensory affordance, as the users will be virtually represented by their character even if their camera is turned off. It also stresses the importance of interactivity on Gather by offering users many possibilities to represent themselves virtually. The character creation and the use of an avatar is the first gamified aspect users encounter on the platform.

Figure 1*Character Creation**Sidebar menu*

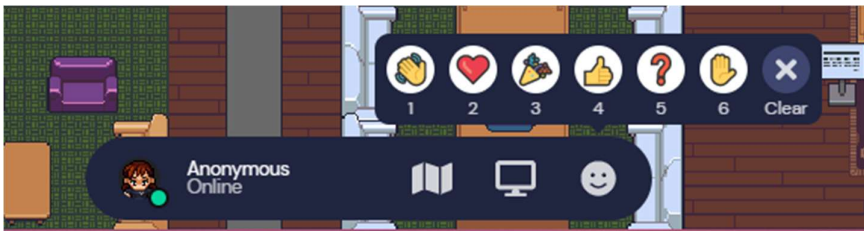
Once a character has been created and the user adjusted their video and microphone settings, they enter the actual space (Figure 2). The interface comes with two menus by default, positioned on the right and bottom of the screen. The sidebar menu heavily relies on sensory affordances. Icons indicate the functionalities; their associated names only appear when users hover the icon. Located here are the chat and participant icons. The chat, indicated by two speech bubbles, folds out once the speech bubble icon is clicked (Figure 3). Users have the option to message everyone, nearby users, or a specific individual. The chat is the only conversational tool with the functional affordance to contact any user, independently of their characters location. This is in stark contrast with the video- and audio chat, as will be elaborated on in the section ‘Spaces and Interaction’. The chat-icon and fold-out menu occupy a small portion of Gather’s interface and are not prominently placed within. This creates lower visibility, which is an indicator of low priority on a platform (Stanfill, 2015). The participants icon below the chat opens up into a fold-out menu showcasing every user in the space, including their character’s face. By clicking a user’s name, it is possible to send them a friend request, message them through the chat, locate and follow their character in the space. The option to send a friend request frames users as potential friends and promotes social connectedness. Through cognitive affordances such as the label ‘friend’, Gather is assigning its users identities (Stanfill, 2015). Both the chat and participants icons fulfill the third motivational gamification strategy for relatedness (abbreviated to MGSR in the following): They are tools for interaction and discussion with others (Shi & Cristea, 2016).

Figure 2*Gather space***Figure 3***Chat****Bottom menu***

The second menu is located on the center of the bottom of the screen (Figure 4). Users can change their name and character freely by clicking on their avatar's icon. The platform is not enforcing a consistency in how a user has to represent themselves, only that they need to do so in some way. It is thus possible to choose looks or names similar to peers to visualize their relation and create a feeling of relatedness.

Figure 4*Bottom Menu*

The emote icon to the right offers users six emotes that will appear above their character's head for a few seconds (Figure 5). The first four emotes have positive connotations, there is no option to express oneself negatively. The hand-emote is an exception, as it stays above the characters head until the user actively removes it. The emotes function matches the third and fifth MGSR as they can be used as tools to join a discussion or pose a question, as well as a display of appreciation of others.

Figure 5*Emote Menu*

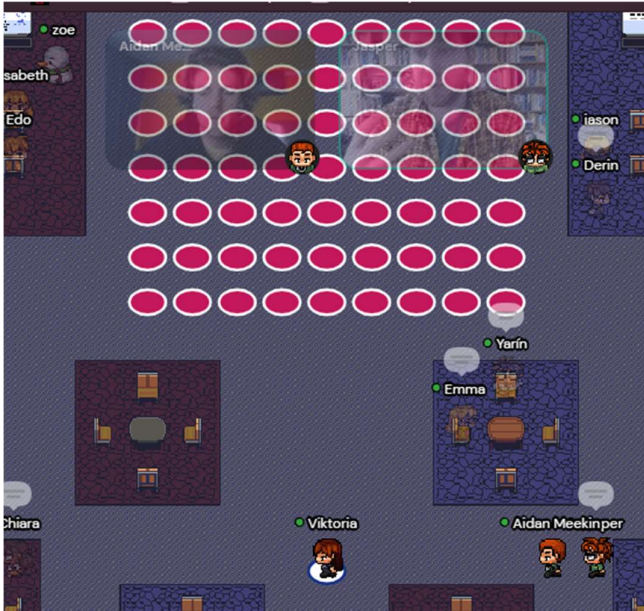
Both menus are icon-heavy, meaning sensory affordances play a greater role than cognitive ones. They assume a certain knowledge of the participants, as the names of icons only appear when they are hovered. As the only truly static objects that appear in every Gather space, the menus have a subordinate role in the interface. This is indicated by both their placement and size as they only occupy small segments of the interface. The social affordances they offer do not go far beyond textual interaction and the location of one another. This emphasizes the priority Gather assigns to the social interaction in the virtual space itself.

