'Stream and Learn': An Experiment to Reconnect Design Students with Theoretical Contents during the Pandemic

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Abstract

As most GenZ and Millenial students now study at home, young people have shifted their media content consumption, with streaming platforms being among GenZ and Millenials favorites since the first lockdown. Could 'Netflix and chill' be turned into a creative learning activity for design students? As theoretical online learning is often associated with unliteral conference calls with no participation from students, we propose an experiment where joining an activity related to relaxation or even procrastination is the basis for a group assignment for design students. We will first address the curricular unit itself and how the pandemic ensued a new organisation around a specific assignment to motivate students on a multidisciplinary level by exhibiting their work online. We will then assess the results obtained in a satisfaction inquiry of the design students (N=70). Results show that online theoretic learning can incorporate multidisciplinary content and interactivity through existing platforms.

Introduction

The COVID-19 pandemic has changed the dynamic of universities for everyone involved, the students being, of course, the first ones to suffer the changes brought by the pandemic, especially their mental wellbeing (Savage et al. 2020; Odriozola-González et al. 2020). Online consumption of young people is often pointed out as problematic and online behavioral problems continue to be observed (Kircaburum et al. 2018). Students have suffered from the total isolation

they found themselves in during the first lockdown (Hamza et al. 2020; Rodrigues 2020).

For GenZers, which is precisely the generation that we will focus on, the pandemic meant spending much more time at home. This generation and others, like Millenials (Gen Y) have admitted spending more time and/or having started to consume more media content due to lockdown. More specifically, GenZers' consumption is divided between 51 per cent for online videos and 38 per cent for online tv/streaming (Jones 2020). As for Millenials (24–37 age group in the report), 44 per cent of their media consumption is dedicated to online video,and 41 per cent to online TV/streaming. As we will focus only on these two age groups here, since they correspond to the students that were inquired for this study, we can also add that these cases are not isolated. Although different in the time they spend consuming media contents, older generations have also increased their overall consumption, with GenX and Boomers dividing this time between TV broadcasting and Online TV/streaming (Jones 2020). An activity that was considered procrastination, for the most part, is now an escape used by all age groups. Considering that GenZers and Millenials are the two main generations of higher education students at present, we wanted to grasp the possibility of experiencing this recent day-to-day activity as something productive. As online learning can be improved by providing instruction in a manner consistent with each student's learning style (Zapalska & Brozik 2006), the assignment proposed also attempts to adapt to the students' learning process and needs, as online learning can also come with positive effects, such as flexibility and adaptive learning (Kwon & Birnthaupt 2012). According to Karppinen (2005, 246), videos can be valuable learning tools when presented and introduced in the right conditions (Grissom 2020) – considering the specific conditions in which students find themselves when e-learning is also fundamental (Alvarez et al. 2009, 333). Video material is also a great asset as it is relatively easy to share and access for both students and educators, and its use motivates students even more in the online learning context (Yick et al. 2019).

As students used to choose e-learning for commodity purposes (Young & Norgard 2006, 114), today, due to the pandemic, most students have experienced online classes. Evidently,e-learning is not new, especially in higher education (Green 2016), but we can identify the pandemic as an accelerator in the early adoption of e-learning on a global scale (Dreamson 2020). Moreover, the isolation of subsequent lockdowns and having computers as the only tool to keep on communicating has been hard on everyone. Therefore, it is crucial now more than ever to find new ways to reach online students and keep them motivated (Ahmad et al. 2020). As digital practice allows much more flexibility in terms of iterations, it also offers positive inducements for both academics and students in the design education setting (Aldoy & Evans 2021), as the integration of new technologies has provided many upgrades in design education. Learning methods such as gamification and tools like cloud servers have been used to implement more interaction on e-learning and blended learning frameworks (Moreno-Ger et al. 2008; Green 2016).

We thus wanted to understand if design students can work in group assignments, even distanced from each other, and stay motivated in a theoretical course unit to complete their learning experience in the most creative, collaborative and multidisciplinary way possible.

Methods

To better understand if design students can become more motivated in online theoretical classes, we will start by approaching the curricular unit's context and observing the course in which it is inserted. Secondly, we will observe the curriculum, as well as the students who typically enroll in this unit. Afterward, a depiction of the experience made in class will be observed.

Secondly, and to gain a quantitative approach to students' perception of the experiment, we applied a survey to each student at the end of the semester. The questionnaire was composed of 15 questions regarding their views on the course unit, its specific contents,and the way the group exercise studied in this article was carried out during the semester, which will then be observed using descriptive analysis. The survey was anonymous and distributed to guarantee the students' ease and honesty after their grades were given. The questions focused on the assignment itself, to assess the students' perception of their learning experience throughout the semester, as they had to implement theory learnt in online classes in this group work. Considering that most of their semester was spent online due to lockdown, we also wanted to understand if this method was seen as viable for them, considering working with other groupmates without the possibility to meet offline, applying contents that were taught online in an online assignment, and the outcome of it all culminating in an online exhibition of their results.

Context and background

The Faculty of Design Technology and Communications at IADE-European University, situated in Lisbon, Portugal, has been one of the many universities that had to cancel presential classes during the country's first lockdown. In March of 2020, students and professors started communicating mainly through the online platform Blackboard and its many tools. The faculty proposes a diversity of curricula, and in a cross-disciplinary logic, also offers the possibility for students to choose some extra course units outside of their course's curriculum. This is important for students, but it also means that professors may have to adapt their contents in certain cases as multidisciplinary curricula help developing students' soft skills as much as hard-skill levels when students do not come with the necessary background to develop specific activities at the same level as others may.

