

Development and evaluation of the Our Journey platform through the 'Linked Journeys' project

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Executive Summary

The Jisc-funded Linked Journeys project has contributed to the design, development and evaluation of a new mechanism for students to report on their experiences of events in their study. The project aimed to expand current understanding and practices in two areas:

- How new interfaces for students can provide insights into student mental health and wellbeing, and prompt students and staff to consider these issues.
- How new sources of data reported by students could enhance existing analytics and reduce current gaps in the understanding that can be drawn from these data sources.

Student mental health and wellbeing is a major concern, and new technologies and forms of data can be a part of the answer (Jisc, 2019). The benefit of the Linked Journeys project for the education sector is to provide an example system and insights into how we can improve on the currently available sources of data, which give limited understanding of the emotional wellbeing of our students.

The evaluation provided evidence that Our Journey could generate insightful data on the *affective experiences* in a student's journey, to complement an understanding of the *academic experiences*.

Feedback from students was also positive. Students found the activity of representing their journey engaging, prompting them to think about their goals, development, and wellbeing.

Students in our workshop and trial survey provided insights into privacy and sharing issues. Students perceived a need for personal control of the journey. This facilitates honesty and avoids concern that they will be judged based on their experiences. Students expected to share information that is important with the appropriate staff. In general, students were happy to share their journeys with course and student support teams, but there may be exceptions, for example where a particular tutor was a cause of distress.

Linking data from a student's journey with module-level registration and attainment analytics highlighted areas where the journey as viewed by the student was richer than the analytics suggested. Events that could be identified in existing analytics could be understood in more depth via the journey data. In other cases, the journey data added understanding about the student that was not present in the data, or did not link directly to the study of a specific module.

The version of the system now available at the conclusion of this project includes new features devised in response to the key issues raised in our exploration of these issues, including:

- **Privacy:** Students need to feel comfortable recording personal details, so they control how the journey is shared and are aware of who can view it. This is flexible to support a range of

scenarios of use, and the design focuses on sharing with specific group ‘hosts’, rather than encouraging wider social media-style sharing by default.

- **Focusing on events of interest:** To enable journeys that includes specific events of interest, and can be better linked to other forms of data, hosts can create suggested events that their students are prompted to consider adding to their journey.
- **Analysis and visualisation:** To support staff awareness and analysis, heatmaps are generated for individuals and groups that amalgamate their emotional responses to types of events.

Building on this project and the current system, we want to build collaborations to develop pilots where Our Journey is used in their teaching contexts.

Introduction

The Linked Journeys project followed from initial design work and a first online Our Journey tool developed through participatory research with students and staff, as discussed in [Coughlan, Lister & Freear \(2019\)](#). The aim of this was to devise a flexible and accessible means of representing diverse student journeys, with a particular focus on the challenges faced by students that might not be visible or understood by the institution. This grew from a specialist project focused on disabled student experiences, to a recognition that supporting student journey representation could be valuable for all students and institutions.

Our Journey developed and maintains a simple structure as its essence. A student’s journey is constructed a series of event cards, each of which has an event type, description, and emotion that the student felt in response. In more recent versions, a date can be added to each card. However, the structure does not enforce a particular time period or sequence of events on the student. This provides a high degree of flexibility and gives the student control over what they include. At the same time there is a structure to the data that is produced.

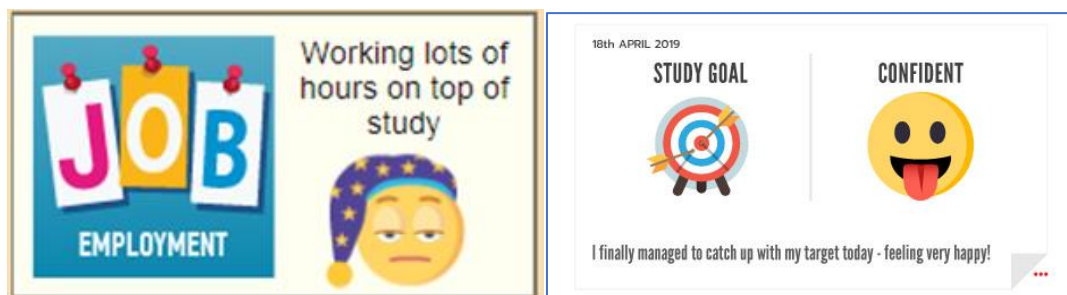


Figure 1: Our Journey card designs. Version 1 (left) and version 2 (right)

Case studies

In this section we provide three examples where Our Journey have been used in different settings.

Gaining understanding of student mental wellbeing in the curriculum (University of Bradford)

Our Journey was introduced on 23 January 2020 as part of Bradford’s initiative on embedding mental wellbeing in the curriculum. Both the online and paper versions of the tool were demoed in an event with student representatives and staff from different areas of the university, both academic and student support. The staff were extremely positive about the tool, and agreed to use it with students in order to gain a better understanding of issues that impact student wellbeing at Bradford, and so the institution can identify and respond to common themes. It was also intended that completed (anonymised) journeys to be shared with teaching staff as a development tool.