Spaces and interaction

Gather imitates real life in its interactive environment, it attempts to replicate the logics that ‘offline’ interactions are subjected to. The distinction between public and private spaces (and reflecting the associated interactions within each space) as well as proximity to other users are the most significant elements for interaction found on the platforms interface.

Public and Private Spaces

The virtual environments incorporate two kinds of spaces, public and private spaces. Public spaces are the default option. Here, users can see the video and hear the audio of other users if their character is within a certain range of another character. The video and audio-chat enable users to interact with each other, matching the third MGSR of offering tools for interaction and discussion. Both the audio and video transmission are based on proximity. Approaching other characters will faintly activate the audio and video on the top of the interface (Figure 6). The closer a character gets, the more conspicuous audio and video of others become, while moving away will have them fade. Both the video and audio are automatically discernible as soon as a user is in range of others, unless they actively mute them. The term public is in support of this functionality, the space behaves like a real-life public place: a user’s conversations can be heard by everyone around them. The sensory and functional affordances demonstrate one of the primary norms regarding social connectedness: The importance of physical proximity of users. Public spaces offer no option to video-chat with others unless they are close, mimicking the interaction of people in public setting in real life. This also contrasts with the use of the text-based chat which can be used independently of one’s location. However, the (automatic) visibility of the video and audibility of the audio, as well as their dominant placement and size, establish them as the main tool of communication on Gather. Even when not engaged in conversation with others, the platform constantly points out ongoing interactions of users in a gamified manner. A speech bubble above a character’s head indicates that the user is speaking in the audio-chat. This visual clue appears to everyone in the virtual space, regardless of their location. The content cannot be heard unless a user is in the right proximity; this sensory affordance invites people to join active conversations and connect with others.

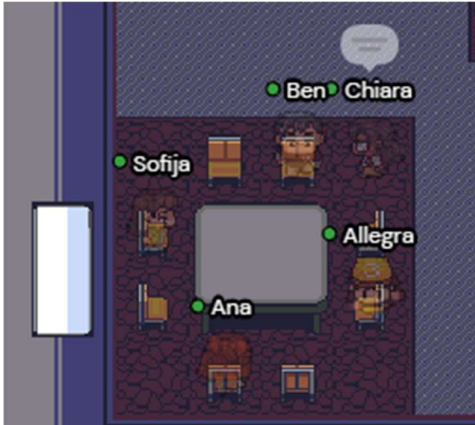
Figure 6*Faintly visible Video-Chat*

Private spaces perform under a somewhat different set of affordances than public spaces. Characters in a private space appear transparent to users outside of it, visually indicating that they are secluded from the rest of the space (Figure 7). The label ‘private’ in contrast to ‘public’ sets expectations about the space being more intimate as well. These expectations are met by the functional affordances within. Upon entering a private space, the video and audio of users inside automatically appear to everyone within at full opacity, independently of their location within that space. The platform enforces social interaction through video and audio as it does in public spaces, while also assuming people in the same private space will always want to interact with each other by permanently displaying everyone’s video and audio. Private spaces turn brighter than the rest of the virtual environment when entered, and users outside will not hear or see users within and vice versa. These sensory affordances make the distinction of private spaces from public ones more obvious. The seclusion creates a higher level of relatedness between users, as it offers greater opportunities to work and interact with others in the gamified interface of Gather (Sailor & Homner, 2020).

