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Blended Learning Adaptation Guide

ISCED 1

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Introduction

Blended learning bridges the gap between a physical and virtual classroom environment. In order that educators are fully informed when planning to either adapt a curriculum to a blended learning model or create a blended learning program, it is important that every aspect of the ISCED 1 requirements are considered.

What is ISCED?

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ISCED (International Standard Classification of Education) provides a detailed outline of how different categories of educational activities can be classified. A truly global institution, it organizes learning objectives and required outcomes into internationally acknowledged levels. Whether developing an entire curriculum or just creating singular lesson plans, educators should have an awareness of the relevant ISCED classifications and what the expectations should be in terms of learning outcomes and expected achievement levels.

In 2011, UNESCO released their revised ISCED. A framework for organizing education programs according to achievement benchmarks and learning objective expectations, the concepts were conceived with the intention of being recognized internationally, and the development of the classifications involved extensive consultation with experts from around the world.

What is ISCED 1?

ISCED 1 covers a level of education that is most commonly referred to as 'primary' or 'elementary' education. Primary education usually commences at the ages of 5, 6, or 7 and will typically continue for about six years. Programs developed for ISCED 1 are designed to build on the developmental level that has already been achieved at ISCED 0, although they may sometimes also consider children who have received no formal education. ISCED 1 offers a semi-structured program covering the core activities of reading, writing, and math. Additionally, there will often be other academic subjects included such as the natural sciences, the humanities, art, and music.

Learning Objectives of ISCED 1

Methodologies for teaching reading within ISCED 1 vary greatly but reading skills will commonly include the ability to 'decode' words using phonetic knowledge of the sounds that individual letters make. From this, more complex sentence structures are then able to be read. Students are often taught to read aloud so that they can demonstrate their reading abilities, including the appropriate use of emphasis and tone of voice. Students are taught to recognize words that do not work in a phonetically consistent way – in English, these might be cough, bough, and dough – in order to be able to read them consistently by the time they leave ISCED 1 educational programs.

Learning Objectives of ISCED 1

Writing

The writing competency expectations for students at this level are not that different from their reading objectives. As well as being able to spell short, basic or core words, simple grammar is also taught, including the use of punctuation, parenthesis, and sentence capitalization. Students will first learn to form letters using a pencil before progressing to using a pen once their fine motor skills and hand-eye coordination have reached a pre-defined competency. This will often – although not uniformly – coincide with being taught how to write in cursive letters. Writing programs will also focus on guiding the understanding of basic linguistics – such as the difference between a verb and an adjective – narrative writing and descriptive writing.

Learning Objectives of ISCED 1

Math

Math education at ISCED 1 level is primarily aimed at teaching fundamental numeracy skills. This means being able to count, add up, subtract, divide, and multiply. In some curricula, long division and long multiplication skills will be introduced, while others will also include concepts like negative numbers. Depending on a student's developmental speed, basic statistics – such as the ability to present information in graphs or pie charts – may be appropriate. At all stages, students will be expected to show fluency in their work by documenting how they worked out answers to problems they have been set. Occasionally, collaborative working is encouraged in math education at the ISCED 1 level, but this is by no means universal.

Blended Learning Model for the ISCED 1 Level

Blended learning is a modern approach to education and learning that combines traditional schooling methods with the use of technology and online resources. Conventional classroom attendance is often still required under this model, but students are given more control over how they learn, as well as the time that they spend on different activities. Face-to-face teaching is complemented by internet-based activities that introduce and reinforce learning topics and often contain an assessment element.

Web-based learning tools are becoming more commonly used at all levels of education, easily implemented via tablets, interactive touchscreen monitors, wall-mounted touchscreens, and interactive whiteboards. It has been widely acknowledged that 'active' learning is far more effective than simply sitting and listening – the more students participate in activities, the more likely they are to be engaged, retain knowledge, and experience positive learning outcomes. Depending on the ISCED 0 program in question, there are three blended learning models to choose from.

Blended Learning Model for the ISCED 1 Level

Hybrid Learning

Hybrid learning is a defined concept that usually refers to a planned or systematic approach to combining multiple learning models in a single educational setting. That is to say, the same lesson is taught simultaneously both online and in-person, so the learning experience is synchronized regardless of whether the student is in the room or remote. For primary-age learners, this means that they can be introduced to educational technology for the first time in a face-to-face classroom experience or through a virtual lesson with an educator. As children may be used to playing games on tablets or computers, ISCED 1 programs will build on this familiarity to assist their academic learning outcomes. Consequently, activities will be designed to be completed both inside and outside a physical classroom. This may include audio lessons, video tutorials, or 'paper-based' learning systems that are accessed via a networked device.

Blended Learning Model for the ISCED 1 Level

Distance Learning

As the name implies, distance learning is a blended learning method whereby the educator is not physically present with the learner. A multitude of online learning platforms provide a distance learning experience suited to students at an ISCED 1 educational level. Face-to-face learning with this model is entirely virtual, most commonly via video link. Distance learning assessment is also entirely virtual, with assignments submitted via email or networked learning system. At ISCED 1 level, massive open online course (MOOC) platforms are now commonplace, but there are numerous offline software systems that also provide distance learning capabilities where an at-home internet connection is either unreliable, limited, or not physically possible.