“A number of staff, either individually or within teams, have reported that they found the tool a very useful active method for engaging in conversation with their students about their journey whilst at University. Some colleagues have expressed a wish to use this with new students to highlight the complex and rich experience that a typical journey can bring, and to act as a trigger for normalising and predicting the stressors associated with those journeys. Other colleagues have reported that this tool acted as a facilitator to initiate conversations between staff and students about mental wellbeing which in turn could lead to timely and appropriate signposting to additional support services. At the University of Bradford we are keen to explore further how we might use the Our Journey tool to enhance both the staff and student understanding of a student’s individual or collective experience of their curriculum in its widest sense.”

Alison Hartley, Associate Dean of Learning and Teaching at Bradford

Considering wellbeing when starting study (Open University)

As part of the Open University’s foundation-level Access modules, students are given an optional activity during a break week that is intended to help them develop as learners. The initial version of the Our Journey online tool has been used with several cohorts now as a basis for this. Students are prompted to use the tool to create a journey focusing on the reasons for starting study, the challenges and achievements so far, and their goals going forward. Students are encouraged to share their journey if they feel comfortable doing so, alongside a summary reflection on a VLE forum. The activity is popular and makes visible the diverse situations that students come to the university with, and encourages emotional awareness and reflection on overcoming obstacles.

“The student journey tool has been used with a number of groups of Access students, who are usually near the start of their academic journey and have often had difficult previous experiences with education. It has been helpful to offer an option that is fun and easy to and which supports and encourages them to reflect on different aspects of their experience. The activity encourages them to share their journey on a student forum if they wish and to comment on each other’s experiences, which has helped develop a supportive environment. Feedback suggests that students have found it helped them to reflect on their previous and current studies and to see the positives in their experience more clearly. They also said that they intend to use the tool at different points in their study to assess progress.”

Sarah McKernan, Tutor Support Manager for the Access programme

Student mental health vignettes for institutional change (Open University)

As part of an institutional research project on the barriers for student wellbeing that reside in the curriculum, students were interviewed and their anonymised experiences were turned into vignettes using the Our Journey tool. These vignettes were delivered to over 200 staff in a series of events; staff analysed the vignettes to identify barriers to mental wellbeing and potential interventions to improve this. Staff commented on how useful the format of the vignettes was, that the Our Journey aesthetic made it easy for them to engage with and analyse the content in a group environment.

“Using the vignettes as part of the workshop shaped engaging, enjoyable and insightful discussions. They generated ideas and thinking about the student experience at the Open University, and the impacts both of and on student mental health. The styles are visually appealing, clear and very simple to follow in groupwork, as well as being informative and interesting. Whilst we were told they were an amalgamation of otherwise confidential individual student stories, they successfully highlighted different students’ experiences in their study journey, as well as how we can make a difference to their experience and studies in a variety of different ways.”

Linzi Morris, Head of Student Support at the Open University

Project methodology

The project took an iterative approach and included a participatory workshop and research around emotional representation, followed by an initial round of development and trial evaluation, and a further round of development which built on the analysis of trial data and also added features for Our Journey to be used in a flexible and on-going way by educators and institutions.

Participatory design workshop

A workshop was held to engage OU students and staff in student-facing roles in exploring the development of Our Journey. Three themes related to the Linked Journeys project were used to structure the day:

- The representation of emotions in relation to events in the student journey.
- The use of student data in the journey and the use of data from student-created journeys by the institution.
- The potential to support effective responses to challenges faced by students.

Presentations were also made to introduce the project and to review the current design and potential future directions.

Nineteen people attended the workshop including OU students, OU staff, and the project team. The focus was on enabling the participation of students and this included representatives from the Open University Student Association (OUSA), Disabled Students Group (DSG).



Figure 2: Participatory design workshop

Emotions

The first session explored how the Our Journey tool could represent emotions that students experienced in relation to example events that were memorable to them. The extent to which

emotion is complex to express, and the potential and limitations of emojis and / or words as a means to this, were key themes. Words were considered more “accurate” than emojis, but visual representations such as emojis were popular and there was a desire to extend the breadth of this on the platform. Multiple emojis were used by some participants and this could express more complexity.

The intensity of emotions was discussed. It was felt that students were more likely to include events of high emotional intensity in their journey. An ability to express different levels of intensity could be important, but it wasn’t clear how much lower intensity would be used as this depended on how students were engaging with the tool¹.

A key element identified was that emotional responses after the event (i.e. in creating the journey retrospectively) would be different to ‘in the moment’ reflection and emotional involvement (i.e. adding to the journey in an ongoing way during study).

Linking to university data

The second session used physical cards to explore how journeys might include or link to data known to the university through other means. A key point of feedback was that students might not respond well if events were added into their journey automatically, or if they were pushed to include negative events such as a failed assignment. This informed the functionality for cards that a host could suggest a student adds, rather than a focus on the direct addition of university data or events into the journey.