These design choices again resemble real-life interaction by mirroring how people come together in a non-public setting.

Figure 7

Users inside a Private Space



Location-independent interactions

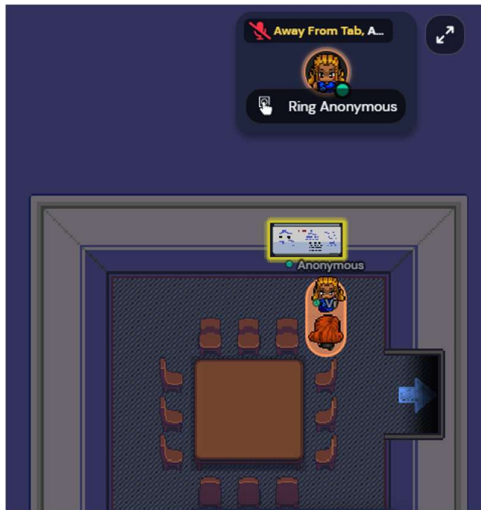
The norms that are created in both public and private spaces reflect those of real-life interactions. It is only possible to see or to talk to someone if they are in someone's vicinity, while being in a private setting with others carries the assumption that one surely wishes to interact with them. However, this social dynamic can be interrupted through the spotlight feature. A spotlight is a dedicated spot in a room that allows a user to automatically broadcast to everyone. It enjoys a prioritized position on the platform as it overrides the interaction regulations of private spaces. Users that are not using a spotlight are muted, but coming near the spotlighted user allows others to speak to them as per the regulations of a public space (they do, however, not get spotlighted themselves by doing so). The interruption caused by a spotlight impacts the current social interaction of users but, at the same time, adds a new layer of communication: the spotlight resembles a teacher speaking to the class or a keynote speaker beginning their presentation. The functional affordance of the spotlight assigns more dominance to a single user but keeps the real-life sense of social interaction intact.

A feature that has recently been added to Gather is conversation bubbles. By clicking someone's character, a user can start a video/audio chat with them, called a bubble. The cognitive affordance, the term bubble, implies a certain degree of privacy for the two users within the bubble. The bubble is also visually indicated by an orange oval below the characters (Figure 8). This might be misleading, as users in the bubble's vicinity will be able to faintly

hear and see those within, albeit never clearly. This new feature adds to the sense of ‘reality’ that the platform tries to create with every video- and audio-based interaction. Even in private conversations, people around might be able to hear what users within say. By making it possible to interact with one person independently of the space, the platform adds yet another feature to socially connect with others.

Figure 8

Conversation Bubble



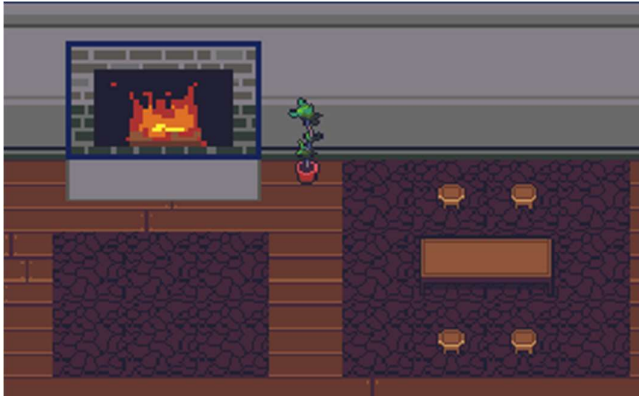
Objects

The virtual environments in Gather are composed of objects that resemble real-life furnishing in appearance and in part functionality. Although every space can be individualized, the objects that can be used to design a space are based on real objects. This ranges from office furniture such as chairs and laptops to tiki bars and fountains. For the purpose of the analysis, the focus will be on two overarching categories of objects, cosmetic (non-interactive) and interactive ones. The former constitutes the aesthetic or the design in Gather spaces. The pixel graphics of objects are reminiscent of (older) videogames, incorporated into a video conferencing platform. It emphasizes that Gather is a highly gamified platform, as game design is found in a non-gaming context (Bouca, 2012). At the same time, the cosmetic objects construct the impression of a real-life space. Objects are named after their real-life counterparts and resemble them visually (Figure 9). Those purely sensory and cognitive affordances are in support of the norms that gather creates around social connectedness. Just as with the interaction of users, the environment tries to look like real-life classrooms, or offices, to replicate a feeling of real-life

