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Article:

Evaluation of online project-based induction activities in Forensic Science

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Abstract

A new project-based induction was designed for 2020. The induction was a fully online project for welcoming our first-year students. The aims of the activities were to concentrate on a smooth and successful transition into higher education, introducing remote learning platforms with a focus on establishing long-term social groups, including feeling part of a larger community.

The project included online synchronous sessions, and asynchronous group and individual tasks. The tasks were organised over the one-week induction with an information retrieval scavenger hunt, a library escape room and a forensic biometrics project that involved developing a standard operating procedure. In 2021 the project was delivered with a more blended delivery approach as COVID restrictions were lifted.

Evaluation of the project was examined by collecting student questionnaires and analysis of online content. Participants agreed that they enjoyed the group activity, that they had engaged in discussions with teammates, and the induction activities helped them feel comfortable/confident in using remote learning platforms. The main findings were that it is imperative to include digital platforms and library catalogue guidance regardless of planned courses delivery. In addition, more time should also be allocated to transition outside of the main project week to allow for more flexible deadlines and introduce more orientation events through the first year, with more social events to nurture a culture of belonging. Finally, for future planned projects to consider more individual responsibilities when incorporating team aspects and tasks to encourage all team members to engage with discussions and submissions.

Context and Objectives

Background

The transition from school into higher education (HE) for some students is a challenging aspect of their HE journey. As educators, we aim to make this transition as smooth as possible and induction activities are the starting point of an effective transition. Some HE institutions with high attrition rates have suggested that a possible cause was ill preparation of the students during induction (Edward & Middleton, 2010). The transition from school to university is widely recognised as a big leap with more independence, and personal and academic autonomy, navigating an unfamiliar university system to become an independent learner (Thompson et al. 2021; Farrell et al. 2020). Also known as the ‘roots of attrition’, factors such as managing academic time and workload along with other aspects including financial issues, challenges with social aspects, course and family expectations and conflict with other life/family commitments can lead to withdrawal (Farrell et al. 2020).

Starting university is a daunting concept, Ribchester (et al. 2014) reported that a student stated that they were excited about starting university but were also dreading moving away from their family and friends. Lowe & Cook (2003) highlight that the shift from the controlled environment of school and family to an environment in which they are expected to accept personal responsibility for both academic and social aspects of their lives is abrupt and can create anxiety and distress. Poor transition into this new environment can lead to drop-out or under-achievement.

To promote student engagement and retention a high-level of responsibility lies with the institution to nurture a culture of belonging (Brunton et al. 2017). The aim of developing a sense of belonging, building peer to peer networks, and learning to collaborate effectively were essential aspects of this induction-project. As HE delivery, in comparison to school or college learning, can be described as more independent with the reduced frequency of sessions and staff interactions, peer interaction is an important aspect of learning; socio-constructivist pedagogies agree that knowledge is constructed through interaction with others rather than copied from a teacher or text (Nordmann et al. 2020), highlighting the importance of building these social groups within the first few weeks of commencing study.

In addition to academic transition, transition also involves personal, social and lifestyle aspects, a common anxiety students express is about making friends (Maunder et al. 2013). With a completely online induction in 2020 we were faced with the challenge of how we create these essential communities and how online platforms can be as effective as in-person social activities. Crucial aspects to consider were how to build essential peer-peer networks online, how to manage the loss and the range of academic background knowledge and student expectations. The negative impact of the pandemic on student well-being has been reported including that students consider blended learning to be limited in terms of: interactions with the lecturer; group work; peer engagement; class involvement; and the ability to ask questions (Hagemeier & Dowling-McClay, 2021; Mali & Lim, 2021).

Due to the COVID pandemic, students commencing the course in 2020 would have been faced with the realisation that their HE experience would not be what they thought during application to university; they may be unhappy that their university experience will not be that of what their older friends and family experienced (Nordmann et al. 2020). They will have missed learning concerns due to the dramatic change caused by lockdown and future entrants may have exacerbated issues due to extended periods of self-isolation, and possible negative pre-conceived ideas of remote learning, however more advanced online skills.

Different academic backgrounds has always been a common issue experienced at the beginning of some HE courses because of the variety of entry qualification pathways. This diversity has been exacerbated by COVID, due to the lack of consistency on what aspects of content were missed due to reduced teaching time caused by the restrictions. Cottle (2021) reported that this has led to lowered student confidence caused by loss of subject content, and less group work experience. Care must be taken not to assume prior knowledge of certain academic aspects or skills, as Kelly & Finlayson (2016) describe that if we put demands on the students it could lead to frustration in both induction activities and going forward.