One of these examples can be found in the bachelor's degree in design, where design students can choose to complete their credits with optional contents, and students from other courses can also join in for extra credits. One of those optional units is called 'Fashion History & Critics', is at a crossroad between fine arts, humanities and design, and aims at awakening students to the history of costume in social, cultural and geographical terms, with all the political and economic dimensions that the fashion system encompasses. The unit is theoretical and is mainly chosen by students who have some interest or curiosity in fashion and cultural history. Otherwise, practical-based units would usually be preferred. As design students often struggle with replicating studio experiences in a digital environment (Aldoy & Evans 2021), a similar pattern can be observed in turning theoretical contents appealing in a digital environment for practising students.

Since the pandemic, the unit has not changed its course contents, which still explore historical clothing from prehistoric times to the present and a critical

approach to the fashion system. Nevertheless, the way contents are presented to students has changed drastically and assessing the changes in design education methods is not an easy task (Gunn 2019). The transition to online teaching has increased the need for more multimedia contact to ensure motivation and attentiveness in online classes (Dreamson 2020). On the other hand, the importance of adapting to students' needs and learning styles is a crucial component of online learning (Park 2011; Zapalska & Brozik 2006).

The institution uses Blackboard Learn for all kinds of communication among faculty members. The platform provides a vast set of tools such as test and assignment pages, groups for students to share information and meet online, and of course, live virtual classes. Such a platform has dramatically eased the transition to online classes for both students and professors and is determinant for students' stability (Young & Norgard 2006), especially during this transition. Even online, the students can be separated into group rooms, which facilitates the process in many different settings, such as group assignments, and promotes online interaction between students (Maher 2020; Park 2011). Such interactions and facilitations provided by the online platform mainly used will be assessed in the next part of this study.

Costume vs. history: a closer look on the assignment

The assignment is called 'Costume vs. history' as its main purpose is for students to develop their critical sense of fashion costume as an instrument to depict characters through time in movies. The premise is that students will find in the theoretical contents approached in class the basic elements to start their research and get further information to define if the costumes they picked in the movie of their choosing respects the time in which the story is set, as well as the social and economic level in which characters are portrayed in the narrative. The assignment is proposed on the first class of the semester, and students have a total of 14 weeks to complete a set of seven milestones, the first one being to form a group of up to 4 members and pick a movie or series, and the last one being the submission of the final poster or short animation. The conclusion of the assignment would take the form of an A1 digital poster or a short animation under 2 minutes, with a description of the movie's premise, the characters chosen and their respective costumes at specific moments of the story. Students would also have to explain if the costumes are historically accurate and propose a few alterations to them that could be partial or total, depending on the level of accuracy depicted in the movie.

To better understand the way the assignment was organised, the table below compares a few rules that were imposed on students during the assignment and, on the other hand, a few free decisions that students could make under certain conditions (Table 1).

A list of 30 movies was proposed to students so that they could choose one. Students could also propose a movie or TV series that was not on the list, pending the professor's approval, and of course, the movie's story had to be set at least 20 years prior to the time of its making. In the first week, 26 groups were formed; most of them had chosen a movie (22 groups) rather than a series (4 groups). Each group was then asked to complete a milestone approximately every two to three weeks and deliver it through their virtual group page using Blackboard Learn. Using the same platform, the professor reviewed each milestone, tracking

TABLE 1 Main rules for the assignment

Authorised	Not authorised
Up to 4 students per group, from the same blending mode group.	Having more than 4 students per group, mixing blending mode groups.
Movie from a list, or suggestion outside the list, with permission from professor, story must be set at least 20 years before the time of its production.	Movie/tv series contemplating 'present time'.
Choose 2 characters and a specific costume they each wear in the movie.	Choosing any character and costumes without professor's approval.
Distributing tasks freely among group members	Delivering the assignment at the end of the semester without proper supervision of each step along the way
Showing research process at least every 2 weeks	Skipping milestones and deliverables
Choosing between doing a poster, short animation/ video (2 minutes max.), or other support with professor's approval.	Delivering a physical assignment

the students' research and redirecting possible errors or deviations. To ensure the quality of their research, the professor made suggestions of online content (e-books, podcasts, videos, online articles etc.) to strengthen and deepen each person's knowledge individually, as well as for the entire group. This was achieved by knowing who was uploading each part of the research, thus attending to the group's needs, but also to individual learning.

Finally, to assess each milestone of a group, the professor used blog posts on each group page for feedback and online group sessions once a month to make sure every group member was involved in the process, and keeping track of the assignment's main objective.

By January 2021, a second lockdown was declared, and the semester closed fully online. Final presentations were therefore held online. The presentations were an incentive for students to share their work and to cross their research with what had been approached in class.

Students were then contacted to see their work on the website that showcases all posters and videos. As a conclusion and a reward for their continuous efforts during the semester, students could explore the outcomes and interact with each other's posters and animations.

