7th International Conference on ICT in Education and Training (TICET7).
Human Resources Development Center for Studies and Research and Democratic Arabic
Center, Berlin, Germany. Dec 18-19, 2021.

Curriculum in Emergency Covid-19 Remote Education at Saudi Universities: Same or Adjusted

Prof. Reima Al-Jarf
Riyadh, Saudi Arabia
ORCID ID: 0000-0002-6255-1305

ABSTRACT

Due to the Covid-19 Pandemic, there was a sudden shift from face-to-face instruction to distance learning (DL) in all schools and universities in Saudi Arabia. This abrupt transition was associated with some challenges and changes. This study aims to find out whether instructors, departments and/or colleges at Saudi universities have changed, modified, or adjusted their college curriculum content taught in the DL environment during the first 3 semesters of the Pandemic (Spring 2020, Fall 2021 and Spring 2021) and whether new courses or training were offered to prepare the students to the Pandemic job market. A sample of instructors and students from English Language Centers, Colleges of Languages, Translation, Linguistics, English Literature, Education and Computer Science at 8 Saudi universities were randomly selected and surveyed. All of the instructors reported no adjustments made and no new courses and skills offered in the languages, translation, linguistics, literature, education or computer science curricula in the DL courses offered to students during the first 3 semesters of the Pandemic. Graduate and undergraduate students surveyed confirmed what the instructors reported about the college curricula. The only difference is in the delivery mode. The instructors indicated that no changes could be made in the college curricula as those have to be approved by their Department, College and Academic Councils. However, there were some alternatives for completing the Teaching Practicum courses and Graduation Projects offered to senior students in the different colleges as there was no face-to-face training/practice. The students preferred lecture recordings (asynchronous DL) to synchronous DL. Results and recommendations are given in detail.

1. BACKGROUND

The term curriculum[1] refers to the academic content, units, and lessons that teachers have to teach in a specific course, program, or school. It is usually comprised of the learning goals, objectives, or standards that the students are expected to meet; the skills and knowledge that they are expected to acquire; the topics and content to be covered; the books, materials, readings, presentations, projects and assignments to be given to students; technologies to be used in a course such as videos; and the assessments techniques for evaluating students' learning such as quizzes, tests, rating scales, checklists, scoring rubrics, and others. Thus, a course curriculum would consist of specific learning goals or objectives of the course an instructor is teaching, the material to be covered, the topics, assignments, and projects that the students need to complete in order to achieve the end-of-course goals. In addition, the students must be provided with practice during the course.

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[1] https://www.edglossary.org/curriculum/

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To achieve educational goals, school and college stakeholders need to plan, design, and organize the instructional units, lessons, learning activities, readings, and assessment techniques in the course, show how the course topics will be taught and in which order and what the students will be doing in the course. This process is called curriculum design. Curriculum design[2] is the systematic organization of a curriculum which involves creating an overall course blueprint, matching the course content to learning objectives, developing a course outline, course descriptions, and building the whole course or program. For each learning objective, the course content, subject matter, exercises, activities, and assessment techniques are identified.

There are three types of curriculum design[3]: *subject-centered* which focuses on a specific area of study; *learner-centered* which focuses on the students' abilities, skills, interests, and goals; and *problem-centered* design which focuses on specific social, economic, medical, educational, and psychological issues and how to come up with solutions for those.

In designing and implementing a particular curriculum, Chaudhary (2015) emphasized that the curriculum developer/designer should take some factors into consideration like the learners, teachers, the school environment, school budget, culture and ideology, resources, materials, facilities, instructional supervision, and assessment. In educational practice, these factors interact with each other and create influences that cannot be attributed to a single factor. Schweitzer (2019) added that the curriculum developer/designer should identify what will be done in the course, who will do it, how and according to which schedule in order to improve students' learning. The developer/designer should make sure that the learning goals are aligned and complement each other especially when the students move from one stage or level to the next.

