Distance Learning as the Higher Education Format of the Future? The Importance of the Study Entrance Phase

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Worldwide, the popularity of distance learning is growing, making digitally delivered teaching and learning formats increasingly important, not only for today but also in the future. These formats' flexibility and accessibility particularly appeal to non-traditional students. However, academic success among distance learners tends to be lower and dropout rates are higher compared to on-campus students. The transition into distance learning represents a critical phase for successful learning. The article addresses the question of why the study entrance is central to a future higher education that breaks down educational barriers and promotes the academic success of distance learners. Based on a scoping review – conducted by searching five databases (ERIC, PubMed, Google Scholar, PsycINFO, Scopus) and ultimately including 60 sources – this article explores the opportunities and challenges for successful learning during the study entrance phase and provides recommendations for teaching.

Keywords: distance education, study entry phase, study success, non-traditional students

1   Background

The popularity of distance learning in Higher Education (HE) is growing worldwide, with 11 million distance learners in 2017, 35 million in 2025, and a projected future student population of 50 million by 2029. But not only are the absolute numbers increasing, the penetration rate has also increased significantly in recent years. While it was at 0.5 % in Germany in 2017, it had already risen to 1.2 % by 2025 and is expected to reach 1.5 % by 2029 (Statista Market Insights, 2025). Distance education (DE) programmes will clearly significantly contribute to the differentiated German HE landscape of the future (Wassmer et al., 2023).

DE programmes are designed with a focus on so-called *non-traditional students* (Kerst & Wolter, 2022; Philips, 2025) and play a key role in enabling individuals with completed vocational training and work experience to study without a traditional university entrance qualification. Their high flexibility makes them particularly attractive for people balancing professional and family responsibilities (Klinke & Pundt, 2022).

Consequently, DE courses remove obstacles and offer student groups who have so far been underrepresented in traditional face-to-face courses the opportunity to participate in HE (Zawacki-Richter & Stöter, 2020). In this way, DE programmes can contribute to breaking down barriers that prevent equity in accessing Education as invoked by the United Nations Educational, Scientific and Cultural Organization (UNESCO) guidance regarding the future of (Higher) Education (International Commission on the Futures of Education [ICotFoE], 2021; UNESCO, 2020).

But unfortunately, DE students are less successful in terms of retention and pass rates than face-to-face students, and are more likely to drop out (Dahm, 2022). Whereas approximately 17 to 47 % of face-to-face students do not successfully complete their studies (Vossensteyn et al., 2015), in DE programmes the drop-out rate is higher (Bağrıacık Yılmaz & Karataş, 2022) and can reach up to 99 % (Simpson, 2013). In addition, only 39 % of DE students successfully pass their courses after the first semester, whereas the success rate for face-to-face students in equivalent courses is 64 % (Fojtík, 2018).

Therefore, while DE programmes have made the access to HE more equitable, the chance of successfully earning a degree remains unequal and societal groups that have traditionally been marginalised within HE are still disadvantaged.

The observed discrepancy in learning success between distance and face-to-face students can be attributed to the inherent differences between these two study formats. While digital tools and media are employed in a supplementary manner in face-to-face courses, contemporary DE is exclusively conducted in the digital space, utilising a wide variety of software, tools and programs (Schlosser & Simonson, 2009). This means that the interactions among DE students as well as between students and teachers are not direct but mediated through technology. Additionally, participants' learning takes place in spatial and sometimes temporal distance (Schlosser & Simonson, 2009). Unlike face-to-face courses, students and teachers are not in the same physical space and do not learn at the same time. DE courses are therefore characterised by alocality and asynchrony.

As a result of these features, learning and teaching differ in face-to-face versus DE due to transactional distance – the psychological or communicative gap between teachers and learners (Moore, 1993). This gap depends on dialogue, structure, and learner autonomy. Less structured environments with more interaction, like live online lectures, have low transactional distance. Highly structured settings with limited interaction, such as providing texts or videos without discussion, create a greater distance, requiring learners to be more autonomous and self-managed.

