Course title: Seminar on secondary analysis of data from international education databases ( elective course, 3 credit hours)

Instructor: Mei-Shiu Chiu (office hours: 10am Monday; office: Jing-Tang Building 403; email: meishiuchiu@gmail.com)

Course introduction and learning outcomes:
1. The course aims to cultivate students' ability to use data from international large-scale databases to answer educational questions.
2. This course is for students interested in the statistics, teaching for excellence, and applying the teaching methods, including examples that the official language is English.
3. The course is suitable for master or PhD students with basic ability in advanced and multivariate statistics for education.
4. Students need to bring their own laptop computers to class for hands-on submissions.

Course objectives and learning outcomes:
- Understand methods to access databases.
- Understand papers based on secondary analysis.
- Understand methods to analyze data.
- Analyze data from databases.
- Write a proposal or paper using secondary analysis.
- Explore databases and analysis methods, read papers.
- Perform analysis, write essay, prepare presentation.

Teaching methods:
lecture, presentation, discussion, hands-on activity, and projects.

References:

Examination:
1. Midterm Exam (40%)
2. Final Exam (60%)
3. Attendance
4. Participation

Course schedule:
05 1. Understand methods to access databases.
06 2. Understand papers based on secondary analysis.
07 3. Understand methods to analyze data.
08 4. Analyze data from databases.
09 5. Write a proposal or paper using secondary analysis.

Teaching materials:
- Lecture notes
- Reading assignments
- Online resources

Tentative course calendar/schedule:
1. Introduction to secondary analysis and data exploration (e.g., PSPP and R).
2. Understanding databases and analysis methods, read papers.
3. Explore databases and analysis methods, read papers.
4. Perform analysis, write essay, prepare presentation.
5. Write a proposal or paper using secondary analysis.

Notes:
- Teaching methods: lecture, presentation, discussion, hands-on activity, and projects.
- Teaching materials: lecture notes, reading assignments, online resources.

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