Project-induction design for successful online delivery

For September 2020, induction processes were revised to a focused project with an academic subject theme running through the activities. The project included traditional elements to introduce students to key staff and the university but with a focus on three specific objectives: familiarising students with digital systems, developing discipline specific skills, and establishing social interactions with their peers

Taking the possible reduced confidence and uncertainty about prior skills and altered expectations into consideration, activities were planned that contained subject specific tasks, but with care not to make assumptions on prior subject knowledge and digital readiness, with an aim of building confidence with care and not to alienate any students at an already daunting time.

With the reflections outlined above, it was also important to consider how usual induction activities could be achieved successfully on a completely remote platform and to build digital literacy. When starting the 2020 induction, the majority of students would be learning from home and not based on-campus with a more flexible approach to learning with aspects of asynchronous delivery. Flexible learners have previously been identified as a vulnerable proportion of the student population that

show lower completion rates than those studying on-campus (Brunton et al. 2017). Online learning allows students to engage flexibly with their studies, which is important for those that have caring responsibilities (Nordmann et al. 2020), however, as these home environments can lead to priority conflictions, advising learners on how to manage other external commitments, such as employment and caring demands when learning from home is important. It has been reported that flexible learners are most likely to leave in their first year of entry (Brunton et al. 2017) and we were now faced with the majority of students studying in this way; it highlighted the importance of supporting students in the early stages of their studies on how to manage workload and home commitments as part of the project.

Some advantages of this flexible delivery is that it allows students to engage and reflect on sessions outside group activities. Reduced confidence in subject knowledge has been outlined due to missed content. Asynchronous content gives students time to reflect, which can reduce apprehension in those students that might be likely to withhold their ideas due to fear of others not approving, it can also reduce the effects of production blocking; by working independently they are not blocked by other contributing ideas (Gallupe, et al.1992). Even aspects such as spelling confidence can be a barrier when communicating in posts during online synchronous sessions (Ribchester et al. 2014). It has also been proposed that asynchronous material should be released as discrete packages of information of around 15 minutes with the aim of helping with any streaming limitations of watching long recordings but taking care not to bombard students with too many short recordings (Nordmann et al. 2020). These aspects were adopted in the project to allow students to work independently, allowing flexibility and time to reflect and gain confidence in the content before discussion within their assigned groups.

Some additional interesting points suggested in the literature as important to establish effective social networks is that staff should engage with the process by describing themselves in their interactions making them appear more ‘human’. This aspect is also emphasised in other literature stating the importance of the instructor being visible and being willing to “show your face” to help students in creating a strong sense of community (Ribchester et al. 2014; Nordmann et al. 2020). With the use of additional discussion posts outside synchronous session it was also suggested that prompt responses are important as unanswered queries are off-putting (Ribchester et al. 2014). These were taken into consideration when planning interaction with the students.

Method

Implementation

The project induction was designed for first year Forensic Science students (n127 2020; n172 2021) part of the School of Chemical and Physical Sciences. The aims of the project were to implement an induction project with the traditional key elements of orientation of university with a focus on the following objectives:

1. to familiarise students with digital systems
2. to develop discipline specific skills via social learning
3. to enable social interactions

The induction was a one-week project in both 2020 and 2021. The students were contacted one week prior to starting the formal induction week via Microsoft (MS) Teams with a welcome message, a document introducing the project, links to central welcome week activities and prompts on introducing themselves to other group members. This was some students’ first experience of using MS Teams and social interaction with their group.

The week started with an online synchronous welcome session on MS Teams introducing teaching staff, course information and information about the project tasks. There were two induction tasks i) a scavenger hunt including the use of the library catalogue and ii) a Forensic biometrics project.

The scavenger hunt was an asynchronous activity that the group would work on for the duration of the week. The hunt included retrieval of information that was located on the University Virtual Learning Environment (KLE) and using the library management system and catalogue. The library aspect was delivered as an online library escape room activity in 2020 to familiarise students with the library, adapted from a previously delivered in-situ library escape room (Chesworth, 2019). Raising

awareness of student support services and providing guidance on library systems has been reported as an important aspect of university orientation (Soria et al., 2013; Tinto, 2017).

For the Forensic biometrics project, the groups were given smaller tasks throughout the week, with the intention of keeping students engaged in the project and their group during the whole week. The tasks involved watching two recordings (i) introduction of biometrics and (ii) understanding the importance and how to write standard operating procedures (SOPs) in Forensic Science. The recording lengths were approximately 17 and 10 minutes respectively, following guidance on creating synchronous material in short discrete packages, and were released on day 1 of the project. With this material, students were able to work on some of the project independently allowing flexibility and time to reflect before discussion within their assigned groups. The first output of the group was to choose a body part as a predictor of stature, this was posted on their private group channel using the @mention in their post to alert their assigned tutor.