In addition to self-management and autonomy, motivation is an even more critical factor in DE (Ferrer et al., 2022). The empirically validated ARCS model – Attention, Relevance, Confidence, Satisfaction – guides the design of digital teaching to boost motivation and reduce dropout rates (Keller & Suzuki, 2004). Teaching should engage learners, highlight subject importance, build self-confidence, and generate satisfaction and rewards (Pange & Pange, 2011).

Moreover, as the student body is more diverse in DE and varies in life circumstances, educational pathways as well as academic and digital skills, the specific needs and vulnerabilities of these students must be considered to ensure that they are not structurally disadvantaged in DE (Lange & Schaper, 2025).

In this regard, special emphasis should be placed on the study entry phase: DE students frequently decide to drop out shortly after beginning their studies (Oliveira et al., 2017; Utami et al., 2020). This can be explained by the fact that distance learners must immediately manage high levels of autonomy, motivation, and digital literacy – skills that are often developed more gradually in on-campus settings (Angu, 2022; Davies, 2015; Güner, 2021). Without the physical presence of peers and instructors, they face greater risks of isolation and disengagement, and physical distance makes it more difficult to (informally) learn from peers (Domingues et al., 2023). Moreover, the particular needs in the transition to distance HE of the "non-traditional" students might not be met adequately (Schaper et al., 2024). Also, the cost of drop-out might be lower, as DE students typically do not invest in a move or new housing. Additionally, a study researching DE imposed by the COVID-19 pandemic revealed that first-year students perceived more of DE's disadvantages as compared to more mature students, who saw DE as more valuable (Stevanović et al., 2021).

Thus, learning about the challenges in the transition into DE should be of high priority to mitigate the high dropout rates during this phase of study (Oliveira et al., 2017; Utami et al., 2020; Xavier et al., 2022). Also, because research on the transition of on-campus students shows, that if they master the challenges at the beginning of their studies, they are more likely to succeed further on (Trautwein & Bosse, 2017).

This raises the question of which opportunities and challenges first-year students encounter in the transition to DE. Furthermore, it calls for an examination of how the study entrance phase can be designed to foster academic success from the outset, thereby promoting equity not only regarding the access to HE but also the success in HE. This is relevant beyond DE, as digitalization is increasingly shaping the HE landscape. For leaders at German Higher Education Institutions (HEIs) the digitalization of teaching and learning is their primary concern, even over administrative digitalization (Gilch et al., 2019). Therefore, guidance on designing digital formats for the study entry

phase is important not only for HEIs offering DE programmes but also for those integrating digital elements into on-campus courses.

To systematically record and present existing knowledge on the subject of "transition into DE" a scoping review was conducted. This article examines the results of this review, focusing on the opportunities and challenges in the transition to distance HE and on how teaching and learning during the entry phase should be designed to fully exploit the opportunities DE offers and to mitigate its challenges. Moreover, the results are discussed in the light of the UNESCO guidance regarding the future of (Higher) Education (ICotFoE, 2021; UNESCO, 2020), and design recommendations for the study entrance phase of DE-programmes that increase the likelihood of study success for DE students are given. If DE programmes could not only provide currently underrepresented student groups with access to HE but also promote their study success, they could contribute more effectively to a more inclusive and equitable HE (UNESCO, 2015).

2   Method

The present article is based on a scoping review researching the transition into DE that was conducted as part of the research project TiDE (Transition into Distance Education). The methodological approach was recorded a priori and can be found in the previously published review protocol by Schweighart et al. (2024b). Scoping reviews are exploratory in nature and are often used to gain an overview of specific topics, open up new fields of research, or identify existing research gaps (Arksey & O'Malley, 2005; Peters et al., 2020). This method seemed suitable due to its objective of gaining a comprehensive understanding of research on the transition into DE. The scoping review was conducted according to the guidelines by Peters et al. (2020). First, inclusion and exclusion criteria were formulated using the PCC framework (population or participants/concept/context) to consider all relevant aspects of the research question (Von Elm et al., 2019). A detailed explanation of these criteria can be found in Schweighart et al. (2024a). Based on these criteria, key terms were defined, and a systematic literature search was conducted in five databases (ERIC, PubMed, Google Scholar, PsycINFO and Scopus) between November 2023 and February 2024. A total of 1,534 sources were identified, including scientific articles, books and book chapters, dissertations, and grey literature.