Survey results

As the first lockdown hit many countries around the globe at different moments, people's online consumption increased, and students' media consumption also changed (Kamarianos et al. 2020). Streaming movies and series have become a big part of day-to-day entertainment, as streaming platforms provide a variety of genres and endless hours of occupation for all ages. The idea was to take an activity that was already being adopted by students and turn it into something productive, creative and culturally fulfilling. For design education, the adaptation to digital

platforms and tools was not a new phenomenon, and design education has been observed scientifically in that sense (Gunn 2019). Distance and online learning have also been generally introduced in education and have not only been introduced since the pandemic (Green 2016). However, the pandemic has accelerated and forced practice-based education to reconsider digital studio classes (Iranmanesh & Onur 2021). The following are the results obtained in the survey applied to the entire class after the semester was closed.

Starting with the sample composition (Table 2), we can observe that most of the sample is composed of design students (87 per cent), with the remaining 13 per cent being marketing & advertising students. The sample is composed of a total of 70 students, out of a total of 72 students who have taken the class in the fall semester of 2020/2021. The average age of the respondents is around 21, with the younger student being 19 and the oldest being 27.

The first two questions were based on the potential technical difficulties related to the choice of a 'period' movie and accessing it at home (Table 3).

Most students agreed that they had no trouble in choosing a movie, with a combined total of 90.6 per cent agreeing on the fact that picking a movie was easy as was watching it at home. By adopting an online activity that blends into the curriculum, the objective was also to facilitate the learning process of the students, remaining flexible and providing accessible services for all (Park 2011). The idea that these students had easy access and knowledge on movies is consistent with the report obtained and published by Jones (2020), as the students in this survey

TABLE 2 Sample description

Valid respondents	70		
Total students enrolled in the curricular unit that semester	72		
Ages	**youngest**	**oldest**	**Sample average**
	19 y/o	27 y/o	21 y/o
Degrees	**Design undergraduate**		**Marketing & Advertising undergraduate**
	61 respondents (87%)		9 respondents (13%)

TABLE 3 Results obtained regarding logistics and motivation towards the assignment

|	Affirmation/answers	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
1	Choosing a movie/TV show for the group assignment was easy.	0.0%	1.4%	7.1%	38.6%	52.0%
2	Accessing the movie/series I had chosen online/on TV/streaming platform was easy.	1.4%	2.9%	11.4%	24.3%	60.0%
3	I felt more motivated because I could choose the Movie/TV show I wanted.	0.0%	0.0%	4.3%	22.9%	72.9%

correspond mainly to GenZ, as only three students in the sample were over 25 years old at the time they participated.

The two first variables were initial concerns at the beginning of this assignment, and therefore, to prevent any issue, the list of movies was vast, and the possibility for students to propose a movie or series that was not on the list was also on the table, pending the professor's approval, as previously explained in the case study.

The possibility for students to choose their movie and the costumes they wanted to explore was a 'bargaining tool', giving them a sense of self-governance, and keep them motivated, a variable we observe in Table 3. Students clearly felt more motivated by being able to choose the movie they wanted to work with, as the vast majority (95.7 per cent) agreed that their motivation was closely related to the possibility of them picking the movie of their choice (Table 3). Adding to this, the fact that students were also able to choose two characters from the movie and pick a specific costume used by these same characters was also a major motivational factor.

Afterward, a crucial question was asked regarding students'feelings about their own involvement in the assignment (Figure 1). Another concern regarded their capacity to stay motivated and to feel 'connected' to their other group members and their professor, as students have been the main sufferers in terms of mental wellbeing during the pandemic (Odriozola-González et al. 2020). This issue was solved through two main axes. The first was the use of the Blackboard Learn platform, as previously stated, and the second, through a mandatory series of milestones, to complete the assignment throughout the semester, ensuring continuity and participation of the group members. This strategy was not only implemented to ensure participation from each member of the group but also guiding students, reminding them of each milestone and giving them structure, something that is dreaded, especially by practice-based students (Sovic 2008). Overall, students seem satisfied with their performance, with a majority (combined total of 85.7 per cent) declaring they did not feel 'lost' during this group assignment. This is a good indicator that group assignments can be performed separately and that students, under the right conditions, can exchange information and distribute tasks.