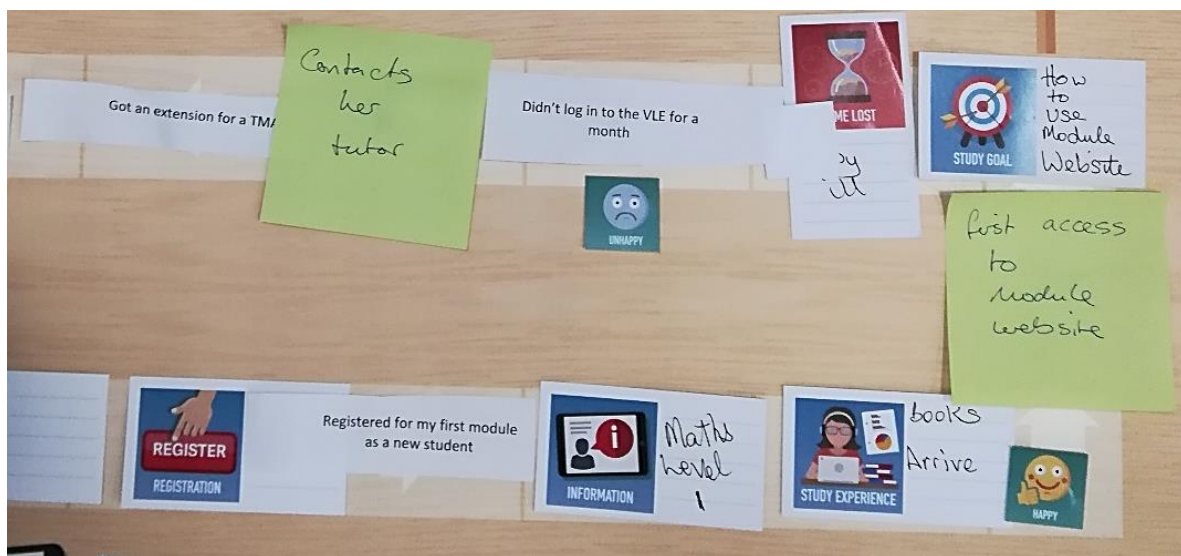


Figure 3: Creating a journey that includes data known to the university, e.g. 'took an exam' 'passed a module', alongside student created events.

Supporting responses to challenges

There was a positive view that Our Journey could become part of student support and a variety of ideas about how this could happen.

To a large extent, this service should be ‘opt-in’ and student-controlled. There could be situations where the university had a duty of care to consider and might want to intervene. There was also a

¹ In feedback from the subsequent trial, the ability to express more subtle emotions was also requested. The final design provides a balanced range of emotions intended to include high or low intensity in positive and negative directions.

consideration that too much help could get annoying and balance needed. Such features should be able to be 'turned on and off'.

There was concern that Our Journey would not be the tool that most students would report into when they had a clear and immediate emergency. The primary use would be in providing support and guiding students to the right points of contact in general situations. It would give 'strategic sign-posting'. Figure 4 shows an example of the activity that participants completed to work through a challenge or crisis in a student journey, and the support that the institution could offer.

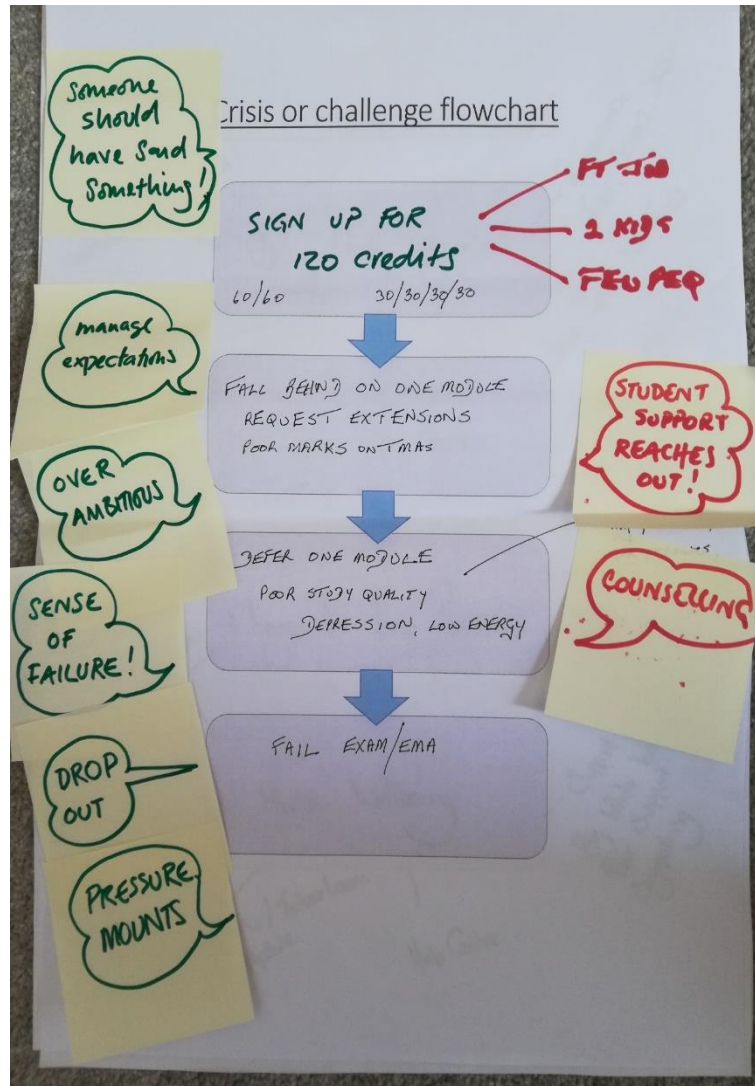


Figure 4: Identifying challenges and how they can escalate to crisis situations if not mitigated at an early stage

Representing mood and emotion

A literature review of emotional representation was conducted, to inform the choice of representation used to represent students' wellbeing. Key areas explored were mood divisions, the universality of facial expressions, use of emojis and alternatives.