Three of the authors subjected the aforementioned sources to a multi-stage screening process, first based on titles and abstracts and then based on the full texts. Ultimately, 60 sources met the inclusion criteria, and relevant data were extracted to answer the research question. The extracted data were analysed using content-structuring content analysis according to Kuckartz and Rädicker (2022) with the software MAXQDA (VERBI

Software, 2024). Following the principle of consensual coding by Hopf and Schmidt (1993), a comprehensive category system was developed through an iterative process, encompassing the following twelve main categories: (1) the process of transition to DE; (2) reasons for enrolling in DE; (3) characteristics of DE students; (4) academic success and failure; (5) general evaluation of DE; (6) differences between DE and face-to-face studies; (7) advantages and positive aspects of DE; (8) challenges and negative aspects of DE; (9) critical life events; (10) coping strategies of DE students; (11) additional initiatives in DE; and (12) recommendations for DE. The complete scoping review depicting these categories is published elsewhere (Schweighart et al., 2024a). The objective of the present article is to explore how the study entrance phase of DE should be designed to foster successful studying, focusing on aspects relating to learning and teaching in DE that were captured by the categories 7, 8 and 12.

3 Results

3.1 Opportunities for Successful Learning in the Transition to DE

DE programmes offer various opportunities for successful learning for first-year students (category 7), which are shown in Figure 1.

Figure 1: Opportunities for Successful Learning in DE

- Flexible and location-independent learning
- Learning through diverse and innovative media, digital tools and learning resources
- Self-directed learning with a high degree of design possibilities for one's own learning process
- Digital interaction, which can facilitate learning and participation for distance learning students
- High didactic quality of the courses

One of the standout-features of DE is the possibility of *flexible and location-independent learning* in terms of asynchrony and alocality. Students can arrange their studies individually and are not tied to a fixed location, which is particularly beneficial to those with work or family commitments (Asikainen & Katajavuori, 2022; Mittelmeier et al., 2019).

Another advantage is learning through *diverse and innovative media, digital tools and platforms (*Tessarolo et al., 2022). The use of modern technologies grants access to a wide range of materials and resources that can support learning processes. For instance, students report that group discussions, regular quizzes, or collaborative activities in the digital space have a positive impact on their motivation and engage-

ment (Sylvester, 2022). An example of an innovative learning environment is the digitalisation of a forest for biology students in DE. The ability to explore the virtual forest and collect data allowed the distance learners to gain an authentic field experience comparable to exploring an actual forest (Robertson et al., 2021). Thus, different platforms and tools can play an important role in making learning material interesting and communicating complex issues in an understandable way.

Self-directed learning with a high degree of creative possibilities for one's own learning process is also a significant opportunity in the entry phase of DE. Students can repeatedly access content, such as recorded videos (Asikainen & Katajavuori, 2022). Therefore, they are not dependent on fixed schedules. This autonomy in determining one's own learning rhythm and style allows for optimal adjustment and continuous enhancement of personal learning strategies, which can foster the motivation and personal engagement of the individual (Howcroft & Mercer, 2022).

Digital interactions that facilitate learning and participation for distance learning students may be particularly relevant for rather reserved or shy beginners, as learning in an online environment can facilitate their participation and active engagement (Kinsel et al., 2004). Furthermore, the platforms and tools used offer the opportunity to interact quickly with their peers and teachers, fostering mutual support and a sense of community (Dodo-Balu, 2017; Hellstén, 2005), which significantly enhances the learning process in terms of social learning (Brindley et al., 2009).

Finally, first-year DE students report that *a high didactic quality of the courses* promotes their learning in the early stages of their studies. Educational content designed to promote interest (Aristeidou, 2021) as well as well-structured and organised materials (Howcroft & Mercer, 2022) significantly contribute to learning success. Furthermore, students have expressed a preference for material that is made available in advance, and for lessons that take place both synchronously and asynchronously (Howcroft & Mercer, 2022).

3.2 Challenges for Successful Learning in the Transition to DE

In addition to a wide range of opportunities and possibilities, first-year students also face challenges with regard to DE (category 8), as illustrated in Figure 2.