To manage the curriculum design process, Schweitzer (2019) pointed out that the curriculum developer/designer should do the following: (i) identify the needs of the students; (ii) make a list of learning objectives and outcomes; (iii) identify constraints that will affect curriculum design; (iv) create a curriculum map, i.e., curriculum matrix to evaluate the sequence and coherence of instruction; (v) identify the instructional methods that will be used throughout the course and consider how they will work with the students' different learning styles; (vi) define the evaluation techniques (placement, aptitude, achievement, diagnostic, formative, summative, norm-referenced or criterion-referenced) that will be used during and at the end of the academic year to assess learners, instructors, and the whole curriculum. Curriculum design is not a one-step process. It is an on-going process. There is always a need to review, modify, change, adapt, adjust and reconstruct the curriculum of a particular course or program to meet the learning requirements of students and the requirements of the labor market. ,

Curriculum design is not only essential for face-to-face instruction, but is also essential for other modes of teaching such as blended, distance and online education. In this respect, Chugh, Ledger and Shields (2017) declared that the design of the distance learning (DL) curriculum should meet institutional and industry requirements, reflect educational objectives, and take into consideration elements of pedagogy and engagement. To ensure that the distance education curriculum meets contemporary educational practices, the authors proposed a triad consisting of pedagogy, technology, and an engaged community of learners.

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[2] https://tophat.com/glossary/c/curriculum-
design/#:~:text=Curriculum%20design%20is%20the%20planning,assessments%20that%20achieve%20educational%20go
als.&text=These%20include%20subject-centered%20design,design%20and%20problem-centered%20design.
[3] https://www.thoughtco.com/curriculum-design-definition-4154176

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LITERATURE REVIEW

Before the outbreak of the Covid-19 Pandemic early 2020, most university courses in all countries were delivered face-to-face, with some courses delivered online, and some instructors using blended learning as a supplement to in-class instruction. But due to the Covid-19 Pandemic, there was a sudden switch from face-to-face instruction to school closure and DL in all countries, all levels of education, and all kinds of courses starting March 2020. Studies reviewed by Al-Jarf (2020) showed that students in most countries were not satisfied with the new course delivery mode, i.e., online DL, due to numerous challenges such as accessibility, connectivity costs, technical problems, lack of staff training and confidence, limited social contact, lack of student engagement, communication, interaction and cooperation with each other and with their instructors, absence of traditional classroom socialization and long response time from instructors. Likewise, the teachers reported that online teaching during the Pandemic required new skills. They were not instructionally nor technologically trained in DL. Learning resources and materials suitable for DL were inadequate and they were not able to use interactive resources.

In addition, both students and instructors preferred face-to-face instruction to DL, because more content is covered. Collaboration and interaction among students in face-to-face instruction is greater. The students' contact with their classmates and instructors is present in face-to-face but missing in DL. Unlike DL, face-to-face, in-class instruction develops the dynamics of group work. Social interaction on campus and in the classroom strengthen students' identity as members of a community. Lack of classroom and on-campus socialization in DL made it difficult for students to participate in group projects (Al-Jarf, 2020).

For the above reasons, some researchers such as Adnan and Anwar (2020) called for the improvement of the higher education curriculum and the design of appropriate content for online lectures and DL during the Pandemic. As a result, emergency DL in some countries triggered some curriculum change, curriculum redesign, and curriculum adjustments in online DL in numerous disciplines such as chemistry, engineering, mathematics, science, early childhood education, physical education, social studies, and language learning.

In chemistry courses in particular, the social distancing measures introduced to prevent the spread of COVID-19 led to the rapid redesign of undergraduate-level chemistry instruction in higher education from face-to-face to online delivery. For example, Easdon (2020) adjusted the topics covered in a Biochemistry Course. This adjustment included covering the life cycle of SARS-CoV-2 and switching to the chapters covering nucleic acid topics. This change promoted students' engagement in the online version of the course for the remainder of the semester. In a course on catalysis in which 188 students were enrolled, Sarju (2020) used a blended multimedia instructional approach, informed by equality, diversity, inclusion, and cognitive load theories. Information was chunked and delivered online through short videos, supported by a written course handout, small group tutorials and banks of multiple-choice questions. Usage statistics, autobiographical critical reflections, and student feedback showed that the course received overwhelmingly positive feedback from students who appreciated the course format, accessibility, and delivery. At a large public university in the USA, General and Organic Chemistry Laboratory courses have always had curricular, administrative, logistic, and high enrolment challenges. To meet those challenges in the transition from face-to-face to remote teaching during the COVID-19 Pandemic, Howitz, Thane, Frey, Wang, Gonzales, Tretbar, Seith, Saluga, Lam, Nguyen, Tieu, Link and Edwards (2020) utilized their existing

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web-based course content, made additions and alterations to their curriculum, and replaced experimental work with videos.

