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EDITORIAL

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From the main track to the winding path: considering the diversity of trajectories at university

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Not all roads lead to Rome?

When we proposed the topic for this special issue and made the call for papers, we knew that it had been relatively little studied worldwide at the level of higher education, but we had no idea it would be such a difficult subject to tackle from the point of view of shared conceptual understanding, or what the topic could mean in different contexts with varying university systems in operation.

The first problems we encountered were related to the precision and clarity of the concept of a student trajectory. Everyone generally shared the idea that a trajectory is a path someone has followed, choosing itineraries and progressing in their studies as they go along. However, the different versions of what was meant by trajectory varied according to the place and time.

To this effect, is a trajectory what the student constructs when they choose subjects and modules within a degree programme? Or is it defined according to how the student accesses university (whether via an academic track or a professional one)? Or does it perhaps consider what the student does during the period they are studying their degree in the academic and family spheres, at work and in other areas?

Moreover, the question was raised as to what the adjective 'complex' actually meant in this context, and whether it was referring to the student's situation, perhaps because they were in a situation of vulnerability, or was complex being used as a euphemism to say that the student was failing subjects? It could even refer to the institutional context, for example, if the courses and modules are selected from an enormous range of options, making it something very difficult to manage. Or perhaps we are talking about the non-linear way in which students progress in their studies.

Given this lack of clarity, we decided to upload a more detailed post on the blog of the journal, which would allow us to explain more extensively the conceptual basis and the intention of the special issue within the framework of a programmatic proposal. However, the proposal was also open to new definitions and the possibility of dealing with aspects that were not considered at the time.

Why would the straight line always be the best path?

We decided to consider the trajectory from the moment the student enters higher education and not before, taking into account what the student does in the academic field while enrolled at university, progressing and making progress as they go along. The trajectory is defined in two ways, from inside and outside the degree programme. However, there is still a split in relation to the internal aspect, meaning we can look at the curriculum, the pace and the place where the degree studies have taken place.

First, from the point of view of the curriculum, the student's range of choice lies in the selection of subjects or modules. It is the student that decides and builds their curriculum, according to the constraints established by the higher education institution. In this regard, the degree of flexibility of the institutions varies greatly from one to the other, with students sometimes having a very large margin of choice, and sometimes a very small one. If the range of choice is very wide, it is up to the student to integrate, give coherence, relate and globalise the content of what they are learning, making choices that reflect a good sequencing of the content and are calculated to assume a realistic workload (Hovdhaugen, 2011). This is a difficult task, but the choice also has the advantage that it allows them to adjust their studies more closely to their tastes, interests and intentions towards specialisation, allowing them to choose whether they prefer to 'learn a lot about a little,' or 'learn a little about a lot'.

Second, the pace is related to the time taken by the student to complete each of the steps. Sometimes the pace is slow, foreseen by the student and formalised in part-time commitment, taking only a few subjects per year, and sometimes the pace is defined according to the number of subjects or credits the student is able to pass, so there is sometimes a non-voluntary delay in the student's trajectory. Internally, there is also the spatial definition because sometimes the degrees can be taken totally or partially online or onsite.

From the external point of view, we only need to look at the degree on which the student is enrolled. The choice here is between continuing to study the same degree from one year to the next, suspending enrolment for a certain period of time (which will lead to a stop-out trajectory), or opting to change degrees. However, the changes can be multiple, with a change of degree taking place within the same higher education institution or by enrolling at another university, or even completely changing the modality, going from a face-to-face degree to an online degree, or vice versa.

While we had originally considered only the latter definition of trajectory, observed from the point of view of enrolment on the degree, the articles received from the call for papers led us to broaden our perspective to also include the trajectories a student constructs through their choice of subjects or modules within their degree, provided the research was conducted from the perspective of the succession of subjects that builds a trajectory with a specific result.

Who chooses their path?

The university frameworks in which trajectories are carried out are highly variable. There are countries where university degrees are designed in an extremely rigid way, with a unitary syllabus structured internally with no optional subjects, or there are externally

established regulations that make it very difficult to change from one degree to another without incurring significant disadvantages such as the loss of all the academic credits taken up to that point. In contrast, in other countries the design is highly flexible with a great deal of room for manoeuvre in designing one's own curriculum, and for building trajectories that allow changes of direction (e.g. by changing degree) with little harm done (Charles, 2016; Orr et al., 2017).

Notably, this more flexible orientation is not always intentionally designed. In some countries the system is more flexible from the outset, while in others the development and diversification of higher education institutions has led to an increase in the number of stakeholders in the field of university provision and, perhaps as an unintended consequence, to a more flexible system (Brennan, 2021; Charles, 2015). In some countries, for example France, flexibility has also been brought about by the introduction of business approaches that prioritise employability and the broad extension of apprenticeship systems (with students spending up to half of their training time in companies), bringing new approaches, rules and organisation into play (Pierrel, 2017).