Blended Learning Model for the ISCED 1 Level

Flipped Classroom

A flipped classroom is a pedagogical approach that reverses the traditional functions of classrooms and home learning experiences. Rather than learning from in a classroom setting and then being asked to complete problems or conduct further research into the subject matter on their own, pupils are tasked with watching a video at home that explains the concept. Students then enter the classroom to carry out their activities and assignments. This blended learning approach is socially beneficial to primary education learners because it allows them to explore their work together, either in groups or as a class-wide effort. The educator is then a resource for guidance and activity direction, rather than imparting new concepts. Research suggests that the flipped classroom model benefits ISCED 1 learning environments where creative or non-linear thought might be advantageous.

The Benefits of Blended Learning for ISCED 1 Programs

The Benefits of Blended Learning for ISCED 1 Programs

Some blended learning models are of particular benefit at an ISCED 1 level due to their success in promoting collaborative learning experiences. More widely, blended learning means that education can continue when students are unable to attend a classroom in person. This may be due to illness, physical accessibility, or geographical distance. It is also known to boost numerous soft skills in IT awareness and to help augment learning retention. Students will often find that computer-based learning's immediacy can help them independently overcome problems without waiting for educator feedback or guidance. When approaching the ISCED 1 program from a blended learning perspective, there are many benefits for educators, students, and parents. These include, but are not limited to:

- A varied approach to learning, based on student competencies
- Suited to the acquisition of core reading, writing, and math skills
- Supports nascent critical thinking in humanities education
- Involves parental input, where blended learning is conducted from home
- Helps students to break new educational ground by the reinforcement of existing learning
- Promotes greater peer support where pupils can blind-review each other’s work online
- Allows children to work at a time and pace that suits them

Overall, blended learning at an ISCED level 1 allows for children to benefit from an early introduction to technology. Through virtually supported methodologies, educators can guide their students to fully utilize each learning outcome's potential in terms of IT literacy. With that in mind, a blended learning approach to ISCED 1 level education provides the perfect platform for facilitating the acquisition and development of vital educational milestones. In comparison to students who have only experienced a traditional learning environment, this puts them at a significant advantage.

How to Assess Learning Achievements for ISCED 1 Students

How to Assess Learning Achievements for ISCED 1 Students

Assessing a pupil's abilities and learning achievements in the digital era is fundamentally no different from the processes employed in traditional classrooms. Observations are still possible despite children not always occupying the same physical environment as their educators. Indeed, all the usual considerations and evaluations made by educators can occur in blended learning models just as easily – often with increased levels of quantifiable data – when computer-based educational tools are put in place. This is because so many apps and software systems do not merely benefit learning outcomes but also record progress as it is made. This is one of the chief benefits of digital era educational technology.

As a specific example, a spelling test conducted at an age-appropriate level for ISCED 1 students will not merely record the number of correctly and incorrectly spelled words. Instead, it will frequently find correlations between an entire class's results, perhaps identifying that more work needs to be done to explain when '-sion' or -'tion' suffixes are appropriate. This can lead to tailored teaching to suit individual needs, as well as promoting a greater focus on a class or year group-wide basis.

Adapting Curriculum to a Blended Learning Model

Adapting Curriculum to a Blended Learning Model

With a wealth of online tools available to educators, adaptation will be almost seamless within their current curricula confines. This is particularly so at ISCED 1 level education as learning outcomes are firmly rooted in the basics of language skills and numeracy. The core tenets of a math curriculum remain unchanged between a traditional and virtual learning environment. Instead, it is only necessary to integrate the use of math apps or games to digitize program activities to teach competencies. The same goes for literacy, where traditional reading and comprehension exercises can all be carried out with digital era technologies.

Adapting Curriculum to a Blended Learning Model

Introduction of Learning Objectives

Activities that are popular with ISCED 1 students involve independence of action as well as interactivity. It is widely accepted that 'active' learning is more effective in forcing engagement, encouraging knowledge retention, and fostering positive learning outcomes. Additionally, the primary education level is when students more strongly exhibit peer-group competitiveness. A good example of software that is suitable for both literacy and socialization is Spooky Spellings. Students are shown a word that they already know how to spell. The word disappears, and they must rearrange jumbled letters to spell it out correctly. As the levels advance, the words can become harder, and the graphics and sound effects can be altered as the game progresses. Students can repeat any spellings they have not been successful with until they get the answer right, and words are chosen that are appropriate to their level of learning. 'Stretch' goals can be implemented as the lesson plans progress.