At a large southwestern university, Chernosky, Ausburn and Curtis (2021) redesigned an engineering course for adult learners. First the researchers identified the key components of satisfaction, student engagement strategies and key course characteristics which could increase satisfaction and reduce dropout rates. Those included faculty interaction, authenticity, student-to-student engagement, feedback, multimedia, and homework. Then, the researchers developed an equitable instructional design model which was a Learner-Centred Engineering Course of Value.

In New Zealand, Nguyen, Everiss, Rosewarne, Vladinova-Aylor, Ippel and Boyd (2020) designed an Early Childhood Education and Care (Level 4) Programme delivered fully online. The new course design focused on instruction that empowers learners in an online flexible DL environment, innovative teamwork, and initial feedback from stakeholders, the integration of sociocultural and constructivist theories with information communication technology and an assessment approach. The re-designed pedagogy and innovative teamwork resulted in very positive initial feedback from stakeholders. In another study, Metscher, Tramantano and Wong (2021) reported adaptations made by three teacher educators in an early childhood teacher preparation programme in New York City to facilitate student engagement. Those included the use of breakout groups, an interactive whiteboard, an interactive agenda, and community-building activities.

In social studies, Helmsing and Noy (2020) integrated key concepts about global health during the COVID-19 Pandemic and offered social studies educators an approach to support lessons on COVID-19 across sociology, geography, and other fields within social studies education. They provided select digital resources for students and teachers to use in teaching and learning about the COVID-19 Pandemic through a global health perspective aligned with the National Council for the Social Studies' Thematic Standards.

Moreover, Stahl (2021) redesigned a Mathematics Curriculum using available technology to implement approaches that incorporate the findings of learning theories, collaborative learning, computer mediation, student discourse and feedback. The proposed model used an existing dynamic-geometry technology to translate Euclidean geometry study into collaborative learning by small groups of students who study together, facilitated by a teacher or supervisor. The dynamic-geometry technology allowed teachers and students to interact with the same material in multiple modes. This dynamic-geometry technology proved to be beneficial for online students, co-located small groups, and school classrooms, with teachers and students having shared access to materials and students' work across all interaction modes.

In implementing a data science curriculum, Berg and Hawila (2021) used R and R-related tools. Readers were directed to helpful R resources. Then they used R in exploring COVID-19 data, and ethnic/racial distributions and COVID-19 death rates. Supplementary R markdown files were also included, which allowed all graphics to be easily reproduced.

Due to the lack of commercially developed, online-based textbook packages for distance language learning courses, and the distance separating students which seemed to hinder the provision of language learning experiences that focus on social and cultural contexts, Noriko (2013) utilized online learning communities as networks of social relationships, engagement, and interaction. In addition, students enrolled in a first-year Japanese DL course developed basic communication skills and increased their awareness of cultural differences

through the instructor's intervention and collaborative work with peers and using a combination of synchronous and asynchronous DL.

A second line of research in the literature focused on creating flexible and adaptable course content and procedures in curriculum redesign to cope with DL and make it more effective. For instance, Watkins, Treviranus and Roberts (2020) created an inclusive design of diverse learning experiences, individualisation and adaptation of learning materials, open education practices and flexible digital resources to optimise learning opportunities for all students. Likewise, Pulker and Kukulska-Hulme (2020) proposed a model for reusing open educational resources in language learning. They found that reuse/adaptation of resources had a positive effect on students and was the main factor in enhancing students' learning.