In all the contexts described above, even in those with a more rigid regulatory framework, students progress as they choose, which does not always coincide with what the institution has planned. The interests of the institution and the student on this point do not necessarily coincide.

A higher education institution responsible for a degree programme is interested in ensuring students who has gained access to it continue to enrol on the same degree programme, progress at a rate as close as possible to the predetermined one, graduate from the same degree programme on which they were initially enrolled and do so in a time frame close to the planned one. This type of student increases the institution's efficiency and improves the indicators used by external assessment agencies.

However, although most students would prefer their trajectory to be linear and to be able to complete their studies as quickly as possible, in practice many of them face obstacles that prevent this from happening. This is sometimes a matter of performance, of a mismatch between expectations and reality, of having discovered that there is another degree programme they like more, of their family or work situations, or of illness. All these possibilities, among others, may mean that students need to take an educational break, or they may want to change to another field of study, degree, institution or modality. In this event, their goal will no longer be the same as that set by the institution, i.e. to finish the degree in the shortest possible time, but will now be to continue to study where they are most interested in studying and graduating when they can, at some point in the future, which is what Tinto (2017) calls *persistence*.

These options, which will make their trajectory more complex, are obviously more easily available in systems that offer greater flexibility and, in particular, the online mode of study. However, as we have already pointed out, flexibility entails risk. Navigation becomes more difficult and the risk of getting 'lost' is very real, and even more so among the group of students who are most likely to find themselves navigating these complex trajectories, the non-traditional students.

Change of direction

To address this issue, both in the field of research and in that of university policies, we suggest a dual change of conceptual perspective.

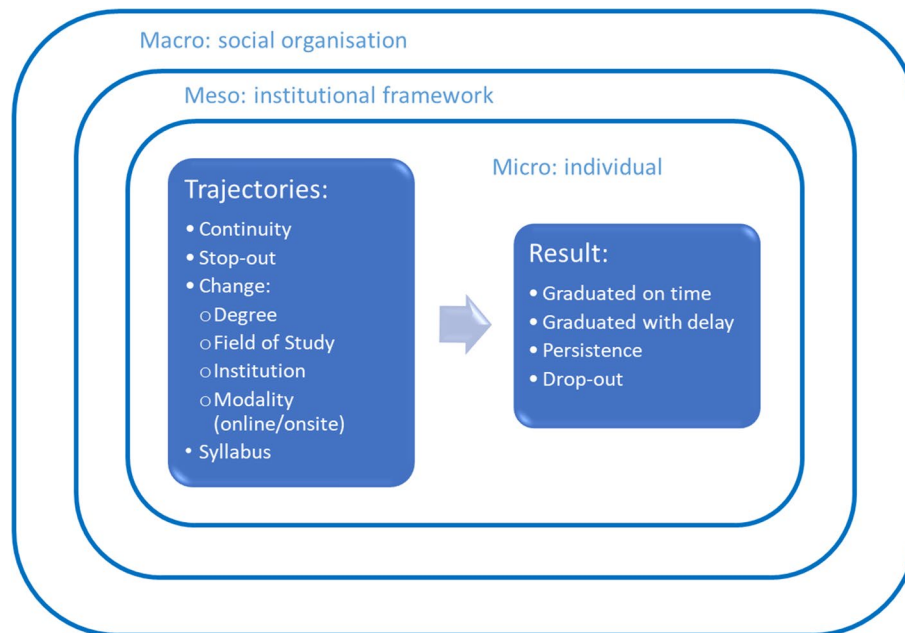
The first change is for complexity in trajectories to stop being conceptualised as a fault of the university system but as a consequence of its flexibility, and to this effect as a symptom of the fact that there are students who follow alternative paths because they have been given the opportunity to do so. If this were not the case, many of these students may have dropped out.

The second change in perspective is to broaden the conception of the type of policies that are relevant. If we adopt the student's perspective, what is important is that the complex trajectory leads to a satisfactory end result, in other words, that the time, effort and money invested lead to graduation at some point. In this regard, it makes no difference whether they graduate from the degree programme on which they were initially enrolled and whether they do so within the time frame established by the institution. What matters is whether the student, despite the obstacles they encounter and the complexity of their trajectory, persists and is able to graduate. This change of perspective means that the focus is not on the institution, because the student may continue on their path outside it, but on the system. It is the university system as a whole that must respond to students' needs. This clearly entirely subverts the logic of institution-focused assessment and a field of higher education institutions all in competition.