Moreover, students were also questioned about the group's organisation since most of the work was done separately, using online tools and platforms, as explained previously. As we can observe in Figure 2, even though 7.2 per cent
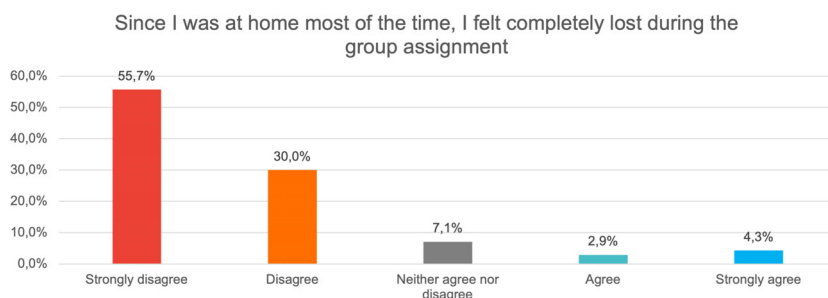
Figure 1
Students' sense of orientation towards doing a group assignment in isolation
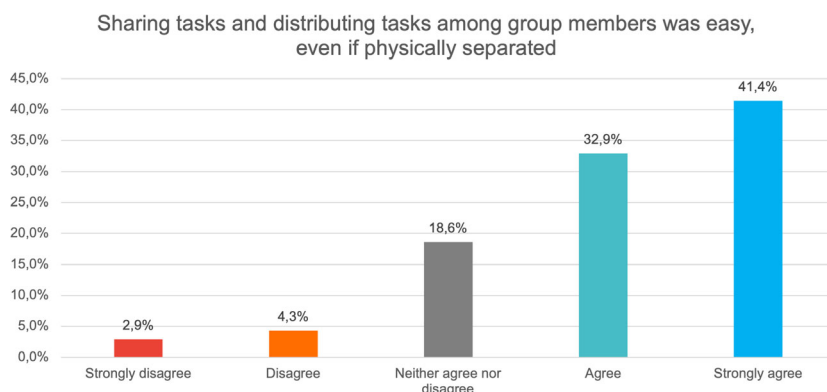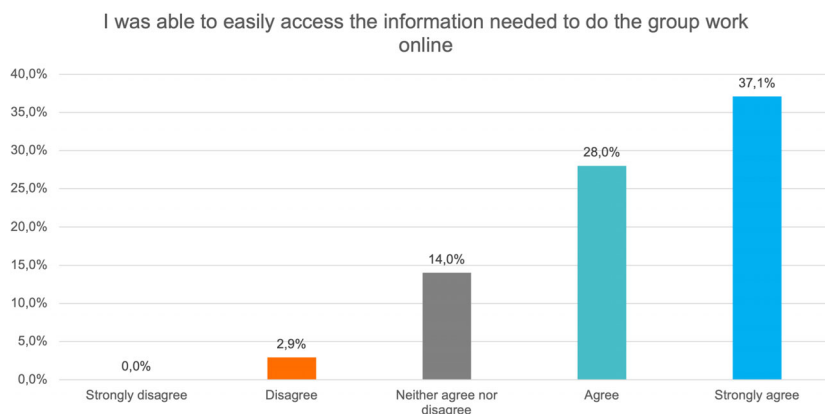
Figure 2
Groups organisation during the assignment

diverged on their ease to distribute and share tasks as a group, most students (74.3 per cent) declared they had no issues in sharing and distributing tasks among group members, even considering their physical separation, leaving the remaining 18.6 per cent feeling neutral. We can therefore gauge students' ability and resilience if the right methods are implemented and the importance of continuing to propose group assignments, even in these conditions, as they can offer interactivity between peers and tend to be more motivational, especially to design students (Newman 2020). By incorporating such digital communication tools in the learning framework, educators can not only track students' productivity and advances, but also adapt to different learning paces and ensure interactivity in the communication with their students (Park 2011). Moreover, by keeping interactive digital group assignment in the curriculum, peer learning can also be facilitated, as it is naturally implemented in presential learning, but difficult to follow through with digital environments (Iranmanesh & Onur 2021).
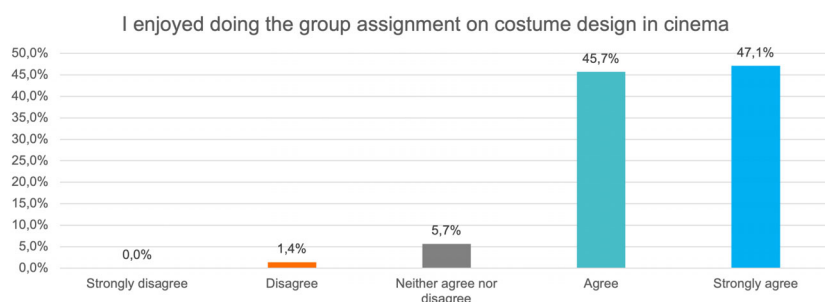
Another concern was since academic libraries were closed during the pandemic, and, therefore, most students would have to find information online, which could potentially damage the quality of information used during the research process. Students were therefore asked to search for scientific information and peer-reviewed documents that they could later reference in their work. Although undergraduate students have little to no knowledge of scientific research, we believe that their motivation to find tangible and verified information was motivated by other counterparts where rules were flexible, such as the movie choice, the costumes they could choose, as well as the possibility to choose whom to work with. We can therefore assume that compromise is always a good option to ensure students' motivation. In this case, we can see that only 2.9 per cent of students experienced difficulties in accessing online information, 20 per cent of the sample stayed neutral, and the majority, 77.1 per cent, agreed that it was easy for them to find information online (Figure 3).

Besides that, most students (92.8 per cent) declared having enjoyed the assignment, leaving only 1.4 per cent to disagree and 5.7 per cent staying neutral on that matter (Figure 4). The overall satisfaction with this group assignment is a positive indicator that a group assignment was an important part of their social interaction as well as their learning process, which goes together in many cases for