In South Africa, Mendy and Madiope (2020) described what colleges did as they responded to the need for curriculum reform in Open Distance e-Learning in South Africa. Results revealed reforms in the following areas: student support, technology-enhanced teaching and learning, alternative assessment systems, excellence in quality assurance, student retention, rate of students completing a course and student accessibility. The reforms were narrowed to three areas, namely curriculum content, curriculum responsiveness, and practical pedagogy.

In Australia, a cross-curriculum priority that stresses Australia's engagement with Asia was mandated by the Australian government. This means that Asian beliefs, cultures, environments, and Australia-Asia relationships should be embedded in the learning processes at Australian schools especially during the Covid-19 Pandemic which affected the whole world so significantly (Guo, 2021).

A student-centered pedagogy and course transformation, which affected more than 600 courses at Purdue University in the USA, was carried out to accumulate knowledge on effective teaching, to facilitate student learning, improve outcomes, and change the institutional culture around teaching and learning. Focus was on self-determination theory which stimulated faculty's motivation and creativity and shaped the setup and transformation of the program from a course redesign to a professional faculty development program. The faculty were given autonomy to build on their expertise in the discipline, pursue their interests and preferences according to a guided framework, and maximize their interaction with colleagues through FLCs (Levesque-Bristol, 2021).

Some Departments of Education such as the Kentucky Department of Education (2020) addressed the knowledge gaps due to school closure and extended remote learning during the COVID-19 emergency DL. Their reports provided guidance on initial steps for how educators can plan and bridge the knowledge gaps. They analyzed their 2019-2020 curriculum to be able to make adjustments in the 2020-2021 curriculum, and to be able to address potential knowledge gaps due to extended remote learning in incoming students. They identified areas for potential gaps in 2019-2020 students to share in vertical conversations and drafted an adjusted curriculum for the 2020-2021 school year.

Another course design used during the Covid-19 Pandemic was the Content-Assessment-Pedagogy (CAP) triangle which provides a framework for making curriculum design decisions about what content must be emphasized, what might be omitted or added, what content components should be assessed, and how to design learning activities that maximize students' learning. A critical feature of the CAP framework is the alignment of content, pedagogy, and assessment with each other and placing what instructors want learners to retain long after instruction in the center. It was concluded that pedagogy and assessment

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need to relate to the learning outcomes with Feedback, not grades, as the most important aspect of assessment, and practice as the essence of pedagogy (Streveler and Smith, 2020).

Moreover, Chugh, Ledger and Shields (2017) recommended utilizing a mixture of synchronous and asynchronous environments in DL. They proposed the integration of pedagogy, technology, and an engaged community of learners. Before designing a curriculum, specific contexts and needs should be identified. The curricula should define competencies that students need to display and the content that should be delivered. In general, it may not be possible to design a curriculum that suits one cohort of students; hence curriculum design should accommodate and serve the needs of both DL student and those in the traditional classroom setting. Curriculum design practices should focus on learning, connecting, and engaging the students and should support the needs of DL students, demands of the labor market and educators as well.

Regarding the Saudi context, students and instructors at some Saudi universities reported some problems with school closure and the sudden transition to DL which started in March 2020 (Spring semester 2020). 55% of Saudi students majoring in languages, linguistics and translation were dissatisfied with DL, found it ineffective and frustrating and preferred face-to-face instruction. Since DL was a new mode of learning, the students had difficulty understanding online lectures especially in courses that require practice. It was not possible for the students to follow the lecture and chat and respond to queries and comments at the same time. 69% of the students surveyed had problems communicating with their instructors and classmates. Students' most common concern was exams and passing their courses with high grades (Al-Jarf, 2020).

Similarly, translation and interpreting instructors were dissatisfied with DL during the first semester of the Pandemic (Spring 2020). The new DL environment was a new mode of teaching and delivering lectures to students. They did not know how to adapt the course material to the new DL environment. They had difficulty communicating with a large number of students registered in their courses and give feedback to each student on their translation of the assigned texts. They added that the students were not interested in online learning, were not enthusiastic, were demotivated and disappointed. The online course attendance was not as high as in face-to-face classes. The students refused to give oral presentations online, did not ask questions, many did not participate in online discussions, and did not do assignments. There was little interaction in the new DL environment (Al-Jarf, 2020).