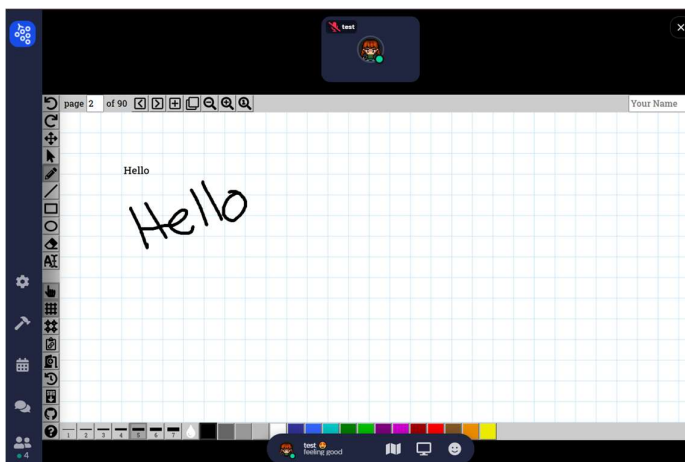
social interactions in equivalent settings. To give an example; a character cannot sit on chairs, the functional affordance to do so is missing, the character will merely ‘stand’ on the graphic model of the chair. The sensory affordances, an arrangement with chairs and tables, invite users nevertheless to use them as one would in an offline setting.

Figure 9

Example of non-interactive Objects



The sensory and cognitive affordances of interactive objects go beyond those of non-interactive objects. Visually they appear to be the same, however, approaching them causes them to be surrounded by a yellow rim (Figure 10). This is indicative of any object that can be interacted with, examples being stacks of notes, whiteboards, posters, and bulletin boards. Not only do they reflect their real-life counterparts visually, but they also resemble them functionally. In most objects, images or text can be embedded to be viewed by other users. Whiteboards are especially interesting, as they match the third MGSR of offering opportunities for collaborative work which fosters relatedness. Unlike the other interactive objects, the content on whiteboards can be altered by every user in its vicinity. The interface of the whiteboard takes over the screen when interacted with, only leaving the static menus and video-chat visible (Figure 11). This prioritizes the use of the object over the Gather space itself, while maintaining the prominent position and size the platform assigns to video-based interaction.

Figure 10*Interactive Object***Figure 11***Whiteboard Interface*

Conclusion

The platformisation of education and the lack of social interaction, both subjects that gained a lot of attention due to the COVID-19 pandemic, are what gave rise to the research about Gather. The platform was analyzed closely to determine how the gamified conference platform constructs remote socializing. This was done by looking closely at its functional, sensory, and cognitive affordances as well as the norms they produce. The findings revealed that the platform attempts to replicate real-life interactions through two means, proximity and interaction. Users are subjected to ‘constraints’ similar to offline interactions when interacting with other users on the platform. In this case, the emphasis is on proximity: others can only be talked to when they are in a user’s vicinity, or when they are in a private space with them. Furthermore, Gather stresses interactivity through its design. Users have to move their avatar in the interface to interact with others, but also to interact with objects such as whiteboards. If a user were not to move, they could only access the text-based chat, which the analysis has shown to have a subordinate role on the platform as this does not support the real-life imitation. Considering these findings, it could be argued that the slogan presented by Gather’s website rings true: “Spend time with your friends, coworkers, and communities like you would in real life”.