I was able to easily access the information needed to do the group work online

Figure 3
Access to information during the assignment

I enjoyed doing the group assignment on costume design in cinema

Figure 4
Students' satisfaction towards the group assignment

students (Maher 2020). Using online tools and platforms is, of course, a big part of the success. However, all efforts and hopes cannot be put into technology solely, and more than one technological tool should be implemented in the process (Dilmaç 2020; Iranmanesh & Onur 2021), which is why besides the learning platform, the use of multimedia content and other online solutions were encouraged for the assignment.
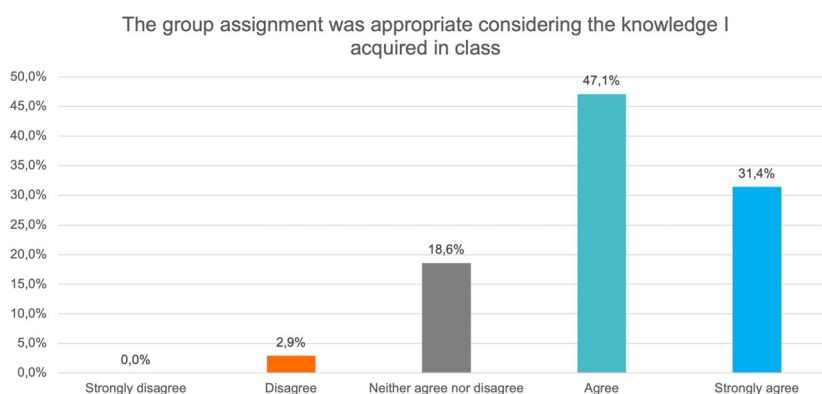
Subsequently, students were also asked to reflect on their knowledge and theoretical content strengthening thanks to the assignment itself, as the methods used in this project were specifically designed to tackle historical and critical matters approached in class through a more tangible method. Making things more visual was a great objective of the assignment, as using visual communication is an important component of design education (Gunn 2019). Although 14.3 per cent had no specific feeling towards the relation between class contents and the assignment, and 5.7 per cent disagreed that the assignment helped them in strengthening their knowledge, most students, 80 per cent of the sample, agreed that the group assignment enriched their comprehension of fashion history and critics (Figure 5).

The group assignment on costume design in cinema helped me consolidating the contents I learned in class
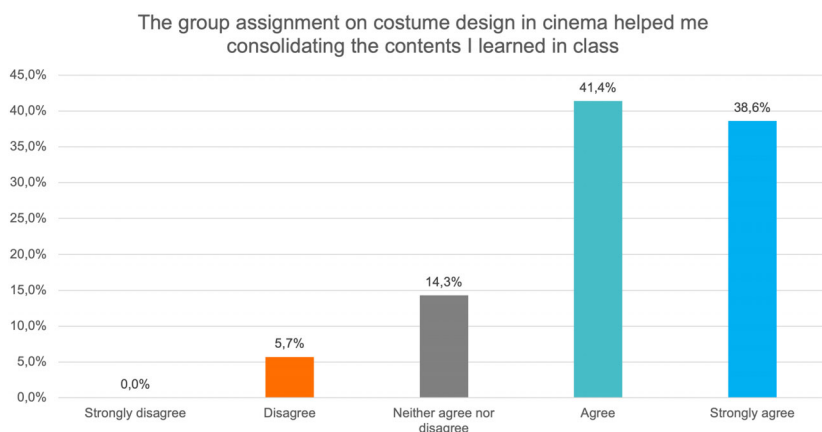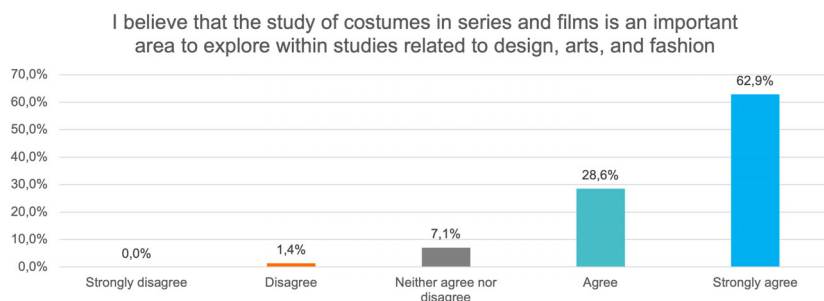

Figure 5
Students' perception on the strengthening relationship between the assignment and course contents

It was also central to understand if students felt the assignment was appropriate to the knowledge they had developed during theoretical classes, as it is harder for instructors to evaluate this at the end of the semester in these less-than-normal times (Giatman et al. 2020). Therefore, these design students were asked if what was expected from them in the group assignment was appropriate, considering the contents and information they had assimilated during the semester (Figure 6). To this question, many students (78.5 per cent) agreed with this idea, and only 2.9 per cent felt that the assignment was not appropriate to their level, with 18.6 per cent remaining neutral to the question. These results are relevant for future installations of this experiment, as students are always left to be autonomous to some extent and can therefore feel lost during online classes or without their professor's supervision during assignments (Gonzalez et al. 2020).

In retrospect, students have also questioned if costume design was an important area to explore within the studies of fields related to design, arts and fashion.