If longer-term mood is the focus, this may be best achieved with representational forms such as images or music. However, short term emotional response to events is something that emojis can be more appropriate to represent, and literature suggests that these provide a usable way of doing this. The outcome of the review was that emojis were the most appropriate means to represent emotion in Our Journey, in conjunction with words.

The first set of emotions were elicited from the student participants. However, feedback from the trial suggested that the choice of emotions tended to be quite intense, and students would prefer to also have milder emotions to choose from. Therefore, in the revised version, emotions were organised into 6 scales, each consisting of 6 emotions ranging from strongly negative through to strongly positive (shown below.)

Very negative	Negative	Mildly negative	Mildly positive	Positive	Very positive
Despair	Confused	Disappointed	Thoughtful	Optimistic	confident
Upset	Stressed	Unhappy	Content	Happy	Excited
Scared	Anxious	Nervous	Reassured	Relaxed	Inspired
Angry	Frustrated	Concerned	Grateful	Determined	Motivated
Unwell	Tired	Bored	Relieved	Surprised	Enthusiastic
Guilty	Embarrassed	Self-conscious	Pleased	Satisfied	Proud

Table 1: Scales and ranges of emotions

Platform design

Development of the platform has occurred in two iterations during the project, with a pause for the trial described in the next section was conducted. The following screenshots and description are based on the version achieved at the end of the project, published at: <https://ourjourney.ac.uk/> .

Having worked through some key design challenges during the project, the system now has the capacity to be used by groups of students and staff both in The Open University and in other institutions. We welcome people to get in touch with us at ourjourney@open.ac.uk to discuss ideas for using the platform with their students.