Since Summer 2020, Saudi universities have taken numerous steps towards solving platform problems, improving internet connectivity and access, providing devices to disadvantaged students who did not have devices in Spring 2020 (Al-Jarf, 2021b). They have set new online exam procedures and standards and offered training workshops for teachers. In Spring 2021 (the third semester of the Pandemic), language and translation instructor surveys showed that the instructors went beyond lecturing and using a PPT in DL. They started to use new online activities for increasing students' engagement such as searching for linguistic and translation key terms and concepts, answering problem-solving questions, using online debates, summarizing a research paper, attending a thesis defense online, inviting specialized guest speakers online, giving project-based assignments, connecting writing and speaking topics with Saudi Arabia's 2030 Vision, collecting and analyzing translation errors, translating Wikipedia articles from English to Arabic, online interpreting contests, analyzing family speech, a video, and talk shows in the light of some pragmatic and linguistic theories and concepts, student-created digital stories, and podcasts. In online speaking courses, the students

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gave online oral presentations, answered problem-solving questions orally, participated in listening and speaking activities and online debates. They integrated new technologies such as Slido, Padlet, and Kahoot in DL (Al-Jarf, 2022; Al-Jarf, 2021a).

AIMS OF STUDY

The above literature review has revealed lack of studies in Saudi Arabia about whether universities, colleges, departments, or instructors have made any changes, modifications or enhancements in their course curriculum while teaching online during the Pandemic. Therefore, the current study aims to find out whether instructors, departments and/or colleges at Saudi universities have changed, reviewed, modified, adapted, adjusted, or reconstructed the curriculum content taught at a sample of colleges (languages, linguistics, translation, English Literature, Education and Computer Science) in the DL environment during the first 3 semesters of the Pandemic (Spring 2020, Fall 2021 and Spring 2021). Specifically, the study will find out whether any changes have been made in the following aspects of the curriculum: (i) set of courses offered by the program; (ii) course titles; (iii) number of credit hours allocated to each course; (iv) the topics taught; (v) amount of material covered in DL courses during Pandemic; (vi) the course material (books, readings, resources) used; (vii) any new training courses offered to equip the students with new interpersonal and technological skills needed for the Pandemic and Post-pandemic labor markets; (viii) delivery of teaching practicum courses and graduation projects in the DL environment during the Pandemic. The study will not focus on other components of the curriculum such as learning activities, students' engagement, and assessment in DL during the Pandemic as they were the subject of other studies by the author (Al-Jarf, 2022; Al-Jarf, 2021; Al-Jarf, 2020). However, occasional reference will be made to these studies when necessary.

SIGNIFICANCE OF STUDY

The current study will help stakeholders at Saudi universities gain insight into online curriculum and course design for DL learners during the Covid-19 Pandemic era. It will show them how to enhance existing DL courses and the different ways for converting traditional courses to courses that are suitable for both DL and face-to-face instruction. It shows the need to reconsider how to teach subjects in the Pandemic online environment. It will help them upgrade teaching and learning in the DL environment. It aims to promote understanding of curriculum design practices and how to update, modify the pedagogy, technology, and an engaged community of learners as a basis for ensuring that the curriculum meets contemporary practices in the 21st centry.

2.   METHODOLOGY
2.1   PARTICIPANTS

The participants in the present study consisted of 125 Saudi college students and 80 instructors from English Language Centers, Colleges of Languages, Translation, Linguistics, English Literature, Education and Computer Science at 7 state universities and 1 private university in Saudi Arabia: King Saudi University, Princess Noura University, King Abdul-Aziz University, Umm Al-Qura University, Taif University, and Imam Abdul-Rahman Bin Faisal University, Tabuk University and Prince Sultan University, a private university. 50% of the students and 55% of the instructors were form Colleges of Languages, Translation, Linguistics and English Literature, 30% of the students and 25% of the faculty were from Colleges of Education; and 20% of the students and 20% of the instructors were from Colleges

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of Computer Science. 90% of the instructors and 80% of the students were female. 52% of the instructors had a Ph.D. degree; 38% had an MA, and 10% were TAs. 87% of the students were undergraduate (sophomore, junior and senior); and 13% were MA, and Ph.D. students. Students and instructors were from different departments (sub-specialties) at Colleges of Education and Computer Science.