The group assignment was appropriate considering the knowledge I acquired in class

Figure 6
Level of confidence in the contents proposed in class to do the assignment

I believe that the study of costumes in series and films is an important area to explore within studies related to design, arts, and fashion

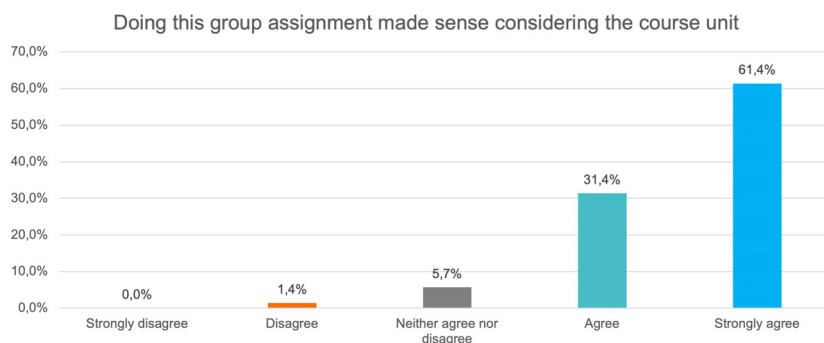|	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
	0,0%	1,4%	7,1%	28,6%	62,9%

Figure 7

Students' impressions towards the importance of costume design studies in the fields of design, arts, and fashion

The answers here also leave no doubt about their experience since 91.5 per cent agreed with this statement (Figure 7).

Most students also declared that the assignment made sense, considering the course unit and its contents. Some 92.8 per cent felt that the assignment made sense, only 1.4 per cent disagreed with this statement and 5.7 per cent remained neutral. This is also a good indicator for future endeavors that implementing such assignments can be beneficial to instructors to keep up with their students' motivational and learning levels (Figure 8).

Finally, the questionnaire ended on three questions regarding the projects' exhibition, an event that was first intended to be held physically in the faculty building, for staff members and students to appreciate and stimulate cross-disciplinary endeavors (see Table 4). Regarding the fact that students could have seen their projects exhibited physically, they did not seem completely bothered by the online alternative, as 38.6 per cent declared neither agreeing nor disagreeing with the fact that they would have rather liked to see their work displayed at the university, although 42.9 per cent declared agreeing that having their work exhibited there would have been better (Table 4). This is completely understandable, as the current context has taken a toll on students, particularly in practice-based courses (Ahmad et al. 2020; Sovic 2008).

Doing this group assignment made sense considering the course unit

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
	0,0%	1,4%	5,7%	31,4%	61,4%

Figure 8

Students' perceptions on the assignment's relation with the course unit

TABLE 4 Students' feelings towards an online exhibition as an alternative

	Affirmation/answers	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
12	I would rather like my final work physically exhibited in the University.	7.1%	11.4%	38.6%	22.9%	20.0%
13	I am glad to have my final group work exhibited even if it's on a website.	0.0%	1.4%	17.1%	27.1%	54.3%
14	An online exhibition is a good alternative to a presential one, due to the pandemic.	0.0%	0.0%	4.3%	27.1%	68.6%

The second question tackling this matter was about the fact that the exhibition was held alternatively, online, through a website, to comply with the intended purpose of the exhibition, as well as with the restrictions imposed by the pandemic, bearing in mind that the end of the semester was, once again, completely online due to lockdown. Students seem mainly pleased with having their work displayed, even in this alternative online way, as 81.4 per cent declared themselves glad to have their work exhibited, even on a website (Table 4).

Additionally, most students agreed that a website was a good alternative to a presential exhibition due to the pandemic (Table 4). This is also reassuring since the exhibition was a motivational factor for students (Ahmad et al. 2020), and this major change could have had a withdrawing effect on the groups. Fortunately, 95.7 per cent agreed with this idea, and only 4.3 per cent remained neutral. In the future, the use of VR could also add interaction and become a beneficial way to showcase the students' work (Lee et al. 2020) instead of using a website. Crossing this assignment with other curricular units where students learn how to develop VR content could also be beneficial and would create cross-disciplinary projects that could potentially be developed under blended learning.

To close these results obtained in the survey, we also want to acknowledge that a final open question was asked to students. Although optional, 22 students took the time to reflect on their opinion about the assignment and were also invited to make suggestions. As all the answers could not be inserted in this work due to their length, we selected a few that are presented in Table 5.

The table considers five different quotes from the last question, where most students declared themselves satisfied with the assignment and where only two suggestions were made to improve the organisation of the assignment (Anonymous answers 4 and 5). One student suggested an even more practical approach to the assignment (Anonymous answer 4), which will be considered in the future, either by having students designing their proposition in 3D on an avatar or by having them complete their poster with a series of mood, colour and material boards for their costume design proposals.

The second suggestion (Anonymous answer 5) also proposed a less 'informative' approach on the poster, with little to no text, although research would be presented on the side through a written report. This second suggestion also makes sense in our opinion, although students had the possibility to create a video, where the text was not an option (unless for titles and credits). Moreover, the suggestion

TABLE 5 Students' final thoughts on the assignment

Open question	Give your opinion about the group assignment on Costume design vs. History, giving suggestions, changes you would make, etc.
Anonymous answer 1	'I think it is an interesting assignment, mainly because it combined fashion and a multimedia support (series / film), which made working more attractive, even for those who have no special interest in the fashion area.'
Anonymous answer 2	'I thought it was an interesting assignment that helped very well to understand fashion in each era contemplated, considering our movie, and the other group's.'
Anonymous answer 3	'Very well done, great for getting interested in the course contents.'
Anonymous answer 4	'I really enjoyed doing this work. I feel that I gained more culture in the fashion area. However, I think it would be interesting to have a greater practical component in terms of costume design.'
Anonymous answer 5	'I would like to have the option of creating a poster without being informative, or with little or no information, maybe a fake poster of the movie with the costumes (the information would always be in a separate pdf/report).'

of a report to be delivered on the side was contemplated; it was not considered in this assignment since these reports end up being made by only one person of the group, which would defy the main purpose of this experiment. Nevertheless, such a process is still to be modified in the future, as these experiments require several iterations (Karppinen 2005; Ahmad et al. 2020) and much dedication from professors to adapt to what is needed by students during this online transition. Moreover, we cannot forget that not every field is equal, students react differently to change, and institutions are not applying the same strategies. Therefore, the same approach cannot be applied the same way and must be adapted to specific courses and faculty members (Hall et al. 2020). Crossing disciplines and using the destabilising environment to promote creativity among students is key (De Wet & Tselepis 2020) and must be regarded as an opportunity, not a threat.