Adapting Curriculum to a Blended Learning Model

Activity Engagement

With built-in scoring and rewards systems, a key feature of digital era educational tools, much of the engagement that drives learning is already present in the software tools available to educators. In blended learning models, this is often backed up by praise, criticism, and general feedback, but the main point is that engagement in learning occurs because well-designed software is considered to be 'fun'. That is why gamification and reward are at the heart of many educational software systems' designs. Take Times Tables Rock Stars, for example. Although it centers on learning basic multiplication, students can operate it with ease while being supervised by a supporting adult. The game involves answering straightforward multiplication problems under the pressure of a ticking clock. The faster students go, the more credit they earn and the greater progress they will make as their rock star alter-ego. Educators can share their students' best performances with the rest of the class and even introduce leader boards if they wish to include an element of competitiveness in order to increase student engagement.

Adapting Curriculum to a Blended Learning Model

Competency Assessment

Although many of the math apps that support ISCED 1 learning have built-in quantifiable assessments, this is not always the case with video learning in the field of music, the arts, or history. Simply asking children to listen to a recording or to watch a video does not mean that any assessment will be possible, no matter the educational value of the media that has been consumed. Therefore, educators need to provide worksheets or questionnaires for students to complete, which means they have to show they have understood and contextualized what they have seen. A good example of this is Ted-Ed, where animated educational videos can be found covering a wide range of subjects from social science to basic engineering. Each video encourages students to 'dig deeper' and signposts them to further resources. Moreover, educators can adapt the material as they see fit to assess exactly what they want from the digital format. Customized lesson plans can then be saved and shared.

Adapting Curriculum to a Blended Learning Model

Physical vs Virtual Delivery

When adapting a lesson plan to a blended learning model, educators must ensure that ISCED 1 learning objectives are considered as a whole. Not all educational needs can be met using virtual teaching methods, which is why a blended learning model is preferred for this level, even when physical contact needs to be limited. For socialization, the company of a peer group is advantageous; equally, the support of an adult when mastering certain motor skills is necessary. Of course, digital educational platforms can support learning even when it is focused on physical skills rather than purely academic ones, but they cannot replace them fully. Indeed, the emotional benefit of learning to work in a collegiate atmosphere is also something that can still only be truly gained in traditional classroom settings. Some online methodologies lend themselves to collaborative work more than others, but because children at ISCED 1 level are still gaining these social skills, classroom environments, yet remain an indispensable part of the learning curve.

Accommodating Additional Needs Through Blended Learning

Accommodating Additional Needs Through Blended Learning

Students with additional educational needs can be better served by blended learning models than by a traditional classroom environment. At the ISCED 1 level in particular, children may develop at vastly different rates, some excelling at math while struggling with reading and vice versa. Since blended learning allows children to make progress under their own initiative and be rewarded for doing so, it helps both those who advance more quickly to push on without becoming bored and those who take longer to develop to focus on tailored learning outcomes or areas identified as being of more individualistic value.

Accommodating Additional Needs Through Blended Learning

Students with Special Needs

Blended educational models are particularly effective in accommodating the learning requirements of students with special educational needs. Indeed, at the ISCED 1 level of education, many conditions are not yet properly diagnosed. Some software systems used to help all students achieve their learning objectives can also help identify issues. An example might be finding problems with decoding words phonetically, which may indicate dyslexia. Some children who find classroom discipline difficult will find the greater freedom afforded by digital educational tools more suited to their needs.

Accommodating Additional Needs Through Blended Learning

Students with a Lack of Resources

Although blended learning at an ISCED 1 level has a significant reliance on access to computer equipment, work can be completed offline as well as on to consider unreliable or non-permanent access to an internet connection. Where books and other physical learning resources may not be available or accessible, using computerized versions of documents and texts can be incredibly helpful in overcoming a lack of resources. Indeed, with the provision of a funded laptop or tablet and tailored support, a student can overcome any impact that might otherwise interrupt their continued education.

Accommodating Additional Needs Through Blended Learning

Students who Have Fallen Behind

One of the major benefits of ISCED 1 blended learning models is that they can more easily accommodate students who have fallen behind. For example, students who are non-attendant for extended periods during their primary education can use apps and pre-assigned activities to keep up or catch up with what the rest of their class will be doing. More widely, however, students who have fallen behind can continue to work at their own pace at a time that suits them, using blended learning technologies to engage in remedial educational objectives.

Technologies to Support ISCED 1 Blended Learning Programs

There are countless applications and software that can be utilized by a blended learning program, but a well-thought-out lesson plan that complies with the curriculum is key to delivering an optimal learning environment. With the prevalence of affordable and accessible computer hardware and the continual advances in functionality, desktop PCs, laptops, tablets, and even smartphones are all capable of delivering educational and interactive content to students.

The possible methods of online lesson delivery for ISCED 1 programs could include, but are not limited to:

- Live videoconferencing
- Pre-recorded video content
- Webinars
- VLE or LMS course modules
- YouTube videos
- Online and offline educational games

The method of delivery requires some, if not all, of the following equipment:

- A stable and/or predictable internet connection
- Videoconferencing and recording facilities
- A reliable laptop or PC for both teacher and student
- A large touch screen or interactive monitor for the host classroom
- An interactive whiteboard
- Tablets and/or a receptive computer

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