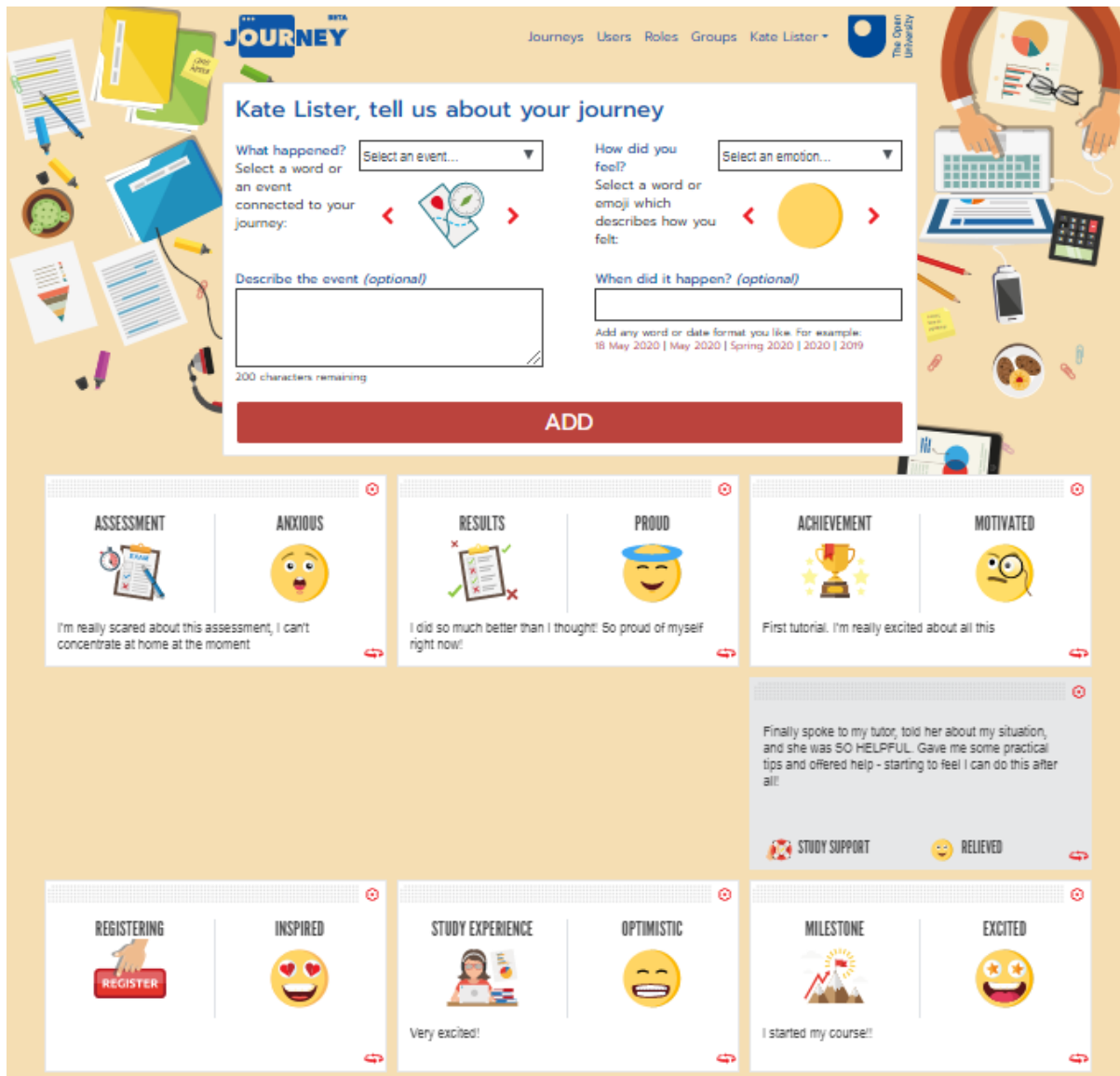


Figure 5: Our Journey

Journey Creation

Figure 5 shows an overall view of the journey page, and Figure 6 shows a closer view of the interface through which students create new event cards. The first field is a drop-down menu of event types. The types of events offered has evolved somewhat according to feedback, and remains flexible. The current version includes 30 event types. For example, the most common event types used in the trial are “Registering” and “Assessment”, and the types include events outside of study, such as “Employment” and “Moving home”.

Students are asked to add an optional description. In response to feedback about the limitations of this, we increased the character length available and have also allowed hyperlinks to be included in the text, which provides a capacity for longer reflections through a blog or online media platform of their choice.

Students also select their emotional response to the event, using the range of emotions described above.

A date field is also optional, and is open to the student to suggest different kinds of periods of time. For example, “Spring 2020”, “1st July 2019” or “all the way through my study”.

Having added a card to their journey, the student can rearrange cards to create the chronological order they want, and can ‘flip’ cards to reveal more text or a graphical side with a shorter amount of text.

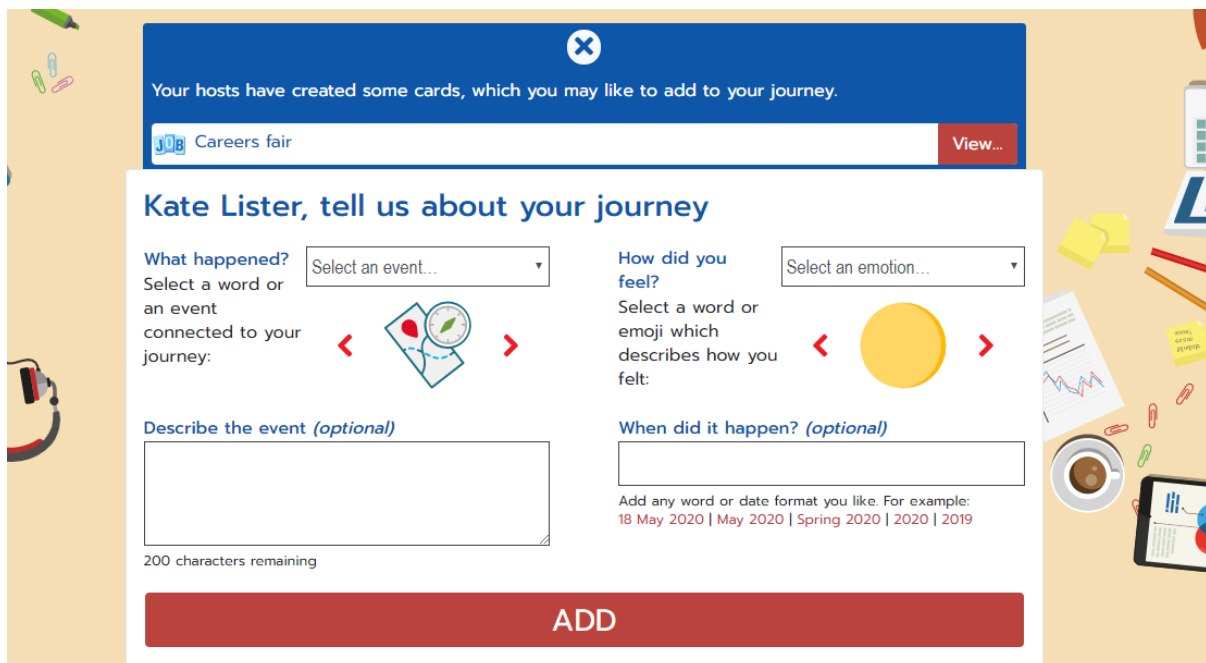


Figure 6: Close up of the journey creation interface

Sharing, privacy and cross-institutional use

There are some important ethical considerations to the design and implementation. Firstly, the platform is devised to prompt students to represent personal information and the intent is that students provide honest and rich accounts of their experiences. This requires attention to the privacy and security of the platform, and furthermore to make the mechanisms for sharing clear and under the control of the students using the platform. The approach to sharing with hosts can facilitate student support. At the same time, there are further possibilities for flagging that individual students are reporting difficulties.