Final thoughts

Group assignments can be performed at a distance and are well perceived by students who find themselves locked at home, having to stay motivated to learn theoretical contents through online classes, in times where our whole learning system is at risk, and where professors have a hard time to find interactive and innovative solutions to keep students interested.

Moreover, we also were able to conclude that students find themselves more interested, as well as more well-informed, thanks to the way this assignment was designed.

Group assignments are important; when students are now more than ever put into a state of isolation (Hamza et al. 2020), creating group activities is fundamental. However, like presential group assignments, some ground rules must be implemented. Small groups are preferable; in this case, no more than four people could form a group, and the professor was also in charge of keeping a close eye on the tasks and deliverables assigned throughout the semester. This was no coincidence,

as the semester started on blended mode, meaning that only small groups of students would be present in the same room once every two weeks, permuting between fully presential, half presential and digital classes. Therefore, the choice to adapt the assignment to groups that could work together in the same room one week and work separated physically from each other the next was used to promote a more hands-on approach (Code et al. 2020), a highly needed method in design courses.

Compromise is certainly a large part of the success. Defining ground rules to avoid chaotic or rushed decisions is important. However, leaving some decisions to the students themselves is also part of their motivation and behaviour towards a group assignment. In this specific case, we believe that some suggestions made by the students in the survey can be implemented in some ways in the future.

It is also important to keep in mind that blended learning will probably continue as the safest way to teach across universities and should be considered in future research on the subject (Code et al. 2020), and therefore, implementing assignments that can be adapted to any setting is always preferable, since it allows students to not worry about possible repercussions on their grades and learning experience.

By keeping on working on the methods used in theoretical course units, to make them feel more practical to students, online or offline, we believe that it is possible to find more attractive and motivational ways to teach specific contents using the right platforms. Additionally, the success of experiments like this depends on the implementation of rules to assure boundaries, also opening design students' horizons and interest in highly theoretical contents.

Finally, we believe that other curricular units can be modified to become more adaptive. Higher education institutions must view this situation as an opportunity to implement creative approaches for design students and a cross-disciplinary framework to enhance students' possibilities and adaptive mindset for future endeavors.

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References

Ahmad, L., Sosa, M. & Musfy, K. (2020) Interior design teaching methodology during the global COVID-19 pandemic, *Interiority*, Vol. 3, No. 2, pp. 163–84.

Aldoy, N. & Andrew Evans, M. (2021) An investigation into a digital strategy for

industrial design education, *International Journal of Art & Design Education*, Vol. 40, No. 1, pp. 283–302.

Alvarez, I., Guasch, T. & Espasa, A. (2009) University teacher roles and competencies in online learning environments: a

theoretical analysis of teaching and learning practices, *European Journal of Teacher Education*, Vol. 32, No. 3, pp. 321–36.

Code, J., Ralph, R. & Forde, K. (2020) Pandemic designs for the future: perspectives of technology education teachers during COVID-19, *Information and Learning Science*, Vol. 121, No. 5/6, pp. 419–31.

De Wet, A. J. C. & Tselepis, T. J. (2020) Towards enterprising design: a creativity framework supporting the fluency, flexibility and flow of student fashion designers, *International Journal of Fashion Design, Technology and Education*, Vol. 13, No. 3, pp. 352–63.

Dilmaç, S. (2020) Students' opinions about the distance education to art and design courses in the pandemic process, *World Journal of Education*, Vol. 10, No. 3, pp. 113–26.

Dreamson, N. (2020) Online design education: meta-connective pedagogy, *International Journal of Art & Design Education*, Vol. 39, No. 3, pp. 483–97.

Giatman, M., Siswati, S. & Basri, I. Y. (2020) Online learning quality control in the pandemic Covid-19 era in Indonesia, *Journal of Nonformal Education*, Vol. 6, No. 2, pp. 168–75.

Gonzalez, T., De Rubia, M. A., Hincz, K. P., Subirats, L., Fort, S. & Sacha, G. M. (2020) Influence of COVID-19 confinement on students' performance in higher education, *PLOS ONE*, 15(10), e239490.

Grissom, D. (2020) Experiential learning through video observations, in R. E. Ferdig, E. Baumgartner, R. Hartshorne, R. Kaplan-Rakowski & C. Mouza [Eds] *Teaching, Technology, and Teacher Education During the COVID-19 Pandemic: Stories from the Field*. Association for the Advancement of Computing in Education (AACE), pp. 97–112 (online). Available at: https://www.learntechlib.org/p/216903/ (accessed 30 September 2021)

Green, P. (2016) How to succeed with online learning, in N. Rushby and D. W. Surry [Eds] *The Wiley Handbook of Learning Technology* (Hoboken, NJ: John Wiley), p. 261–86.