The next task for the Forensic biometrics project was to develop a standard operating procedure (SOP) for measuring their chosen body part that their peers from other groups would use. Example SOPs on handwashing (a topical subject during COVID) were provided and the group were required to save their final SOP on the files space on their private MS Teams channel. Students then used other group's SOPs posted by the tutor to measure their own body providing the data using an individual MS form with an alias. Graphs were constructed and posted on MS Teams. The graphs were produced by the tutor with the intention to alleviate any issues with prior MS Excel and mathematical knowledge; these skills would be taught later in the semester. The final task required the group to complete a MS form after group discussion, detailing feedback on other group SOPs, interpretation of graphs, and directed literature research on biometrics.

At the end of the week there was a final synchronous MS Teams session to summarise the project. Highlighting the key learning aspects, answers for the scavenger hunt and sharing of the SOP feedback.

There were some revisions to the induction between the academic years. Because of reduced COVID restrictions we were able to offer the opportunity for some face-to-face group sessions during the induction week for 2021 entrants. This involved an in-situ session, where the groups worked together to measure the assigned body parts and review their peer's SOPs.

Induction Evaluation

The project was evaluated using a multi-method approach: firstly, online student questionnaires to record student perspectives, identified as a gap in student success literature where the student voice is mostly absent (Farrell et al., 2020); the first questionnaire was delivered immediately after induction week, with a follow-up a few months later to gauge long-term effects. The questionnaire consisted mainly of Likert-style questions, with only a few open-ended questions that allowed students to provide comments on their induction experience. In addition, tutor perspectives were also recorded by analysis of online content looking at MS Teams chat posts and attendance monitoring. The use of student questionnaires collected in both years allowed for comparative data to be collected.

The project was reviewed by the University KIITE Research Ethics Committee, and the application was accepted.

Results and Discussion

Student and tutor perspectives

For academic year 2020/21, in week 1 there were 127 students enrolled on Forensic Science courses assigned to 12 groups of approximately equal size, for 2021/22 there were 172 students across 18 groups. For the evaluation questionnaire there were 26 responses for 2020/21 and 10 responses for 2021/22.

The projects for both years were well received with a substantial number of positive responses agreeing that they enjoyed the induction project (58% in 2020/21, increasing to 90% for 2021/22), as seen in figure 1.

