How WhatsApp makes Educational Data Mining difficult in West African universities

Bassole Romaric | Frédéric T. Ouedraogo | Laurence CAPUS
Norbert ZONGO University | University Laval
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Many universities in African countries have adopted Moodle as a learning management system to offer online courses or to support traditional courses.

The success of social networks in general among young people who adopted them as their favourite communication tools has raised a great interest among educational experts. M. Bousso, L. Capus, T.F. Ouédraogo (2020)
interactions between teachers and students around learning activities occur on other media such as WhatsApp or Facebook
Facebook and Twitter have implemented Application Programming Interfaces (APIs) that provide many services such as obtaining user data from pages and groups. WhatsApp does not have such an API. For example, there is no service to browse or search for a group on WhatsApp, let alone retrieve data.
Dedicated e-learning platforms are not sufficiently powered by student learning activities, so conducting MDE research seems to be more complicated in this context.
WhatsApp groups are explicitly created by students and teachers.
OVERVIEW OF WHATSAPP DATA

Data recovery process

Knowledge • Contact • Make a request to the teacher

Teachers • Studying the demand • Consensus with students

Data • Recovery • Analysis • Presentation of results
We collected data from five groups: each group contains interactions between group members on course content and exercises, shared as files in the groups.

< date> - member_id>: text written by the member>.
The data processing was done with the Python language. We performed an exploratory analysis of the data to show that the data makes sense.
We have presented some practical cases of using this data in the context of educational learning. The analysis of these data can be used to:

- Measure students' experience and overall satisfaction with learning.
- Predict future learning behaviour of students;
- Make recommendations to teachers.
DISCUSSION

• Many department heads have explicitly recommended the use of the WhatsApp group, among others, to continue courses.

• Huge amounts of data are thus created by this messaging platform without any persistent storage system.

• Data from WhatsApp groups can be made available on a website.

• But data containing personal data be rendered anonymous and users must consent to their sharing, before they are collected
Moodle data is fully accessible to users and its collection can be completely controlled.

The solution would be to develop an identical free service, but this raises several challenges.
• This research could lead to the examination of administrative, legal and ethical issues and thus arrive at an African regulation of its own.
THANK YOU FOR YOUR ATTENTION