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DISTANCE LEARNING DURING THE CORONAVIRUS OUTBREAK

Schools and colleges around the world are shifting to online learning during the coronavirus. This paper explores how different countries manage with distance learning. The first country to be infected by the virus was China. Preparing to teach a course online for the first time usually takes several months. Faculty at institutions in China have done it in less than three weeks - a remarkable feat. How did they achieve it?

Educators in China suggested how easy to switch to distance learning:

1. Know your student information system capabilities. A good digital platform can to a large extent mimic holding class in a classroom and that this technology becomes much more important once physical schools close.
2. Increase your bandwidth. Not all students have computers or smartphones at home. To provide broad access to lessons, Chinese state television channels are broadcasting elementary school lessons nationally.
3. Embrace an all-hands-on-deck approach when it comes to communication. Teachers in China are using every means of communication to keep in touch with their students. Lectures and lessons are being delivered via TV and various school learning management platforms, while extra explanations may come through a group text on QQ or Wechat, popular multimedia messaging apps. When that's not enough, direct phone calls and text messages to students and parents provide personal attention and help fill in the gaps.
4. Have a plan for students who may struggle. Knowing that some students are going to have a tough time adapting to working from home, schools must have a plan that engages them and their parents through regular phone calls and other communication.

For effective distance learning, China uses the following sites: Canvas, Blackboard, Moodle, Zoom та Skype. Many Chinese scholars accessed sites like Google and YouTube by using virtual private networks, despite "periodic crackdowns" by the authorities. The authorities have not required schools to hold online classes during coronavirus. But they have encouraged it, starting all-day TV broadcasts of state-approved lessons in math, language, English, art and even physical education. The official mantra: "Stop classes but don't stop learning."

Although the closure of schools and universities in Europe came later, but they were just as unprepared for distance learning as China.

European University Schools uses the online learning services recommended by UNESCO:

For digital learning management systems: Blackboard (resources and tools to transition and deliver quality teaching and learning online), ClassDojo (connects teachers with students and parents to build classroom communities), Google Classroom, Schoology (tools to support instruction, learning, grading, collaboration and assessment).

Systems purpose-built for mobile phones: Cell-Ed (learner-centered, skills-based learning platform with offline options), Eneza Education (revision and learning materials for basic feature phones), Funzi (mobile learning service that supports teaching and training for large groups), KaiOS (software that gives smartphone capabilities to inexpensive mobile phones and helps open portals to learning opportunities).

Massive Open Online Course (MOOC) Platforms: Coursera, EdX, University of the People (online university with open access to higher education), Future Learn (online courses to help learners study, build professional skills and connect with experts), Canvas.

Collaboration platforms that support live-video communication: Dingtalk (communication platform that supports video conferencing, task and calendar management, attendance tracking and instant messaging), Lark (collaboration suite of interconnected tools, including chat, calendar, creation and cloud storage), Hangouts Meet, Teams, Skype and Zoom.

Big companies are also trying to contribute to the development of distance learning. For example, Microsoft Teams is available for free to educational institutions through the Office 365 A1 offer. This provides a completely free customized hub for class teamwork with Teams that includes video meetings, online versions of the Office 365 apps, as well as compliance tools, and information protection. As schools move to a remote learning environment, Teams can provide an online classroom that brings together virtual face-to-face connections, assignments, files, and conversations into a single platform accessible on a mobile device, tablet, PC, or browser.

On March 12, all educational institutions of Ukraine stopped working as usual and switched to quarantine. In Ukraine teachers use messengers for communication with students, such as Viber, Telegram, others have adopted online diaries, or special platforms like Google Classroom. The distance learning is as follows: the teachers send the task for processing, set the deadline, the student sends a completed task to the teacher by messenger or e-mail. The Ministry of Education and Science, together with television channel "Rada", launched a daily broadcast of free video lessons and online courses. Rada is available on satellite, cable and YouTube.

Also educational portals such as BeSmart, EdEra, Prometheus, iLearn provided free video content for Ukrainian students. The problem for teachers of Ukraine is that they almost do not interact with students, giving only references to material, assignments, and taking the completed tasks, but in most cases there is no video talk where students can discuss mistakes, refine the material and work in a team. Because quarantine is social exclusion, communication with students is important.

Problems faced by countries in the transition to distance learning:

1. Many students around the world still do not have Internet access or have only one device per family. Developed countries where the number of such students is small have solved this problem. For example, The Latvian Education and Science Ministry said at a news conference that approximately 3 percent of school kids do not have any devices. Two mobile operators have already pledged 5,000 mobile devices to the schoolchildren, while other telecommunications companies also expressed willingness to help out. Also, New York is preparing to distribute 300,000 individual learning devices to students who need them. In the case of underdeveloped countries or countries where the number of such students is higher, the issue remains open.

2. The unprofessionalism of teachers. Many older educators and those living in rural areas do not possess the technology for providing online material to students.

3. Some students with physical disabilities may struggle to manipulate remote learning software; some students with developmental disabilities may not be able to participate in this kind of distance learning at all.

4. Adding to the complexity, students do not always welcome digital education, and research shows they are less likely to drop out when taught using "traditional" face-to-face methods.

The head of the Management Information Technology and System Office (MITS) at XJTLU said "The coronavirus epidemic is a crisis to our society, but also a good chance to promote and develop technology and solutions for online learning and teaching, which is the future direction of education".

Today's crisis shows that no country is ready for distance learning and we need improve moving online quickly when they need to and go back to normal once things "blow over", in a world where global emergencies look increasingly like the norm.

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ЗАДАЧІ РОЗРОБКИ ІНФОРМАЦІЙНОЇ СИСТЕМИ ФОРМУВАННЯ РОЗКЛАДІВ ЗАНЯТЬ У ЗВО

У сучасному світі освіта – складне і багатоманітне суспільне явище, сфера передачі, засвоєння і здобуття знань та соціального досвіду. Вона охоплює діяльність реально сформованих суспільних інститутів, які здійснюють підготовку молоді до життя. Однією з ланок освіти є навчальні заклади, завдяки яким людина має можливість вивчити певну сферу діяльності, у якій надалі працюватиме.

Одним зі стратегічних напрямів діяльності будь-якого навчального закладу є реалізація основних положень освітнього процесу, чим займається навчально-методичний відділ.

Планування навчального процесу, участь у підготовці базових та робочих навчальних планів, розрахунків обсягів і розподілу навчальної роботи, перевірка розрахунків штатів науково-педагогічних працівників кафедр, розкладів занять, заліків та екзаменів є важливими та невід’ємними завданнями навчально-методичного відділу закладу вищої освіти (скорочено – ЗВО). Реалізувати їх можна за умови вмілого поєднання традиційних педагогічних методик та впровадження комп’ютерної техніки й сучасних технологій.

Метою розробки інформаційної системи формування розкладів є створення програмного продукту, що допомагатиме в організації роботи навчально-методичного відділу, буде автоматизувати один з основних процесів роботи. Додаток міститиме у собі значну частину інформації, що стосується освітнього процесу і алгоритми роботи з нею, що дозволить формувати розклади занять і педнавантаження.

Здійснивши аналіз існуючих способів рішення задачі, було встановлено, що наразі існує дуже мало програмних продуктів, які відповідають всім вимогам, необхідним для складання розкладу у ЗВО, на відміну від середніх навчальних закладів. Такий стан речей легко пояснюється тим, що шкільна освіта сьогодні більш стандартизована в організації навчального процесу, ніж вища. Така стандартизація веде до великого обсягу потенційного ринку продажів, копій програмного забезпечення.