Our aim is now to make Our Journey available to the sector and sustainable to run. Issues like capture of personal data, links to student records to enable further analysis and support, and privacy considerations, mean that the code for version 2 is currently being maintained by The Open University, rather than being available under an open source licence. The [version 1 tool](#) produced prior to this project is open source, and because this does not store any personal data online there are no concerns about the security implications of releasing it in this way. The [version 2 platform](#) is publicly accessible, rather than on an Open University intranet. It is intended that any individual student can use it freely and institutions can manage students with our support.

Groups and hosts

In order to support use by institutions, courses, personal tutor groups, or other groupings of students, we created functionality for ‘Groups’ and ‘Hosts’. Students are invited to join groups, which are managed by hosts, who also can access a student’s journey if the student consents to this being shared. Figure 7 shows the interface for creating a new group.

Create a new group

Groups can reflect any community you wish, but are intended as a way to represent collections of learners such as module presentations.

Group name

A course code or similar short identifier.

Group title

A course title or similar description. (optional)

Figure 7: The new group creation modal, available in the host interface

Hosts can also access a heatmap which provides an overview of how event types correspond with emotions for their groups (see figure 8, below.)

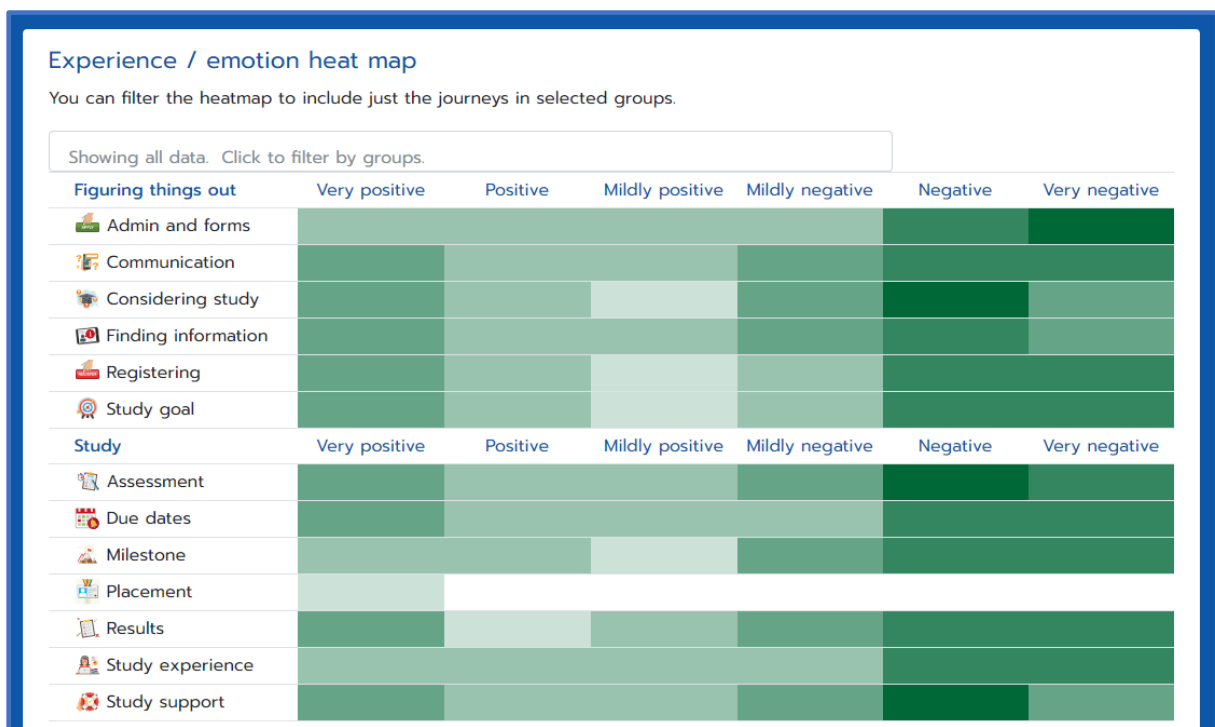


Figure 8: Part of the revised heat map for visualising data, available in the host interface

Suggested experiences

As part of the group experience, hosts are now able to suggest events that their students might like to add to their journey (i.e. if the host would like feedback on a particular shared event, such as a placement, careers fair or social event.) These appear as a notification and a set event, and the student is invited to customise them with an emotion and accompanying text and add them to their journey (see figure 9, below.) The student is able to ignore or dismiss the suggested experience.