2.2   DATA COLLECTION
All instructors and students in the samples responded to a survey with the following open-ended questions that asked them about the curriculum in their DL courses during the Covid-19 Pandemic (Spring 2020, Fall 2021, and Spring 2021) and whether any changes, modifications or additions have been made in the following: (i) set of courses offered by the program; (ii) course titles; (iii) number of credit hours allocated to each course; (iv) the topics taught, If yes, give examples; (v) amount of material covered in DL courses during the first three semesters of the Pandemic and whether it is the same, less or more than that covered in face-to-face instruction before the Pandemic; (vi) the course material (books, readings, handouts, videos, podcasts digital resources) used, and whether any digital resources have been added, if yes, give examples; (vii) whether new training courses have been offered to equip the students with new interpersonal and technological skills needed for the Pandemic and Post-pandemic labor markets; (viii) how the teaching practicum courses and graduation projects are carried out in the DL environment during the Pandemic.

2.3   DATA ANALYSIS
Instructors and students' responses to the surveys were compiled, sorted out according to each question, then quantified. Responses to a question from all students and those from all faculty were pooled separately. Where applicable, percentages of instructors and students giving the same response were calculated. Instructors and students' responses are also reported qualitatively. Where necessary, quotations of some instructors and students' responses are given. Instructors and students' responses to each question were not classified in terms of instructors and students' gender, area of specialization, instructors' degree, students' educational level, type of college, or university.

3.   RESULTS AND DISCUSSION
3.1   *The DL College Curricula During the Pandemic as Reported by Instructors*
All of the instructors in the sample reported that no adjustments have been made in the languages, translation, linguistics, literature, education or computer science course curricula in the DL courses offered to students during the first three semesters of the Pandemic (Spring 2020, Fall 2021, Spring 2021). The set of courses offered in each college program, course titles, credit hours allocated to each course, course content, topics taught, amount of material covered, types of material used by the students are the same as those offered before the Pandemic, when classes were held face to face. The only difference is in the delivery mode.

In addition, the instructors indicated that the set of courses in the college/department program and the course description of each cannot be easily modified, changed, or added to as these are usually approved by the Department, College and Academic Councils, not individual instructors. Any changes to be made in the curriculum have to be approved by the aforementioned Councils. Since the Council members were working remotely, it was not easy, nor possible to make any changes or adjustments in the curriculum even if those adjustments are necessary.

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At Saudi universities, instructors are not given the freedom, nor the choice to change or add new topics to the course content they are teaching without getting the approval of at least their Department, or College Councils, which was not possible because of the disruption that the Pandemic has created. However, instructors at Saudi universities have the choice and freedom to select the learning activities to be given to the students even when they are using textbooks assigned by the department as in the listening, speaking, reading, writing, grammar and vocabulary courses

As for the Teaching Practicum courses that senior students at Colleges of Education or English Departments have to complete, before the Pandemic student-teachers would go to elementary, junior or senior high schools, observe teachers and practice teaching the students in the classroom (face-to-face). But during the Pandemic, when all courses were delivered online, there were several options. The following are examples mentioned by the participants:

An instructor at a College of Education reported:

Before the Pandemic, the students used to practice teaching in the real classroom, but during the Pandemic, the Teaching Practicum shifted to online microteaching.

Another Practicum instructor at another College of Education commented:

There is a Teaching Practicum at our department during the Pandemic. Our student-teachers practice distance teaching. They use Madrasati (the Ministry of Education's Platform) to practice teaching. They borrow the class teacher's username and password to access the courses delivered on Madrasati and teach the students.

An instructor at an English Department wrote:

In face-to-face instruction before the Pandemic, senior students at the English department were required to take a Teaching Practicum course for a whole semester where they practiced teaching English face-to-face. During the Pandemic the students attended their Teaching Practicum twice a week as it was before the Pandemic.

