



Virtual and hybrid classrooms

To drive inclusivity and accessibility

Abstract

Universal, personalised education is key to help learners maximise their potential to lead a thriving life; benefitting the individual, the community and the environment. To be able to offer this, creating a diverse and inclusive pedagogical environment, educational institutions of any level need to provide equitable access and availability to their classrooms and learning spaces.

The use of online, virtual learning environments that can be accessed remotely can support participation from different identity groups that may find it challenging to attend more traditional physical classrooms. These platforms can also complement conventional setups, offering engaging, interactive activities that foster valuable learning experiences and the exchange of ideas among different learners and identity groups.



The importance of driving diversity and inclusivity in education

Educational institutions enable students to make positive, meaningful changes in their lives and to their communities. It does so by reducing inequalities, discrimination, segregation and social exclusion while supporting social and economic mobility, supporting every nation's competitiveness and prosperity. By offering high-quality learning opportunities, schools help to address disparities, poverty, violence and exploitation, ultimately contributing to higher quality of life for learners, fostering the creation of sustainable and peaceful planet. Even more, the regular attendance to courses, learning and training activities can offer a sense of normality during unexpected individual, social and/or household turmoil.

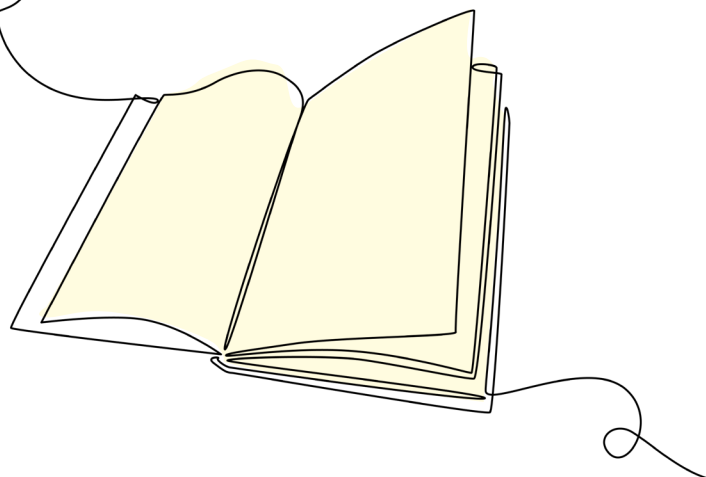
In order to meet these goals and empower future generations, it is important for education to be safe, continuous and, most important, universal. In effect, only in this way it is possible to give everyone the chance for an auspicious future and drive active participation from every member of society to contribute to a better world. Furthermore, when different - and not mutually exclusive - identity groups can contribute to educational activities and academic research, it is possible to drive creativity. Social diversity encourages the search for novel information and perspectives, enriching key discussions by tapping into identity-related knowledge and experiences.

In recognition of the prominent role of multidisciplinary literacy, 193 countries around the world have adopted the fourth Sustainable Development Goal (SDG 4) established by the United Nations (UN). This focuses on quality education, seeking to ensure inclusive and equitable education and promote lifelong learning opportunities for all by 2030¹. In line with the same principles, the Equality Act 2010 establishes that schools and academies in the UK cannot unlawfully discriminate against pupils because of their sex, race, disability, religion or belief or sexual orientation². In addition to this, they have a duty to promote equal opportunities and foster positive relations and interactions people from different identity groups.

Therefore, it is imperative for educational institutions and learning providers worldwide to ensure that they can succeed in the creation and wide distribution of development programmes aimed at enhancing knowledge and skills of anyone enrolled.

'Education is the most powerful weapon which you can use to change the world'

Nelson Mandela



Towards personalised learning to drive equitable access and availability

Making education inclusive, equal and diverse entails the establishment of easily accessible and available learning environments. In effect, it is well accepted that the availability of high-quality learning settings is vital for good educational outcomes³. As global policies and public demands ask for the transition from mass education and lecturing to universal, personalised learning, it is important to maximise participation, providing a learning environment that is truly accessible to anyone.

Besides ensuring suitable access options, it is vital to create engaging and valuable learning experiences. These should resonate with each different identity groups and every single student, recognising their uniqueness. In effect, diversity greatly influences learning, as knowledge and its development are always contextual. They are a result of the mental outlines that are specific to the individual.

In effect, students will understand new concepts or ideas based on their experience, personally constructing meaning as they learn, in relationship to their current models to explain the world they perceive and interact with. As the sensory input and constructs will differ between identity groups as well as among individuals that had similar experiences, successful educational frameworks leverage pedagogic approaches and teaching strategies that can accommodate for this variety. Ultimately, educators should identify and use suitable bridges to access the cognitive structure of the learners they are interacting with.