Gunn, V. (2019) Design education in higher education, in A. Massey [Ed.] *A Companion to Contemporary Design since 1945* (Hoboken, NJ: John Wiley), pp. 412–45.

Hall, T., Connolly, C., Ó Grádaigh, S., Burden, K., Kearney, M., Schuck, S., Bottema, J., Cazemier, G., Hustinx, W., Evens, M., Koenraad, T., Makridou, E. & Kosmas, P. (2020) Education in precarious times: a comparative study across six countries to identify design priorities for mobile learning in a pandemic, *Information and Learning Science*, Vol. 121, No. 5/6, pp. 433–42.

Hamza, C. A., Ewing, L., Heath, N. L. & Goldstein, A. L. (2020) When social isolation is nothing new: a longitudinal study psychological distress during Covid-19 among university students with and without preexisting mental health concerns, *Canadian Psychology*. https://doi.org/10.1037/cap0000255

Iranmanesh, A. & Onur, Z. (2021) Mandatory virtual design studio for all: exploring the transformations of architectural education amidst the global pandemic, *International Journal of Art and Design Education*, Vol. 40, No. 1, pp. 251–67.

Jones, K. (2020, April 7). How COVID-19 Has Impacted Media Consumption, by Generation, *Visual Capitalist*, 7April (online). Available at: https://www.visualcapitalist.com/media-consumption-covid-19/ (accessed 30 September 2021).

Kamarianos, I., Adamopoulou, A., Lambropoulos, H. & Stamelos, G. (2020) Towards an understanding of university students' response in times of pandemic crisis (Covid-19), *European Journal of Education Studies*, Vol. 7, No. 7, pp. 20–40.

Karppinen, P. (2005) Meaningful learning with digital and online videos: theoretical perspectives, *Association for the Advancement of Computing in Education Journal*, Vol. 13, No. 3, pp. 233–50.

Kircaburun, K., Kokkinoos, C., Demetrovics, Z., Kiraly, O., Griffiths, M. & Colak, T. (2018) Problematic online behaviors among adolescents and emerging adults: associations between cyberbullying perpetration, problematic social media use, and psychosocial factors, *International Journal of Mental Health Addiction*, Vol. 17, pp. 891–908.

Kwon, H. J. & Brinthaupt, T. M. (2012) Teaching the social aspects of clothing in an online course, *International Journal of Fashion Design*, *Technology and Education*, Vol. 5, No. 2, pp. 129–34.

Lee, J. H., Yang, E. K., Lee, E. J., Min, S. Y., Sun, Z. Y. & Xue, B. J. (2020) The use of VR for collaborative exploration and enhancing creativity in fashion design education, *International Journal of Fashion Design*, *Technology and Education*, Vol. 14, No. 1, pp. 48–57.

Maher, D. (2020) Video conferencing to support online teaching and learning, in R. E. Ferdig, E. Baumgartner, R. Hartshorne, R. Kaplan-Rakowski, & C. Mouza [Eds] *Teaching, Technology, and Teacher Education During the COVID-19 Pandemic: Stories from the Field*. Association for the Advancement of Computing in Education (AACE), pp. 91–6 (online). Available at: https://www.learntechlib.org/p/216903/ (accessed 30 September 2021).

Moreno-Ger, P., Burgos, D., Martínez-Ortiz, I., Sierra, J. L. & Fernández-Manjón, B. (2008) Educational game design for online education, *Computers in Human Behavior*, Vol. 24, No. 6, pp. 2530–40.

Newman, T. (2020) Collaboration is uncomfortable, *International Journal of Art and Design Education*, Vol. 39, No. 4, pp. 788–94.

Odriozola-González, P., Planchuelo-Gómez, Á., Irurtia, M. J. & de Luis-García, R. (2020) Psychological effects of the COVID-19 outbreak and lockdown among students and workers of a Spanish university, *Psychiatry Research*, Vol. 290 (August), 113108.

Park, J. (2011) Design education online: learning delivery and evaluation, *International Journal of Art & Design Education*, Vol. 30, No. 2, pp. 176–87.

Rodrigues, C. (2020) Ansiedade, angústia, insónia: os efeitos secundários da pandemia nos estudantes, *Público*, 13 May.

Savage, M. J., James, R., Magistro, D., Donaldson, J., Healy, L. C., Nevill, M. & Hennis, P. J. (2020) Mental health and movement behaviour during the COVID-19 pandemic in UK university students: prospective cohort study, *Mental Health and Physical Activity*, Vol. 19 (October), 100357.

Sovic, S. (2008) Coping with stress: the perspective of, *Art, Design & Communication in Higher Education*, Vol. 6, No. 3, pp. 145–18.

Yick, K., Yip, J., Au, S., Lai, Y. & Yu, A. (2019) Effectiveness of blended learning in the first year of fashion education, *International Journal of Fashion Design*, *Technology and Education*, Vol. 12, No. 2, pp. 178–88.

Young, A. & Norgard, C. (2006) Assessing the quality of online courses from the students' perspective, *Internet and Higher Education*, Vol. 9, No. 2, pp. 107–15.

Zapalska, A. & Brozik, D. (2006) Learning styles and online education, *Campus-Wide Information Systems*, Vol. 23, No. 5, pp. 325–35.