An instructor at an English Language Center said:

Before the Pandemic, we had a Teacher Mentoring Program, in which new instructors and graduates received training in the principles of teaching, how to interact with students, how to use Blackboard in language teaching, and how to design tests and homework-assignments. The program is still operating during the Pandemic, but the training period has been reduced to one month only instead of a whole semester.

An instructor at a private university indicated:

Before the Pandemic, we had a face-to-face Cooperative Training Program (Coop) *for students majoring in linguistics and translation. During the Pandemic, this Coop is still required although training opportunities for senior students are very limited. Working face-to-face or remotely (during the Pandemic) depends on where the student is doing her training.*

A translation instructor added:

Graduating seniors have a choice to translate a book or go for field training in translation. Some translation students used to go for training to King Abdullah Bureau for Translation and Arabization, the Deanship of Research, the Ministry of Municipal

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and Rural Affairs, the Ministry of foreign Affairs, some marketing firms, some hospitals, and others. But during the Pandemic, the students were asked to translate 14,000 words at home (i.e., remotely) instead of going to the office and working on their translation face to face.

A computer instructor declared:

During the Pandemic, some places that offered training for computer science students such as Makkah Municipality allowed the students to complete their practicum during the summer to maintain social distancing. The students also had the option to attend 135 hours of online training courses in computer, IT and technological skills.

3.2   The DL College Curricula During the Pandemic as Reported by Students

Graduate and undergraduate students in the sample confirmed what the instructors mentioned about the college curricula. The set of courses offered in program, number of credit hours allocated to each course, course content, topics taught, amount of material covered, material, textbooks, handouts are the same as those mentioned in the course outline and course description. No digital resources have been added, uploaded, or required. They also revealed that they have not received any instruction or extra training in interpersonal skills, digital skills, computer skills, remote communication, and so on.

However, the students mentioned one difference between face-to-face and DL instruction during the Pandemic which is lecture recording by the platform used in DL such as Zoom and Blackboard. They added that with lecture recordings, they did not need to attend online lectures synchronously as they can re-play lecture recordings (asynchronously) any time and as many times as they wish, especially when they miss a class. They did not have this advantage in face-to-face instruction before the Pandemic, where lectures were not recorded, and they had to take notes by hand during the lecture, and if they miss a lecture, they had to borrow lecture notes from a classmate or read the lecture material/handout at home.

4.   DISCUSSION

Findings of the present study have shown that no changes, modifications, or enhancements have been made in the curricula of a sample of college majors (languages, translation, linguistics, literature, education, and computer science) at a sample of Saudi universities in DL during the Covid-19 Pandemic. The college curricula, i.e., the set of courses offered by the departments, course titles, number of credit hours, course content and topics taught, amount of content covered and course material, and resources in DL during the Pandemic are the same as those in face-to-face instruction before the Pandemic. The only change was in the delivery mode, in the teaching practicum and graduation projects, in addition to the recordings of the online class lectures by the DL platform. These findings are partially inconsistent with findings of prior studies such as Easdon (2020), Sarju (2020); Howitz, Thane, Frey, Wang, Gonzales, Tretbar, Seith, Saluga, Lam, Nguyen, Tieu, Link and Edwards (2020); Chernosky, Ausburn and Curtis (2021); Nguyen, Everiss, Rosewarne, Vladinova-Aylor, Ippel and Boyd (2020); Metscher, Tramantano and Wong (2021); Helmsing and Noy (2020); Stahl (2021); Berg and Hawila (2021); Watkins, Treviranus and Roberts (2020); Pulker and Kukulska-Hulme (2020); Streveler and Smith (2020); and Chugh, Ledger and Shields (2017) in which instructors made adjustments and enhancements in the online chemistry, engineering, mathematics, science, early childhood, social studies, physical education and language learning courses during the Pandemic.