The heterogeneity arising from universal, personalised learning is extremely challenging to handle by conventional courses and training programmes. Even more, it can expose their limitations and systemic biases in the methodologies and pedagogical mediation instruments.

The most obvious example of limited accessibility can be found in the offering of solely physical classrooms and courses. In effect, a portion of potential learners may face considerable challenges or obstacles, due to temporal or long-term personal, physical, familiar and/or socio-environmental barriers, among others. Similarly, unidirectional, passive learning without any active learning process may not be able to engage individuals or groups that prefer more interactive, hands-on activities to construct meaning. In addition to these, there are a number of possible hurdles to fully accessible and available inclusive, diverse and equitable education.



Technological infrastructures for more inclusive, equitable and diverse classrooms

Online, virtual learning environments (VLEs) can help develop innovative, stimulating educational designs and frameworks to support universal access. These are more than videoconferencing tools, which are a digital replica of conventional, face-to-face teacher-directed pedagogical approaches and can only partially improve access to education. In fact, VLEs leverage a variety of solutions and systems to shape up more inclusive, diverse and equitable learning.

In particular, it is possible to offer new ways of accessing information, continuous access to learning materials as well as unique opportunities for cost-effective active learning. All these elements can be implemented thanks to the latest advances in data-sharing and high-speed communications as well as virtual, augmented, mixed reality and gamification.



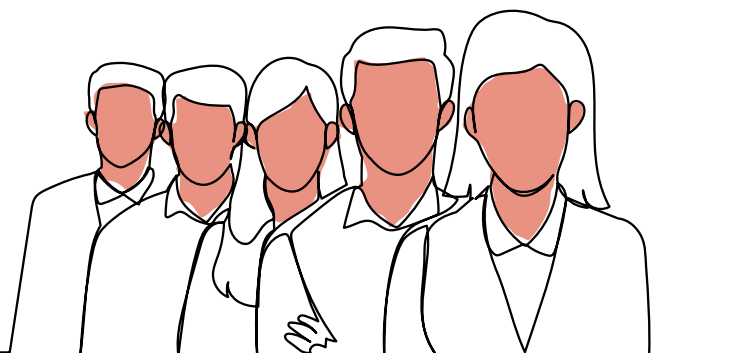
Even more, value-adding, VLEs for universal education are designed with accessibility in mind, as they need to meet key regulations in the UK, such as the directive on the accessibility of websites and mobile applications (Directive (EU) 2016/2102)⁴ and the European accessibility act (Directive (EU) 2019/882)⁵, referred to as 'AAD', based on the Web Content Accessibility Guidelines (WCAG) framework⁶.

Through VLEs, educational institutions can complement traditional resources, such as text and frontal lectures, providing richer, varied, diverse and more active learning solutions to improve the learning outcomes of each individual. In effect, such a comprehensive offering can empower learners to use their personal natural abilities and specific skills, whilst helping them skirt around their potential weaknesses. Even more, it can increase the occurrence of stimulating practical activities that can be challenging to accommodate within traditional, physical classrooms.

The use of communications technologies can also foster meaningful relationships between educators and learners. VLEs can deliver an unprecedented level of connectivity and offer highly collaborative setups, with learners able to interact and study together as well as contact educators, improving access to 'office hours' for revisions and clarifications.

Furthermore, VLEs can generate large volumes of data by means of digital technologies that track key learning and testing activities, offering valuable tools to measure engagement and the progress from individuals. Based on these insights, educators can refine their course materials and plan suitable experiences to optimise learning outcomes.

Finally, the availability of distance learning courses can also help educational institutions increase their resilience. In effect, it can enable them to adjust in case of emergencies to continue offering courses and engaging learners uninterruptedly, offering a sense of normality when students may need it the most.



References

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About V-Ex

V-Ex is an established provider of virtual events and digital services with a proven track record of supporting Universities and training providers through engaging virtual campuses and online e-learning solutions. The company's virtual event platforms have been developed over more than 10 years to ensure clients can reliably reach a global audience and enjoy a unique digital experience, removing barriers to educational content and pedagogical activities. V-Ex's digital spaces are also combined with unrivalled analytics to offer key insights into students' engagement and remote learning behavioural patterns. All digital environments are hosted on highly secure and reliable carbon-neutral servers in the UK and rely on renewable energy whenever possible, contributing to low carbon footprints.



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