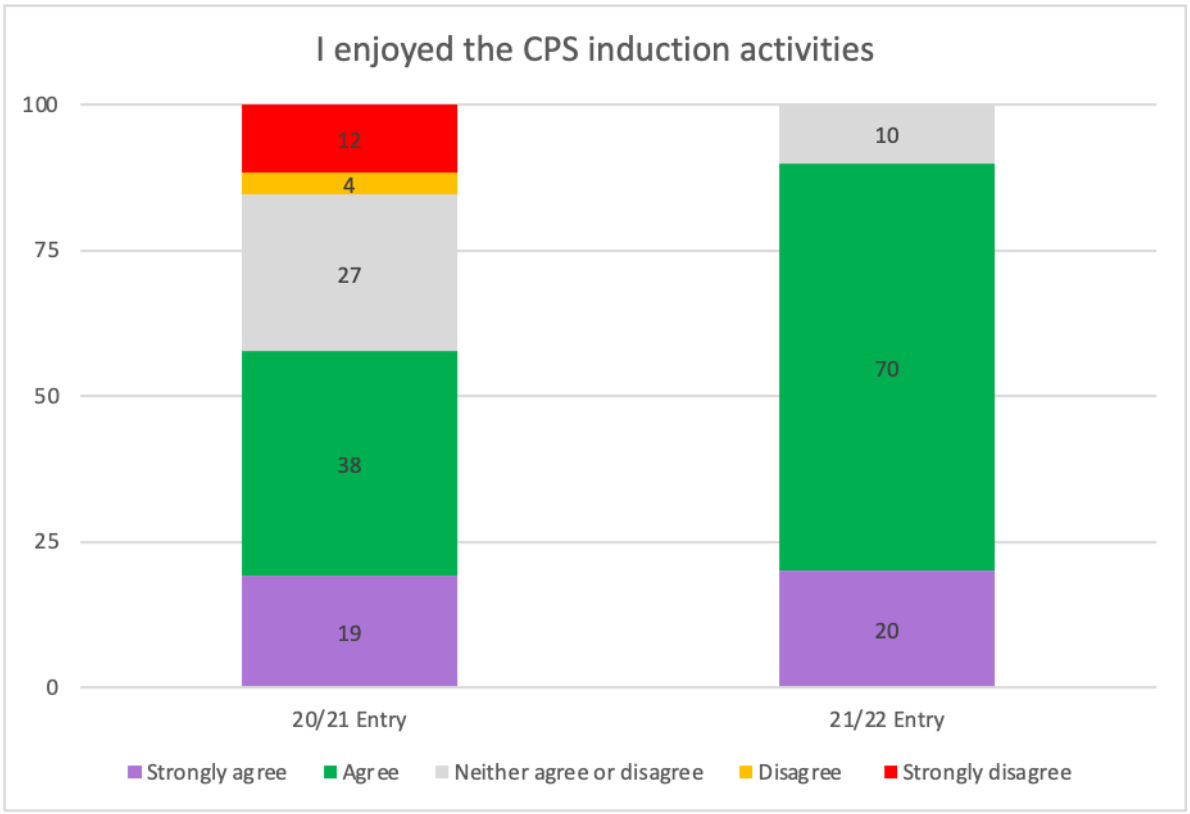

Figure 1 – percentage response from students about their enjoyment of the induction activities.

One possible explanation for the increased enjoyment in the second year could be the introduction of the in-person session in 2021 as there were positive free comments when asked what were the best aspects of the induction activities …"*Getting to go into the lab for the first time*" and "*The session in the CSL (Central Science Laboratories)*" whereas in 2020 there were negative comments about the complete online delivery ……"*I just don't think online works*" and "*Obviously it would be better if Covid wasn't around*", mirroring other research findings that reported negative student perspectives of online content in comparison to face-to-face activities (Hagemeier & Dowling-McClay, 2021; Mali & Lim 2021).

Objective 1 - To familiarise students with digital platforms

Throughout the project students used the University Virtual Learning Environment (KLE), MS Teams and the library catalogue. As seen in figure 2, overall for both academic years the students were very positive about their confidence in MS Teams and the KLE, all exceeding 80% (89% MS Teams and 83% KLE in 2020/21 and 90% in 2021/22 for both MS Teams and the KLE).

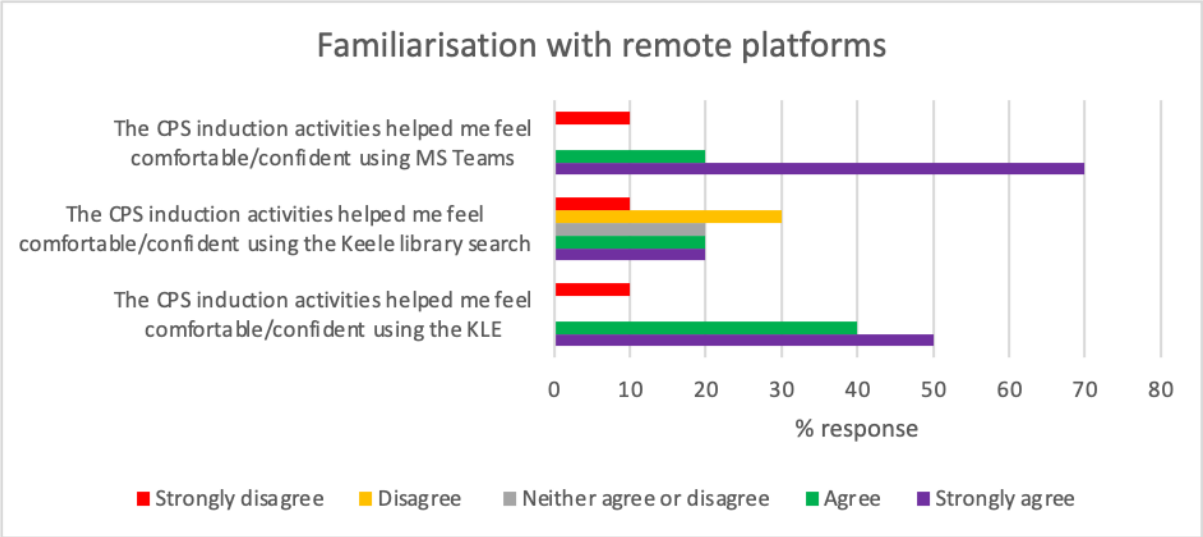

Figure 2 – percentage response from students in 2021/22 about how comfortable/confident at using remote platforms.