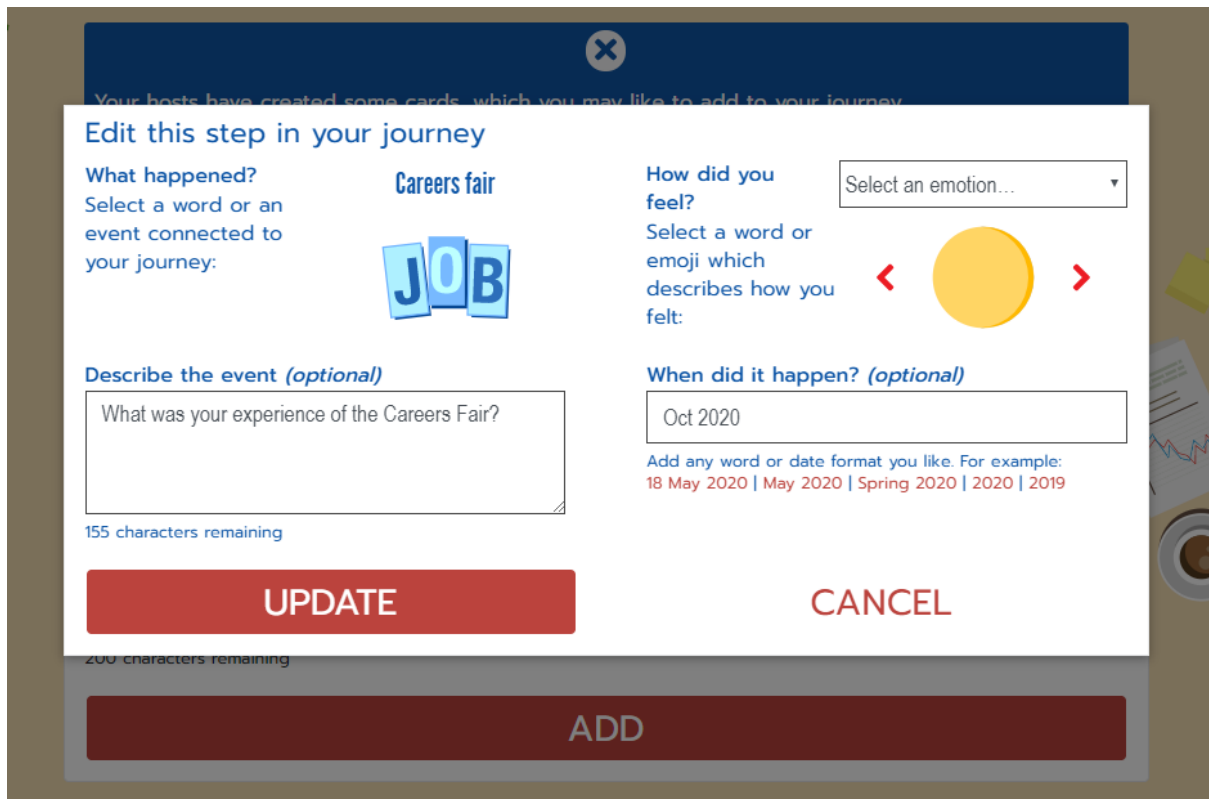


Figure 9: The suggested experience modal, available in the student interface

Trial

Method

We conducted a trial with OU students. They were given an introduction to the platform, they then used it to complete a retrospective view of their journey and then completed a survey. The participants were identified to be enrolled on one of five specific qualifications and had all completed at least one module of study, such that they should have a substantial amount of experience to report on. The trial was conducted in August/September 2019, so participants used the first iteration of the platform rather than the final version shown above.

Findings

Our findings are based on feedback via a survey completed after participants used the tool, as well as the data collected through the participant's interaction with the tool itself – the journey they create. The journey data was analysed in conjunction with information from the participant's student record – the modules they have taken, when they started them, and their results.

Survey results include that:

- 83% of survey respondents said that they enjoyed reflecting back on their study journey
- 89% thought Our Journey was easy to use

Participants said that creating the journey prompted them to think about:

- the difficulties they have faced (94%)
- their study achievements (91%)
- their goals (77%)
- the skills they developed or demonstrated through their studies (74%)
- how they respond to difficulties (69%)

- their mental wellbeing (66%)
- their approach to studying (66%)
- what they want to do next (63%)

What can be understood about emotional responses to study events from Our Journey?

While it is early days, the data from the trial allows us to explore what might be possible in identifying patterns of wellbeing according to events. Common combinations of emotion and experience type can be identified across the data. For example, assessments were most commonly linked to negative emotions, such as anxious, nervous or stressed, while results were frequently linked to positive emotions such as proud, surprised, happy. This provides evidence of an emotional journey that might be familiar, with students feeling more anxious at the point of assessment than they perhaps should, given that the results produce a more positive feeling. The example below, for an individual student who participated in the trial, shows how their emotional responses to assessment are more negative than to the results they receive.

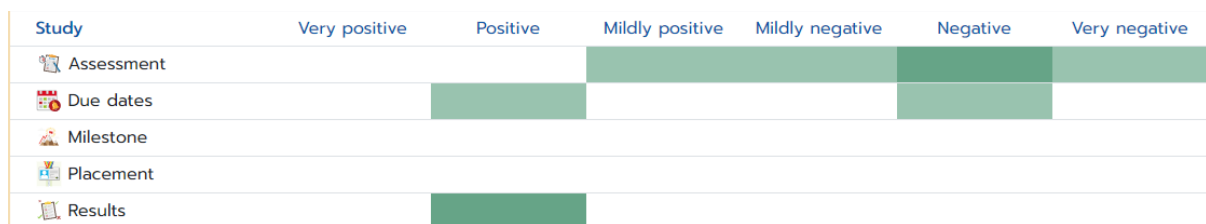


Figure 10: Heatmap for an individual student showing emotional responses to assessment events (darker colours indicate more events in this category of emotion)

One of the constraints in the trial was that the types of events captured in the structured data are of a fairly high level, e.g. a generic ‘study experience’ rather than a more specific type of event. This is part of the rationale for the new functionality for host-generated events, and so these may be key to understanding more about emotional responses to events and to linking other analytics data with the emotional responses.

