



# Online Teaching on bioinformatics: Systematic Review

## Authors & Affiliations

### INTRODUCTION

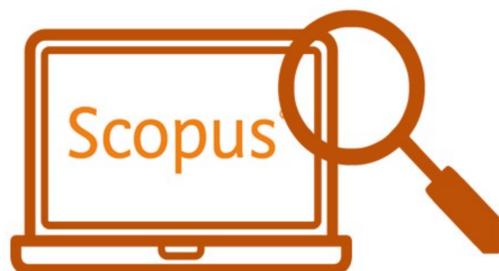


Bioinformatics is a field involves Biotechnology and Computer Sciences where competent computational skills and biological knowledge are required to process biological data in a big variety of biological-related areas such as algiculture and medicines.

With the availability of the open and accessible online database and its high engagement with computational devices, Bioinformatics is suitable to be learnt online.

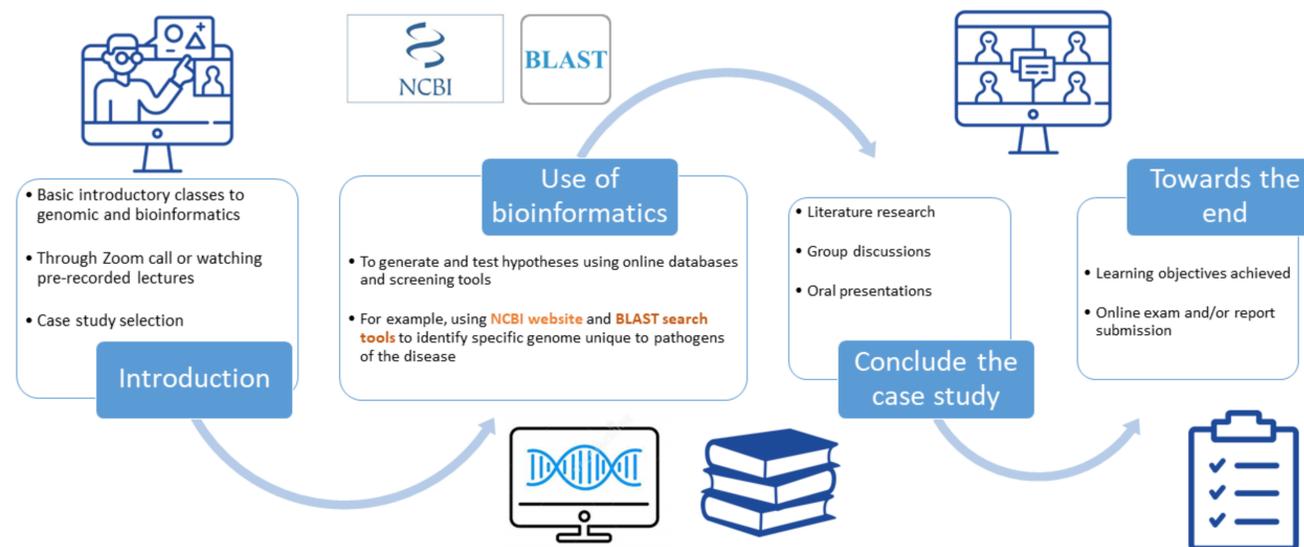
### METHODS

Through Scopus search, 96 items are found to be related to 'Bioinformatics' and 'online learning'. 15 journal articles are selected for this review which aims to assess the feasibility of learning Bioinformatics through online platforms.



### RESULTS

#### Flowchart of online learning on Bioinformatics



#### Benefits

- Flexible (Online database accessible at anytime and anywhere)
- Time and cost saving
- Good alternative in difficult situation (such as COVID-19 pandemic)



#### Challenges

- Virtual classroom engagement
- Maintain students' motivation and work performance



### CONCLUSION

Online learning on Bioinformatics has been practiced in a number of Universities. Students who had undergone such programme provided good reviews and they believed that it is as efficient as learning in a classroom setting.

In addition, this may benefit both learners and teaching staffs in terms of time flexibility, especially in this current COVID-19 situation.

However, this may be only favourable for basic introductory topics and not sufficient to make students bioinformatics experts in which exclusive learning materials and programs are necessary.