One aspect that students reported more negative comments in 2021 compared to the previous year was their reduced confidence in using the library, increasing from 27 to 40% reporting that they disagreed that induction activities helped them feel comfortable/confident using the Keele library search (library management system and catalogue). One possible contributor to this was the removal of the library escape room, replacing this with a prompt to attend the escape room activities being run centrally by the library. Questions relating to retrieval of information using the library catalogue were included in the scavenger hunt rather than a bespoke escape room activity in 2021, possibly attributing to this reduced confidence.

In reflection, incorporating more content on how to use academic resources during the induction week had not been emphasised in induction session previous to this project. Comments related to the usefulness of providing guidance on digital platforms were documented *"It taught me a lot about the KLE and MS teams which helped me feel more confident about how my lectures and my module material was set up!"* and will remain as an important feature of future orientation design.

Objective 2 - Develop discipline specific skills via social learning

Students were asked about some of the subject specific content delivered during the week, for 2020 89% agreed they understood the scientific aspect of the project, whereas this dropped to 70% for 2021 entry. Figure 3 highlights the results for 2021 for some further questions asked about the forensic biometrics project including the SOP content. Students in 2020 commented that the best aspects of the online group project were ….."*Creating the SOPs and using the SOPs to measure different body parts", "measuring myself" and "Taking the measurements as it was interactive rather than just looking at a screen"* highlighting the success of embedding an important quality system identified by the accreditation body for our programmes and utilising a more interactive experience for a solely online project.

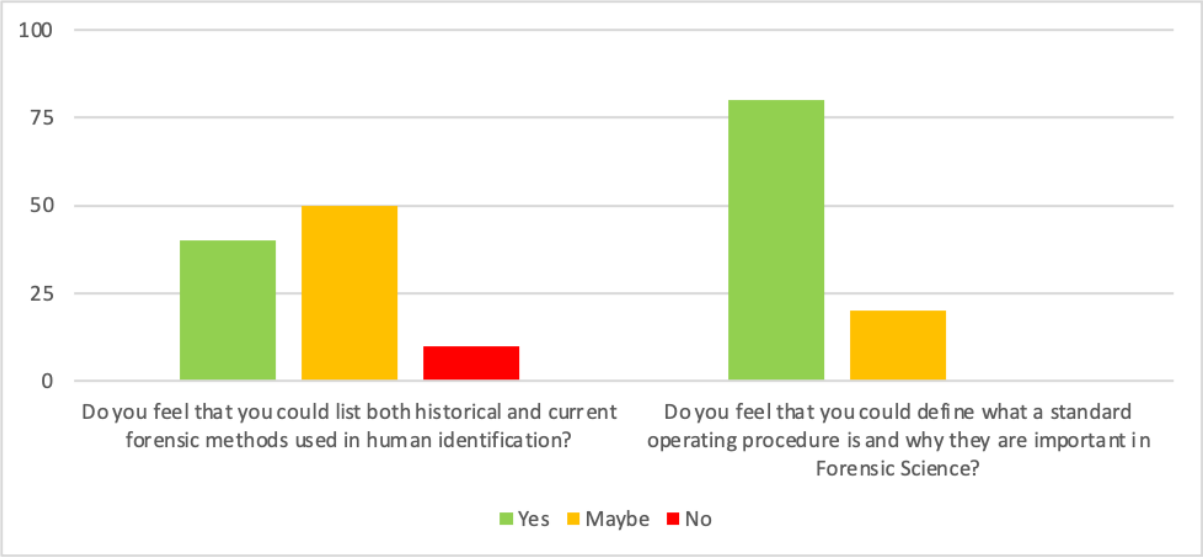

Figure 3 – percentage response from 2021/22 students about subject specific content.

Objective 3 - To enable social interactions

One major challenge of the project was to encourage all students to engage with the project with the aim of creating social groups that would help support them in their transition into HE and going forward through their studies.

When reflecting on the responses about engagement in team-work discussions, the positive response rate for 2020 was reported as 89% whereas this dropped to 70% for 2021 (see figure 4). One possible explanation for this was due to increased numbers in the cohort, and despite group sizes being consistent, there were a higher number of students that failed to engage in team-work discussion.