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Saudi students' preference for lecture recordings and asynchronous learning, in the present study, is similar to findings of other studies by Chung, Subramaniam, and Dass (2020) and Al-Nofaie (2020). In the former study, Malaysian college students preferred online learning via pre-recorded lectures uploaded to Google Classroom and YouTube, but the biggest challenge was for diploma students who had difficulty understanding the course content. As in the present study, Al-Nofaie (2020) reported that Saudi students preferred learning via an asynchronous rather than a synchronous learning environment due to its flexibility.

5.   CONCLUSION

The outbreak of the Covid-19 Pandemic in early 2020 has forced many schools and universities around the world to shift from face-to-face to remote teaching and learning using a variety of platforms such as Zoom, Microsoft Teams, Google Meet, WebEx, Blackboard and others without prior notice and without prior training in online instruction. The Pandemic has also posed an urgent need to redesign college curriculum in terms of the content and topics taught, the redesign of activities, the utilization of technology in delivering classes to students with emphasis on collaborative learning, student engagement, interaction and online assessment and feedback. Since the subjects in the present study have reported no official changes made in the languages, translation, linguistics, English literature, education, and computer science curricula at Saudi universities during the first three semesters of the Pandemic, the present study recommends the integration of current global issues (topics) related to the Covid-19 Pandemic from different perspectives depending on the students' major. For example, students majoring in languages, translation, linguistics, and English literature may read articles, watch videos, write essays, give presentations, or participate in online debates about some issues related to Covid-19. They may practice critical thinking skills through the reading of articles or watching videos about the Pandemic. The students may share and propose digital material on the Covid-19 from the World Health organization, UNICEF and other websites, or digital resources that they can read or watch.

Students majoring in education may discuss the impact of Covid-19 on students' psychology and well-being. They may practice teaching children online using the Madrasati Platform, designed and supervised by the Saudi Ministry of Education, learn how to motivate school children to communicate and interact in the DL environment. Graduate and senior students may work as a teacher aide where they can help teachers at elementary, middle, or high schools and special education centers in providing online assistance to students, help in grading, leading small group online instruction, supervise virtual field trips and prepare digital materials for the students. They can attend seminars and thesis defenses online as well.

Students majoring in computer science may create certain apps related to the Pandemic. They can design robots to be used in hospitals, airports, restaurant, factories and other locations to help doctors and nurses in treating corona patients, help passengers at airports, help serve food and drinks at restaurants and coffee shops, and help workers in the factories. In data mining courses, students may collect and analyze Pandemic statistics from around the world. They can conduct some learning analytics[4], i.e., collecting, analyzing, measuring, and reporting data about students in DL contexts in Saudi Arabian schools and universities, in order to understand and optimize learning, and improve the DL environment. They may help in solving faculty and students' connectivity problems and access and train instructors and students in using the different DL platforms. They may collect data about students while using LMS's, DL platforms, social media, or other online tools. They may track students' clicks, time on task, navigation

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[4] Learning analytics - Wikipedia

patterns, information flow, social interaction, and concept development through discussions and make these data available for analysis.

Higher education institution in Saudi Arabia should be encouraged to utilize learning analytics about teaching practices in DL, analyze, compare, and link those to learning processes and learning outcomes, in addition to gathering instructors' views about online learning and engaging them in the development of learning analytics for learning designs.

Finally, this study recommends that future researchers investigate other aspects of the curriculum such as assessment and engagement in DL during the Pandemic such as assessing students' achievement (using placement, achievement, formative or summative assessment), evaluating instructors' performance in DL, evaluating the curriculum content and course topics to find out their relevance to DL, difficulties encountered during online delivery of the course content, and evaluating the effectiveness of the new teaching practicum and graduation project alternatives used during the Pandemic. Student assessment can be conducted from different angles: self-assessment, quizzes, exams, rating scales, and/or checklists. Assessment of instructors' performance can be conducted through observations, interviews, and/or surveys. The suitability of the curriculum from the students and instructors' perspectives and its relevance to the program goals can be assessed as well. The evaluation of student engagement, communication and experiential learning activities in DL during the Pandemic is still open for further investigations in the future. Such new areas of research are needed to explore the effectiveness of different aspects of DL and to help students achieve the desired learning outcomes, program, and course goals.

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