Figure 2: Challenges for Successful Learning in DE

- Need to learn autonomously and independently
- Distractions in the home environment
- Lack of guidance and feedback from teachers
- Lack of contact with peers and teachers
- Difficulties in navigating the media/tools used
- Technical malfunctions of used media/tools
- Low didactic quality of the courses

Students must have a high level of self-organisation, self-motivation, and discipline to cope with the *need to learn autonomously and independently* in DE (Angu, 2022). First-year students report difficulties in managing their time, balancing professional and private obligations alongside their studies (Xavier et al., 2022), as well as a lack of routine in everyday student life, and a tendency to procrastinate (Asikainen & Katajavuori, 2022). As a result, they postpone learning tasks until the last minute, and their interest in and enjoyment of online learning decrease (Beck, 2017) or they drop out of their studies (Xavier et al., 2022).

Another barrier to successful DE is the multitude of *distractions in the home environment*. Unlike in a traditional learning environment, where the learning process is supported by specific locations, clear structures and fixed times, many distance students learn in their own homes. Here, everyday tasks or other people can significantly disrupt concentration (Howcroft & Mercer, 2022). Some students have reported that on some days, the proximity of the bed to the desk has been found to have a counterproductive effect on their motivation to learn. Being able to turn off the camera and remain unseen by teachers and peers encourages some students to disengage from active participation (Sylvester, 2022).

Furthermore, there is often a perceived *lack of guidance and feedback from teachers* (Kinsel et al., 2004). Reduced direct contact with teaching staff may lead to feelings of isolation and difficulties in comprehending the learning content or clarifying questions in a timely manner. This is sometimes even described as the most challenging aspect of online learning (Dodo-Balu, 2017). Especially for first-year students, the lack of a confidant to guide them through the new world of DE can be challenging

due to the physical distance, thereby negatively affecting the learning process (Warshawski, 2022).

The feeling of isolation is reinforced by the *lack of contact with peers and teachers*. This hinders the establishment of support networks and learning groups, thus impeding social learning. DE beginners encounter challenges in connecting with peers for knowledge exchange and mutual support. In certain instances, the purely asynchronous teaching methods lead to no interaction whatsoever among students, which effectively excludes the potential benefits of social learning (Domingues et al., 2023).

Difficulties in navigating and using the media/tools used can act as an additional hurdle towards successful learning. Some DE students have limited experience with such technologies and report feelings of being overwhelmed by the complexity and variety of platforms and media offered (Davies, 2015; Güner, 2021). This can lead to insecurity and stress when using digital tools (Chongkolrattanaporn & Kongpolphrom, 2023). Moreover, technical disruptions that may arise during use, including software issues, network interruptions, or unexpected system logouts, can significantly disrupt learning and result in frustration (Asikainen & Katajavuori, 2022; Davies, 2015; Yamazaki and Yamazaki, 2021).

Finally, *low didactic quality of the courses* can be a barrier to successful learning in the early stages of DE. For instance, challenges arise when materials are presented in an uninspiring or unorganised manner (Howcroft & Mercer, 2022; Kahu et al., 2015), learning sessions are too long (Harshani, 2022), or demands and workloads are too high (Warshawski, 2022). It can also be more difficult to teach students important practical skills, such as conducting laboratory experiments, due to physical distance in the online setting (Howcroft & Mercer, 2022; Long et al., 2013).

3.3 Recommendations for Designing Teaching in the Transition to DE

The scoping review identified a wide range of wishes and recommendations for a successful transition into DE (category 12), including suggestions for course design and the involvement of those responsible, which may serve as a foundation for successful learning processes. Figure 3 provides an overview of recommendations.