There were positive comments from the students about how the overall induction week introduced them to their peers, staff and overall enjoyment of meeting new people ……"*being able to virtually meet people on my course*", *"Meeting people who have the same interests as me", "Speaking to members of staff", "Discussing ideas in the separate allocated groups in order to get talking, engaged and interact with some of my peers given the current circumstances", "Having a smaller group to work with so you got introduced to some people on your course", "meeting other students and figuring out how everything was going to work online".*

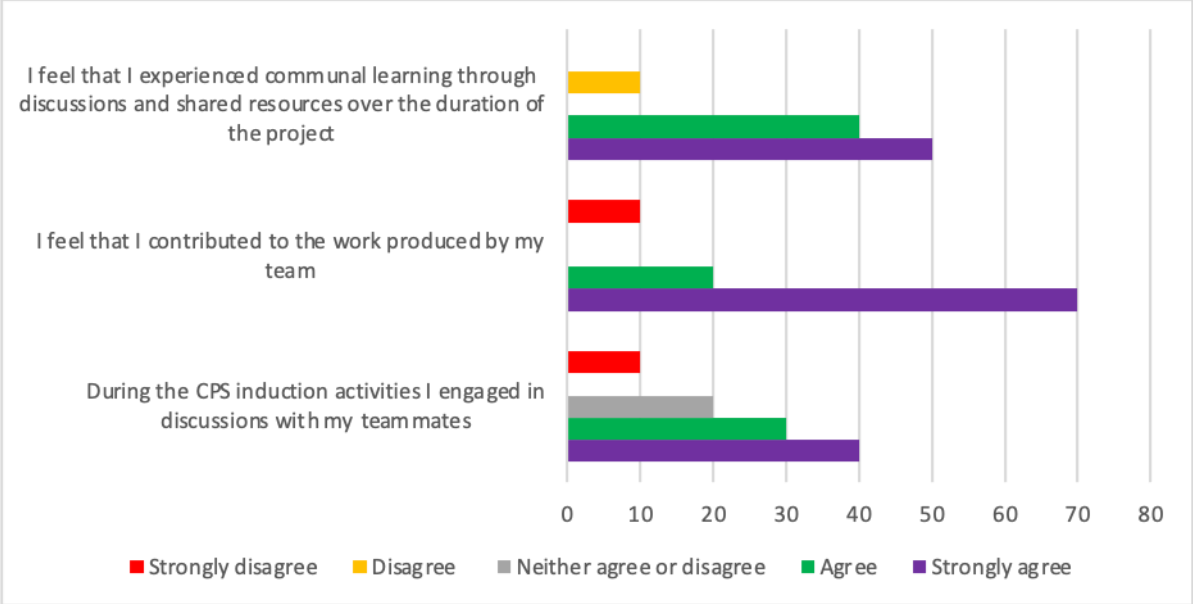

Figure 4 – percentage response from 2021/22 students about how they contributed and engaged in group activities.

However the lack of engagement for some team members as highlighted in figure 4 was also reflected in student perspectives across both years, with suggestions that groups should be formed by students….. "*allow the students to make their own cliques"* and encouraging more individual group responsibilities for activities to increase engagement……. *"Make them more engaging for all, as in some groups one or two people were doing all the work",* "*my group didn't participate" "teams not communicating correctly, not having full attendance or people just not contributing", "Some people don't join in during the teams calls".* The importance of collaborative learning is an important competency to achieve common group goals (Haugland et al. 2022) more attention to this aspect of the project must be considered for future years. Diversity of student groups can have an impact on group innovation success (Usher & Barak, 2020) but with limited information on the new cohort of students other aspects such as emphasising both joint and individual responsibility for certain tasks may provide more positive student experiences for all team members. For the 2021 project, groups were tasked with assigning key roles such as a project leader, note-taker and meeting timekeeper which many engaged with, however with larger cohort sizes more individual responsibilities could be introduced.

Looking at MS Teams activity over the duration of the project it was apparent that students were using both the chat and video call functions for group communications. For 2020, 9 of the 12 groups posted messages to introduce themselves before the formal induction week, and all groups used MS Teams to make private channel calls during the project. For 2021, 12 of the 18 groups posted messages to introduce themselves, with some group using the suggested prompt information as an ice breaker and assigning group project roles. For 2021, all groups used MS Teams to make private channel calls during the project. During some of the calls it was observed that not all students used their cameras, which is a possible barrier to social interactions. As previously discussed, the literature outlines the importance of the instructor being visible to help students create a strong sense of community, and being willing to "show your face", and the value of being able to put a face to a name are key (Nordmann et al. 2020; Ribchester et al. 2014). Throughout the project staff shared their cameras and students were encouraged to do so during private Team channels, with an intention to encourage social interaction, but this was not always implemented by the students.