It is through the interactivity that Gather offers more than a feeling of social presence, compared to a purely video-chat focused platform (Aandel et al., 2020). Gamification on the platform is visible in both the design and the possibilities for interaction, such as the creation of an avatar or the use of objects in the space. As the analysis demonstrated, the social elements found in the Gather interface are intended for user interaction and collaborative work. There are no leader boards, no badges to be earned, nor any other signs that might induce competition. The focus on cooperation has been shown to have positive effects on players in videogames (Halbrook et al., 2019; Granic et al., 2014), which possibly translates to users in the gamified environment. The motivational gamification strategies for relatedness that were found lay emphasis on this as well. The third strategy, which concerns tools for interaction, collaboration, discussion, and mutual assistance, emerged most prominently on the platform. Through the affordances described in the analysis, Gather creates social norms that attempt to foster connectedness. Even when a user’s camera is turned off, they are still represented through a virtual character in the interface. Said character has to be moved to different spaces and objects in order to interact with them and others. This required proximity to users replicates the closeness one has to have to peers in an offline environment. This can help a person feel more

connected to others (especially in comparison to solely video-based conference platforms) which would lead to a higher degree of relatedness (Ryan et al., 2006).

This research was conducted to add to the existing body of research around the platformisation of education, as well as platform pedagogies. Social connectedness plays an important factor in this, as it affects both the mental health and the performance of students (Przybylski et al., 2013; Shi & Cristea, 2016). The analysis of Gather's social affordances illustrated how a conference platform can construct social interaction that resembles the 'logic' of real-life interactions. Through its gamified design, the platform places users in a virtual environment which is likely what sets it apart the most from the 'big player' conference platforms. The similarity to offline interactions might have the potential to increase the feeling of relatedness between peers which is usually perceived as lower in educational online settings (Butz & Stupnisky, 2017). This may provide a solution to the commonly found problem of low feelings of relatedness in digital education. These findings might help other conference platforms that are used in educational settings to enhance the feeling of connectedness between students. At the same time, it can help educational institutions to make well-informed choices in selecting a platform that is supporting the social needs of their students. Further, research into gamification in education has widely focused on the utilization of gamified elements in learning applications. The current research on Gather implies that gamification can have positive effects on feelings of relatedness of students and thereby also on student performance in settings that are not solely focused on learning.

Discussion

The critical interface analysis of Gather focused on affordances that enable social connectedness between users. The lack of existing literature on the platform made an explorative, qualitative approach most suitable. Considering the critical approach to studying the platform, it did not involve studying actual users that interact with the interface. The results of the current research allowed to draw conclusions about the ideal Gather constructed of social interaction in its virtual environment, what norms are created, and how affordances shape this architecture. This research, however, did not have the scope to provide insights into the extent to which users truly experience social connectedness with others. The motivational gamification strategies of Shi and Cristea (2016) turned out to be less applicable than anticipated to the current research. While it confirmed that the platform has a strong emphasis on interaction and collaborative work, most of the strategies were not found on Gather. This is likely due to the fact that these strategies originated in the research of learning applications. Conference platforms have a different architecture and are utilized for other purposes than learning applications, even if they are both gamified.

Further research could investigate these qualitative findings on Gather in an experimental study to determine if, and to what degree, the platform achieves an environment that fosters the creation of relationships and meaningful interaction. Alternatively, an ethnographic study could look into the social practices of the platform in an educational setting. This could lead to observations outside of the scope of the current research and thus yield valuable insights about the role the gamified elements play in the authentic use of the platform. Lastly, as Gather is fairly unique as a gamified conference platform, a comparative study with platforms such as Microsoft Teams or Zoom could reveal the differences, but also similarities of the platforms with regard to social interaction. This has the potential to further the research surrounding platform pedagogies through discovering improved ways for students to feel connected to one another. Furthermore, this could verify the role gamification plays on conference platforms and develop the body of research around gamification in education.

Although the current research cannot assert to what extent Gather fosters social connectedness in its real-life application, it gave valuable insights into the opportunities offered to connect with others and how the platform constructs norms around social interaction. These indicate that socializing on the platform will be interactive and through that, reminiscent of offline interactions. Gather positions itself as the provider of an environment that offers a playful substitute for the real world. This paper not only disclosed the social structures of

Gather, but it also highlighted the importance of feeling related and thus experience remote socializing in online education, even after the pandemic.

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