Figure 3: Recommendations for Successful Learning in DE

- Teachers play a key role
- Comprehensive introductory programmes and orientation events
- High quality of instruction
- Well-designed digital tools and platforms
- Pleasant and positive interactions

Distance learners emphasise that *teachers play a key role* for successful learning. Research indicates that teachers should be present and available (Kinsel et al., 2004), approachable (Harshani, 2022), enthusiastic (Wu, 2013), inspiring and motivating (Chamdani et al., 2022). Moreover, the communication skills of teachers are considered essential (Beck, 2017). Particularly at the beginning of their studies, students rely on the support provided by lecturers to navigate their new role as distance learners (Kinsel et al., 2004). To facilitate a successful transition into DE in the long term, it is essential that students receive ongoing support, guidance and regular feedback from lecturers (Beck, 2017; Kinsel et al., 2004; Maphoto, 2022). Teachers should be aware of the potential challenges that new distance learners may face, including physical and mental stresses, and participate in relevant professional development addressing the transition into DE (Barber & Sher, 2022). Another crucial aspect for successful learning is the development of effective coping strategies regarding academic stress. Teachers can initiate reflections on adaptive and maladaptive strategies and motivate students to use helpful strategies, such as listening to music or spending time in nature (Cortes et al., 2022).

Furthermore, *comprehensive introductory programmes and orientation events* are considered beneficial for successful learning in DE. Studies show that participation in such events is associated with better grades (Adkins, 2014; Ali & Leeds, 2009). These events are considered particularly beneficial for DE students if they offer numerous opportunities for interaction (Ali & Leeds, 2009; Wu, 2013), are tailored to the needs of the students (Wu, 2013) and use various learning resources and technologies that students will also be exposed to in their studies (Horvath et al., 2019). Such programmes should also clarify students' expectations of their studies, prepare students for their role, and provide relevant information (Robertson et al., 2021; Wu, 2013). Key aspects of DE that new students should be informed about include technological requirements and the need for technical competencies, as well as the importance of time management and organisational skills. Realistic expectations as well as the importance of personal commitment, active participation, and contact with their peers and teachers are equally important (Bozarth et al., 2004; Horvath et al., 2019).

A *high quality of instruction* is crucial for successful learning in the transition into DE. Caring, empathetic and humane approaches are considered particularly relevant for teaching in the entry phase of DE (Barber & Sher, 2022). Courses are considered particularly conducive to learning when they are interactive (Dodo-Balu, 2017), encouraging (Kinsel et al., 2004), personalised (Mosia, 2020), interest-arousing (Kahu, 2014), and well-structured (Wu, 2013). Additionally, courses should enable problem-based and in-depth learning (Crowley-Cyr & Hevers, 2021; Kahu, 2014), which can be supported by modern, diverse and well-thought-out teaching content, methods, and resources (Chambers, 2010). Teaching sessions should not last too long (Harshani, 2022) and should be recorded and made available afterwards (Asikainen & Katajavuori, 2022). Courses in which student progress and learning processes are regularly assessed and fed back are also considered to be conducive to learning (Aristeidou, 2021; Tessarolo et al., 2022). To meet the challenge of effectively conveying practical experiences in DE, it is recommended that students carry out practical tasks independently if possible. When this is not feasible, alternative methods should be found to provide students with comparable experiences. For example, virtual experiments with strong student participation can also promote successful learning (Long et al., 2013).

DE occurs in a virtual space, meaning that *well-designed digital tools and platforms* are fundamental. Learning management systems are highly valued for their ability to structure and store content centrally, enabling students to access and navigate content in a flexible and adaptable manner (Howcroft & Mercer, 2022). Furthermore, these systems allow students to review learning material multiple times, thereby promoting flexible learning and adapting to individual learning paces (Beck, 2017; Howcroft & Mercer, 2022). To enable successful learning, the tools and platforms should be easy to navigate and designed to offer the best learning experience. Learning environments must therefore be reliable, innovative (Henry, 2018), user-friendly (Wu, 2013), and diverse (Singer & Jarvie-Eggart, 2021).

Finally, *pleasant and positive interactions* support the learning processes of new DE students in the sense of social learning. The exchange of ideas and strategies or collaborating in groups can enhance the learning process for DE students, thereby fostering successful and efficient learning (Angu, 2022). Therefore, it is recommended that distant education incorporates a wide range of interaction and dialogue opportunities (Watson, 2021). This is because many students report a strong need for contact and interaction (Kahu, 2014) and perceive significant potential for improvement in this area (Hammer et al., 2022). Teachers should encourage students to use the offered interaction spaces, for example by encouraging them to turn on their cameras and participate actively during synchronous teaching sessions (Harshani, 2022). Social relationships have been shown to be essential for successful learning and a positive transition to DE (Warshawski, 2022).