Another observation was that students adopted the use of other social media platforms, for example using WhatsApp, Snapchat and Instagram, possibly feeling that this was a more informal platform and favouring a more familiar social networking platform for social interactions that tutors could not monitor. Other social events such as attendance of a Student Union guest lecture was shared in some groups. It is recognised that these social platforms are a good way for students to present themselves, articulate their social networks, and establish or maintain connections with others (Ellison, 2007). This has been highlighted in other literature when students were given the choice on how to communicate virtually, they chose WhatsApp (dos Santos Belmonte, 2022). These interactions would hopefully lead to the establishment of long-term social groups and were present in some of the student perspectives of the project …."*any personal talk should be encouraged on personal medias not ms teams".*

One of the project objectives was to establish longer term social groups, during the follow-up questionnaire students were asked whether they found the induction activities useful to introduce themselves to classmates and if they had kept in contact with their group members. For the 2020 there were only 3 responses for Forensic Science students, however 2 out of 3 students agreed that they found the project useful to introduce themselves to classmates and that they had kept in contact with their group members. For the 2021 there were 8 responses for Forensic Science students with 4 out of 8 students agreeing that they found the project useful to introduce themselves to classmates (the other 4 students neither agreed nor disagreed with this statement). However, 6 out of 8 stated that they had not kept in contact with their group members, highlighting the lack of longer-term social groups being formed by the groups, despite in person sessions. One possible explanation was that the reduced COVID restrictions meant that students had more freedom to socialise outside of their course with limited restrictions to campus life.

Future induction considerations

Overall, the main aim was for the induction to assist in a smooth transition into higher education. As explained previously, poor induction can lead to less successful transition (Brunton et al. 2017), some triggers such as workload, organisational skills, and support are key features that can be incorporated and advised on during induction activities, with guidance on how to manage both synchronous and asynchronous activity. With the move away from online learning some of the attributes typically associated with flexible learners, such as other external commitments, noticed across the whole student population during the past two years should be less prevalent moving forward. During the project smaller tasks were set across the week to engage students throughout the week, however this did create challenges with setting short deadlines and was reflected in some of the student perspectives…… "*Maybe to have better deadlines? Some were very confusing or kind of awkward timing so it was sometimes difficult to get all the group members working on the project together", "Possibly better timing so that more members are available to talk."* On reflection for future inductions deadlines will be set during timetabled sessions and extend some of the delivery outside of the main project week to allow more time for content.

There were also comments from students about ongoing transition sessions throughout the semester……."*mid- semester check in, previous years I have found motivation has left me around then and it does get harder being away from home then. Even a quiz or tutor meeting would be helpful", "more info on things coming up", "Possibly a virtual job fair of sorts or something similar?", "Potential drop-in sessions to discuss general university life, given the circumstances, such as mental health. I feel people will begin to feel particularly isolated and alone especially as being away from home (which is quite far for some)".* Two of these comments refer to support from a tutor, during the induction session the personal tutor (academic mentor) role was introduced but these comments highlight that more detail on the academic mentor role and student support should be provided. These may be isolated comments as in 2021 80% stated that they had contacted their tutor, but there were only 70% agreeing that they knew where to go or who to contact if they needed further support.

For future induction projects, some of the online aspects will remain as it is reported that the students benefit from the introduction of digital platforms (see figure 2) and allowing the opportunity for interaction before the formal induction week. With face-to-face activity possible for future years the majority of the forensic biometric project work can be done in one in-situ session, leaving more time to engage with social events and other centrally organised activities.

Conclusion

With reflection on the questionnaires and content analysis, some objectives of the project were very successful. 90% of 2021 entry participants agreed they enjoyed the project and students had positive comments about key aspects of the induction such as identifying key people and meeting new people on their course.

It was clear that the students felt confident in using the digital platforms at the end of their induction week. With the shift away from online learning, a question is if this will be an essential objective for future inductions? It maybe that the frequency of digital platform use is reduced over the induction week but with features maintained to ensure student confidence, with digital literacy being an important transferable skill. After removal of the library escape room, it was apparent that student confidence was reduced making it clear that there should be more emphasis on this for future inductions.

Most of the questionnaires collected contained a small amount or no free text when asked open questions regarding the project. For future evaluation it may be useful to consider setting up focus groups to reflect on the project, to discuss how they felt the induction activities impacted on the first few weeks of their semester.

One objective of the project was to enable social interactions. From analysis of the online content, it was clear that students engaged with their groups but unfortunately, especially for 2021 entrants, it was evident that the majority did not keep in touch with their group members. Introducing more social event into the first weeks of study may improve this.

