

# LDA2Net: Digging under the surface of COVID-19 topics in literature

## Topic 12 companion sheet

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This file contains the following supplementary information for Topic 12 of the manuscript “*LDA2Net*: Digging under the surface of COVID-19 topics in scientific literature”:

- Human label and automatic n-gram label proposals (Table 1)
- Summary measures (Table 2)
- Network of top 25 bigrams (Figure 1)
- Wordclouds of top 25 words by node relevance measure (Figure 2)
- Wordclouds of top 25 bigrams by edge relevance measure (Figure 3)
- Filtered (0.99 percentile) topic network (Figure 4)

Table 1: Human and automatic label proposals. Automatic label candidate for largest word community of the topic. In parenthesis: absolute frequency of the walk out of a sample of size 1000.

Human label	2-gram label	3-gram label	4-gram label
online education during pandemic	online->learning (30.7%)	online->learning->students (10.9%)	online->de->student->learning (3.4%)

Here follows the set of topic-specific measures that have been used to classify the topic and to analyse its structural properties (see manuscript for details):

Table 2: Summary measures

	JSD	Mean propensity	Variance propensity	Modularity	Barrat Clustering Coeff.
value	0.613537	0.009819	0.000880	0.000000	0.525502
rank	45	112	114	33	14

Based on the aforementioned measures, Topic 12 has been classified as a SPECIALIZED topic.

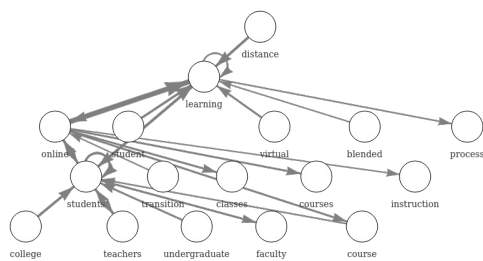


Figure 1: Network of top 25 bigrams (i.e., edges) by weight.

A word cloud of education-related terms. The word 'online' is the largest and most central. Other prominent words include 'students', 'courses', 'learning', 'teachers', 'course', 'undergraduate', 'educators', 'classroom', 'classes', 'digital', 'blended', 'faculty', 'distance', 'college', 'student', 'pandemic', 'schools', 'universities', 'engagement', 'academic', 'transition', 'graduate', 'feedback', and 'virtual'. The words are arranged in a circular pattern around the central 'online' word.

A word cloud of terms related to online learning. The words are arranged in a circular pattern, with 'students' being the largest and most central word. Other prominent words include 'learning', 'assessment', 'academic', 'platforms', 'lectures', 'classes', 'work', 'faculty', 'course', 'higher', 'virtual', 'student', 'educators', 'via online', 'provided', 'courses', 'instruction', 'format', 'teachers', 'process', 'distance', 'feedback', and 'schools'. The words are in various shades of gray and sizes, creating a dynamic visual effect.

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Figure 3: Top 25 bigrams (i.e., edges) by measure.