4   Discussion and Future Implications

This article aims to provide answers to the question of why the study entrance is central to the future of distance HE and how it should be designed to maximise its benefits and address its challenges so that educational barriers can be broken down and the academic success of distance learners can be promoted.

The results show that the opportunities and challenges for successful learning in the transition to DE often apply to the same characteristic of DE. On the one hand, the digital media and tools used can enhance the learning experience of distance students (Sylvester, 2022). At the same time, difficulties in using and navigating these platforms and tools can hinder successful learning (Davies, 2015). Flexible and location-independent learning offers both opportunities and challenges. While it can be more easily combined with professional and family obligations, the home environment also presents significant potential for distractions (Howcroft & Mercer, 2022). Furthermore, DE can be flexibly adapted to one's own learning style, but the loosely structured learning process also places considerable demands on the autonomy and self-organisation of distance learners (Angu, 2022). Media-mediated contact also offers both opportunities and challenges. Shy students might feel more comfortable initiating contact through digital media (Kinsel et al., 2004), but for many students, the lack of physical proximity makes social learning more difficult (Aristeidou, 2021).

To provide concrete ideas and guidance for the design of online learning environments, we will draw on the positive aspects of DE outlined in category (7) and discuss them in the light of UNESCO guidance regarding the future of (Higher) Education (ICotFoE, 2021; UNESCO, 2020). Both publications emphasize equity, inclusion, collaboration, sustainability, and student-centred learning. We will illustrate how these principles can be realized in the study entrance phase of DE programmes by drawing on the results of our scoping review and by inferring design recommendations.

ICotFoE (2021) encourages us to think education as a social endeavour and the building of learning communities where community and belonging are central. According to our findings, real-time sessions and discussion boards foster a sense of community (Dodo-Balu, 2017; Kahu et al., 2015) and virtual kick-off events and mentoring programs support social integration (Hammer et al., 2022; Martin et al., 2009). Thus, virtual orientation events and peer mentoring programs should be integral part of every DE programme and private social media groups or forums for informal student interaction should be encouraged. In addition, it should be explained to students that peer networks may serve friendship purposes but more importantly enhance their resources. As such they may help to master study-related challenges and to form future career

networks. This is important, as DE students – often being more mature – may prefer not to add friends to their already rich private social networks (Lange & Schaper, 2025).

Moreover, UNESCO (2020) calls for pedagogies of cooperation and solidarity, emphasizing meaningful dialogue and interaction. Despite being a challenge in DE, our study shows that breakout rooms, interactive quizzes, and professor-led discussions can facilitate some engagement and interaction in DE (Sylvester, 2022). Consequently, collaborative learning should be encouraged and collaborative tools (e. g., Padlet, Miro, breakout rooms) should be default in DE programmes to foster social and active learning.

ICotFoE (2021) advocates for equitable learning opportunities that are flexible and respect learners' diverse contexts and needs. Designing online environments with modular, asynchronous content supports this vision by allowing learners to self-direct their education. In our study this is reflected by DE students, who appreciate the ability to manage their time and learn at their own pace, especially when asynchronous materials are enriched with engaging tasks (Angu, 2022; Barber & Sher, 2022) and multimedia elements like videos and audio clips (Tessarolo et al., 2022). Thus, we recommend the development of asynchronous modules with embedded quizzes, reflection prompts, and multimodal content to cater to different learning styles and increase learner accessibility, interest and reflection.

According to ICotFoE (2021) teachers serve as facilitators of learning and well-being. Our study indicates that strong teacher presence and teacher-initiated communication help students adjust and feel supported, which is of heightened importance during the transition phase (Barber & Sher, 2022; Kinsel et al., 2004). Thus, DE lecturers should send welcome emails, schedule weekly check-ins, and offer virtual office hours to build strong connections right from the start. To achieve this aim, programme standardisation should not compromise teacher agency in DE.

ICotFoE (2021) promotes formative assessment as a tool for learning. Our results indicate that students appreciate continuous assessment as it improves academic skills and supports learning (Tessarolo et al., 2022). Thus, low-stakes quizzes, peer reviews, and automated feedback tools should be part of DE courses. AI-driven tutoring systems like Syntea or OneTutor offer easy accessible features for course related Q&A, self-testing and exam preparation. However, these tools cannot replace teachers; rather, teachers should curate and oversee their use and data security must be ensured.