In conclusion the following will be included in future inductions and maybe useful for others considering a similar project-based transition:

- Include digital platforms and library catalogue guidance regardless of planned courses delivery (online, blended or face-to-face).

- Extend activities outside main project week to allow for more flexible deadlines and additional transition events through first year, including more social events to nurture a culture of belonging.
- For team aspects consider more individual responsibilities and tasks to encourage all team members to engage with discussions and submissions.

References

Brunton, J., Brown, M., Costello, E., Farrell, O. & Mahon, C. (2017). Giving Flexible Learners a Head Start on Higher Education: Designing and Implementing a Pre-induction Socialisation MOOC. In: Dublin, Ireland: National Institute for Digital Learning, Dublin City University: 10-19.

Chesworth, S. & University, K. (2019). Escape [to] the library: Reframing the Library Induction, Keele University. *Journal of Academic Development and Education.* (11).

Cottle, D. (2021). The effects of Covid-19 on student transition from school to university in STEM subjects. *New Directions in the Teaching of Physical Sciences*, *16* (1), 1-4. [3847].

dos Santos Belmonte, I., Borges, A.V. & Garcia, I.T.S. (2022). Adaptation of Physical Chemistry Course in COVID-19 Period: Reflections on Peer Instruction and Team-Based Learning. *Journal of Chemical Education.* 99 (6): 2252-2258.

Edward, N. & Middleton, J. (2002). The Challenge of Induction! Introducing Engineering Students to Higher Education: A Task-Oriented Approach. *Innovations in Education and Teaching International.* 39 (1): 46-53.

Ellison, N.B., Steinfield, C. & Lampe, C. (2007). The Benefits of Facebook "Friends:" Social Capital and College Students' Use of Online Social Network Sites. *Journal of Computer-Mediated Communication.* 12 (4): 1143-1168.

Farrell, O., Brunton, J. & Trevaskis, S. (2020). 'If I had missed it I would have been the lost little sheep': Exploring student narratives on orientation to first year. *Journal of Further and Higher Education.* 44 (7): 865-876.

Gallupe, R.B., Dennis, A.R., Cooper, W.H., Valacich, J.S., Bastianutti, L.M. & Nunamaker, J.F. (1992). Electronic Brainstorming And Group Size. *Academy of Management Journal.* 35 (2): 350-369.

Hagemeier, N.E. & Dowling-McClay, K. (2021) The Impact of Transitions Related to COVID-19 on Pharmacy Student Well-being. *American Journal of Pharmaceutical Education.* 85 (4):267-274

Haugland, M.J., Rosenberg, I. & Aasekjær, K. (2022) Collaborative learning in small groups in an online course – a case study. *BMC Medical Education.* 22 (165); 1-10

Kelly, O. & Finlayson, O. (2016). Easing the transition from secondary school to higher education through recognition of the skills of our students. *New Directions in the Teaching of Physical Sciences.* (6): 51-55.

Lowe, H. & Cook, A. (2003). Mind the Gap: Are students prepared for higher education? *Journal of Further and Higher Education.* 27 (1): 53-76.

Mali, D. & Lim, H. (2021) How do students perceive face-to-face/blended learning as a result of the Covid-19 pandemic? *The International Journal of Management Education.* 19: 1-17

Maunder, R.E., Cunliffe, M., Galvin, J., Mjali S. & Rogers J. (2013) Listening to student voices: student researchers exploring undergraduate experiences of university transition. *Higher Education*. 66:139–152

Nordmann, E., Horlin, C., Hutchison, J., Murray, J., Robson, L., Seery, M.K. & MacKay, J.R.D. (2020). Ten simple rules for supporting a temporary online pivot in higher education. *PLOS Computational Biology.* 16 (10): e1008242.

Ribchester, C., Ross, K. & Rees, E.L.E. (2014). Examining the impact of pre-induction social networking on the student transition into higher education. *Innovations in Education and Teaching International.* 51 (4): 355-365.

Soria, K. M., Fransen, J. & Nackerud, S. (2013). Library Use and Undergraduate Student Outcomes: New Evidence for Students' Retention and Academic Success. *Portal: Libraries and the Academy.* 13 (2): 147–164.

Tinto, V. (2017). Reflections on Student Persistence. Student Success 8 (2): 1–8.

Thompson, M., Pawson, C. & Evans, B. (2021). Navigating entry into higher education: the transition to independent learning and living. *Journal of Further and Higher Education.* 45 (10): 1398-1410.

Usher, M. & Barak, M. (2020). Team diversity as a predictor of innovation in team projects of face-to-face and online learners. *Computers & Education.* 144 :1-13.

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