A change of perspective that applies to one's own research projects is not difficult to achieve. All that is needed is a careful conceptualisation, discussing the problems, comparing all the options in hand and reaching a consensus among the various international teams with whom the projects are shared. The difficulty increases enormously when the intention is for this change of perspective to spread among researchers and university managers that are not yet involved in the research projects. The proposal of this special issue on complex trajectories is intended as a further instrument to achieve this goal.

A new map to explore the region

From a research point of view, however, it is important to frame our proposal within a broader research programme. With the intention of contributing to its concrete realisation and extension, we have adopted the research programme described by Haas and Hadjar (2020) in their review and systematisation of existing research in the field. Following their structure, we consider the three levels of analysis reflected in the following diagram:



At the macro level are the patterns of social structure and dynamics that help us to understand how institutions are configured, and the mental framework in which individuals move within a given society. A very interesting example is the study on forms of transition to adulthood in different countries by Van de Velde (2007), helping us to understand the reasons for earlier emancipation in some countries such as Sweden and the UK, which are linked to more unstructured educational trajectories, and the later emancipation in countries like France and Spain, where students are more dependent on family support and educational trajectories are more linear.

From a life course perspective (Bernardi et al., 2019), the paths followed in the different areas of people's lives, be it family, education, work or any other, intertwine and give meaning to the moments when transitions take place and the trajectories followed by individuals.

At the meso level, we need to look at how institutions shape their norms, and thereby establish a framework for action wherein people will make decisions and move in different directions. Once again, the research (Charles, 2015, 2016) offers a comparative example among cases from different countries, described using the metaphor of different forms of transport (an underground network, a network of secondary roads, and a high-speed train line) that provide greater or lesser opportunities for take-off and re-entry, and for changes of direction. The varying degrees of flexibility of the institutional framework obviously define the most common trajectories and the degree of diversification that occurs in each of these university systems.

It is at the micro level that equity issues emerge most clearly because this is where we see the consequences that social and institutional frameworks have on people, and it is where we can see that the impact can be different depending on social background and other socio-demographic variables. Even in the case of institutions that implement

policies to diversify access routes in an attempt to broaden the opportunities and social diversity of their potential students as they follow more complex trajectories, there are unexpected consequences because the same policy can have different impacts depending on the social background of the student (Herbaut, 2022).

It is also at this level that we can see the interpretation people make of their life course, how they successively or simultaneously and in an integrated way deal with the different areas of their lives, what motivates them and how they give meaning to the various areas (Cortez García, 2022). In some cases, this occurs even to the point of attributing complementary meanings that simultaneously support each other from areas such as work and studies, which university institutions often consider to be in competition (Béduwé & Giret, 2021).

The micro level is where we can empirically observe students' trajectories, the paths they actually follow and, in connection with the previous levels, this allows us to detect in which institutional and social environments the different types of trajectories are most frequent. Moreover, this is the level at which our proposal can be most clearly developed.

With regard to moving away from considering the complex trajectory as a bad result to be avoided, the strategy simply consists in separating what is considered the trajectory from what is considered the result. To this effect, the trajectory is the path followed by the student during the time they are studying for the degree, while the result is the final situation we observe at the end of a reasonable period of time (often defined by the practical circumstances that determine how long we can extend our observation). Whether in some contexts, or for some social profiles of students, the results for complex trajectories are more satisfactory (i.e., lead more often to graduation) than for other trajectories is an empirical question that needs to be investigated, along with the consequences this may have beyond the university stage. By way of example, from the point of view of labour market integration, we could ask whether having followed a complex trajectory is an advantage or a disadvantage, or if this result depends on social origin (Lemistre, 2018).

To consider the persistence of students as central, regardless of whether they continue their trajectory in a linear pattern, the strategy is to analyse data that are not restricted to a single institution and to broaden the frame of reference to correctly identify the transfer trajectories within a system.

To this effect, let us take a look at a real case. A student is enrolled on a degree in social education at an onsite university. They dislike the subjects and they are not sure that the type of work the degree leads to really is their calling; what is more, they need to do paid work because they are emancipated. They find a job in the field of social integration and decide to work full-time, leaving their degree. After a year, they see they really like this type of work and want to develop their career in this area, and so need to study a degree because they need specialised knowledge and because doing so will lead to better future opportunities for job stability and promotion. They decide to enrol on the same degree, but at another university in the online learning modality, which they do while continuing to work in the same job. By the time they finish their degree in social education eight years have passed since they first went to university, which is twice as long as expected. This is a complex trajectory, without doubt, but with a graduation result

(along with a labour market integration result), whereas if the indicator focused only on the first higher education institution they enrolled at, it would be classified as a dropout. However, if the system is analysed in a wider sense, the case is automatically classified as a transfer.