According to UNESCO (2020) and ICotFoE (2021), learning should be authentic, experiential and relevant. Results from our study indicate that virtual field experiences

and life projects can provide experiential learning in DE (Robertson et al., 2021) and that the realism of a virtual reality fosters students' interest and understanding (Walker, 2022). We recommend to conduct case studies and project-based learning in DE that incorporate real-world challenges from local communities and use virtual simulations to allow for authentic, experiential and relevant learning.

UNESCO (2020) advocates for education to be more inclusive and empowering, especially for marginalized groups. Our study includes reports from mature students and those with mental health challenges, who feel empowered by DE (Bodo-Balu, 2017). Towards this aim, special care should be given to provide mental health resources, ensure accessibility features (e.g., captions, screen reader compatibility), compensation for disadvantages (e.g., flexible deadlines) and courses to fill knowledge and skill gaps (e.g., courses on self-regulated learning or basic math knowledge). Moreover, DE programmes should try to minimize the digital divide by providing students in need with basic digital skills or sponsoring digital devices.

According to ICotFoE (2021) digital learning should at best be integrated in physical communities. Our results also indicate that some learning opportunities are difficult to provide in DE, such as hands-on experience or laboratory courses, but that hybrid models with selective contact courses help mitigate DE's disadvantages (Brown et al., 2015; Kahu, 2014). Thus, we recommend DE programme designers to consider integrating selective on-campus courses preferably during the study entrance phase to allow for hands-on-experience and face-to-face community building of learners and teachers.

As demonstrated well designed DE programmes can align with UNESCO's humanistic and future-oriented vision of (higher) education. If special consideration is given to the study entrance phase, DE can truly contribute to a future HE that fosters equity and inclusion in the access to HE and beyond.

5   Conclusion

DE programmes provide access to HE, particularly for students who have been underrepresented in traditional face-to-face courses, thereby breaking down educational barriers and promoting equal opportunities (UNESCO, 2020). However, success rates in this form of education are lower, and dropout rates are higher, with the transition into DE being a particularly critical phase that calls for careful planning and design.

The study entrance phase is crucial as many learners drop out early in their distance studies, often due to challenges in adapting to the digital format, managing autonomy, and overcoming isolation. If this phase is well-designed in a way that provides students

with opportunities to enhance their digital literacy, self-regulation skills and social interactions, then drop-out can be impeded and the foundation for long-term academic success can be laid.

This is of particular importance for non-traditional student groups – those with vocational backgrounds, family responsibilities, or without standard university entrance qualifications. These learners often struggle to develop an academic identity (Bird et al., 2019), making it essential to offer opportunities for building confidence, motivation, and belonging right from the start.

Unlike face-to-face formats, distance learning requires high levels of self-organization, digital literacy, and motivation. The entrance phase must address these demands by offering structured support, orientation programmes, and interactive learning environments to impede frustration. If frustrated, students with non-linear educational pathways – who might be reminded of past negative educational experiences – may be triggered to give up on their educational aspirations (Busher & James, 2019).

An inclusive and innovative design during the entrance phase, however – such as student-centred teaching, accessible digital tools, social interaction and creative didactics – might help beginner students to see the advantages of DE (Stevanović et al., 2021) and reduce dropout rates and promote equity in HE.

As the digitalization of society proceeds, these recommendations are not only relevant for providers of DE programmes, but also for HEIs that aim to digitalize their teaching and learning (Gilch et al., 2019).

In sum, the study entrance phase in DE is more than a starting point – it is a strategic moment that determines whether students thrive or disengage. To lay the foundation for successful learning in the early stages, the opportunities offered by DE must be accessible and its challenges manageable. By following the UNESCO principles for the future of (higher) education and delivering DE courses effectively from a didactic (student-centred and engaging), social (supportive and interactive), and media (innovative, disturbance-free, flexible, well-organised) perspective, learning during the critical transition phase of DE can succeed. By investing in this phase, HEIs can shape a more inclusive, flexible, and future-ready higher education.

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