How can journey data be combined with existing learning analytics?

The journeys were analysed in combination with module registration and attainment data for the student. When considering the affective and academic experience, some cards are clearly related to module-level data. In the following example, the student record matches well, showing that they took the related module and passed with distinction.

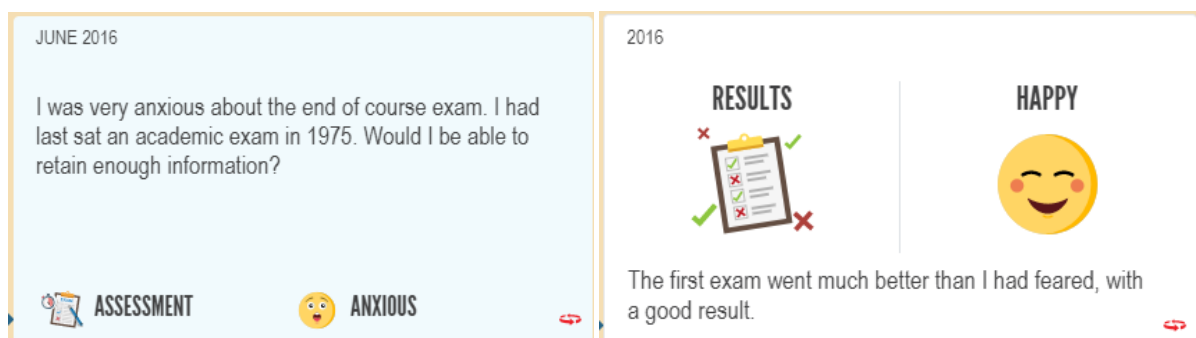


Figure 11: Cards from an individual student's journey that illustrate experience of assessment

In the next example, the journey cards show important details that could aid understanding of the other student data.

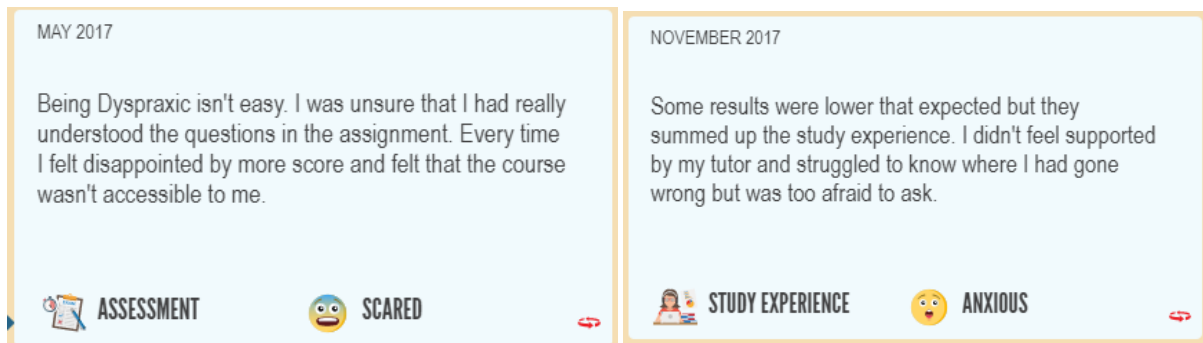


Figure 12: Cards from an individual student's journey that illustrate study challenges

In this case the student passed the module they are discussing, so there would not be a concern based on their record. However, they later withdrew from some subsequent modules and the journey data helps to understand this.

However, there were also experiences that are ongoing (i.e. concerns over lack of study skills), cumulative (i.e. anxiety around assessment) or beyond a module-level data point (i.e. a major life event, such as having a baby or changing job, taking place in a break between modules.) This data is of particular interest as it may not be present in the other analytics. However, it also poses a challenge for linking journeys and analytics.

Next steps

In the OU, we will continue to expand the piloting and use of Our Journey in different scenarios. We will explore further integration of it, and opportunities that may arise from it, including sharing of data with mentors and the possibility of badges for participation.

Through these pilots, which will benefit from the improved functionality described above, we can develop further processes for analysing journeys in relation to other forms of analytics, and further insights into mental health and wellbeing in study. It is apparent that Our Journey can also be used to develop richer understanding in other areas and can be embedded into activities such as personal development planning.

We are actively opportunities for collaboration or pilots in other HE and FE institutions. As a result of presentations at Jisc events (the Learning Analytics Research Group and the Connect More online conference) we have received several expressions of interest from different institutions, and these will be explored for the 20-21 academic year.

References

Coughlan, T., Lister, K., & Freear, N. (2019). Our Journey: Designing and utilising a tool to support students to represent their study journeys. In Proceedings of the 13th Annual International Technology, Education and Development Conference (INTED) 2019. Available from: <http://oro.open.ac.uk/59195/>

Jisc (2019), Can we tackle the student mental health challenge using data analytics? Available from: <https://www.jisc.ac.uk/news/can-we-tackle-the-student-mental-health-challenge-using-data-analytics-13-mar-2019>