The vast majority of the articles received and accepted for this special issue fall within this micro level (contextualised at a meso level) and adopt some or all of these principles. Three of the accepted articles follow the trajectory of students from the point of view we referred to as external in a previous section, or more specifically, they select a group of students who make a change and observe the result. Fount et al. (2023) analyses the students who make a vertical transfer and looks at their performance. Sánchez-Gelabert and Elias (2023) follow students who transfer from onsite to online degrees and look at the outcome, considering the varying probability of success according to social background. Last, Miguéis (2024) focuses on how long it takes students who change degrees to finish their studies. A fourth article takes an internal look at the degree, focusing on the construction of the syllabus (Maqsood et al., 2023) and the selection of subjects, performance in each of them leading to varying degrees of successful succession, and placing the student in a position of greater or lesser likelihood of final success.

Resources for avoiding getting lost

We advocate for this change of perspective to be made not only from the point of view of research but also among the administrators of the university system and higher education institutions. For this to be the case, we believe there are three fundamental areas of intervention and development.

First, it is necessary to monitor students' trajectories and observe how they evolve over time. There is now an enormous availability of data, the problem being their management and analysis. University and government data services cannot carry out in-depth analyses with the regularity and speed with which they are normally required to provide results; testing hypotheses is not their task but that of the researchers, which is why the latter needs to have access to this data (with the required guarantees). What is more, research can guide the selection of indicators these services should use, which is why it is important to think of it in such a way that it can be useful for systematising the observation of the trajectories followed by students and the results they obtain.

By way of example, research shows that there is inequality according to socio-demographic variables in the probability of following one trajectory or another, and of obtaining certain results. In this regard, a good practice for these agencies would clearly be to consider the question of equity. With the indicators used to monitor the performance of degree programmes, it is possible to systematically check whether students behave differently according to gender, age and social or ethnic background.

Another important consideration is the need to adapt the indicators to the longer times required by people who follow complex trajectories to complete their studies, especially if they study their degrees online.

Second, it is crucial to develop specific student support measures. All universities have established student support services, but here we would like to point out a couple of issues that need to be addressed to make the service particularly useful in the context of this change of perspective. The first is that considering the principle

of acceptance of people who are following a complex trajectory and with the aim of helping them to finish successfully, the retention measures are not sufficient because what they currently aim to do is ensure that there is no dropout, always from the perspective of the initial degree enrolled on and linearity. These resources need to be complemented by tools that help students to find their own path, even if it leads far away from the higher education institution that is offering guidance and support. In this regard, a programme to support the change of degree or institution would be just as valid as one that seeks to increase the student's institutional engagement and retention (Villar Aguilés et al., 2022).

The second issue is linked to the fact that, as mentioned above, university institutions in many parts of the world are becoming more flexible. This means that degree programmes and students alike often find themselves crossing existing boundaries between disciplines, higher education institutions, countries, modalities of study and so forth, creating a sea of choices wherein a compass and a good map is needed because it is easy to get lost (Brennan, 2021). The tools universities need to develop to help students find their way are these compasses and maps. Students need to know when they are at risk, what their choices are, the difficulties inherent to the different possible paths, the rules they must comply with, and so on. The fifth article accepted for this special issue develops an instrument in this direction (Sajja et al., 2023).

However, students are not the only actors at risk of loss as a result of pathway entanglement; complex trajectories are also a challenge for teachers. While a class full of students who have followed different trajectories, many of a complex nature, will bring diversity and richness to the classroom, the teacher will not know what their students have previously studied, and what is this will differ for each of them. How can teachers deal with this diversity? What resources will be available to them? And what repercussions will this have on the quality of learning in the group? These are of course very difficult questions to answer.

Last, special mention should be made of the need for institutional openness and coordination. As Brennan (2021) discovered for the English case, although there is sometimes an apparent flexibility with regard to the possibilities of changing trajectory from one degree or higher education institution to another, in practice this is a titanic task mired with risk, because the decisions taken with regard to the recognition of credits from one programme to another are not always reasonable. Institutions more often than not try to prevent students from making a transition to another institution because they lose money and because this affects efficiency indicators, but sometimes they simply ignore the study programmes offered by other institutions in the same territory. Not only is the lack of coordination evident, but so are the reasons that prevent transfer. In this regard, it may be up to higher authorities to implement policies of greater collaboration, which would conceive the system not as a field of competing institutions but as a university system at the service of citizens.

Author contributions

All three authors contributed to the development of the ideas, recommendations and writing of this article.

Declarations

Competing interests

The authors declare that they have no competing interests.

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