INTRODUCTION TO LEARNING ANALYTICS

WEBINAR SPONSORED BY AITIE

DELIVERED BY OLAFARE F. O.

GOALS OF INSTITUTIONS OF HIGHER LEARNING

- The goal of every institution of higher learning is that:
- learner should learn/ to promote scholarship;
- to prepare students with knowledge and skills for self-reliance;
- high quality career counselling; and
- lifelong learning opportunities

DATA

- Information about learners that can be used to achieve the goals of institutions.
- They are digital and can be transformed into value for speculations and decision making.

BIG DATA

The goals of the Institutions can be achieved through Big Data which is;

- the use of technology in tracking and storing students' sets of data
- within online environment (Institutional database)
- over an extended period
- for a particular transactions.

USES OF TECHNOLOGY IN BIG DATA

Usage of technology to gather data saves the institutions of

- making referencing to students file
- coding and computation of data
- physical appearance of learners for information

USES OF DATA IN INSTITUTIONS

Data is used to determine candidates:

- pre entry level;
- with low entry level;
- previous and present learning environment;
- special conference session for selected learners (counselling),
- everyone will be assisted to learn; and
- for research

DATA SOURCE

Data can be used to formulate conclusions and to present paths to make decisions about learners. Data are gotten from

- Pre Learning Management System (LMS)
- Learning Management System

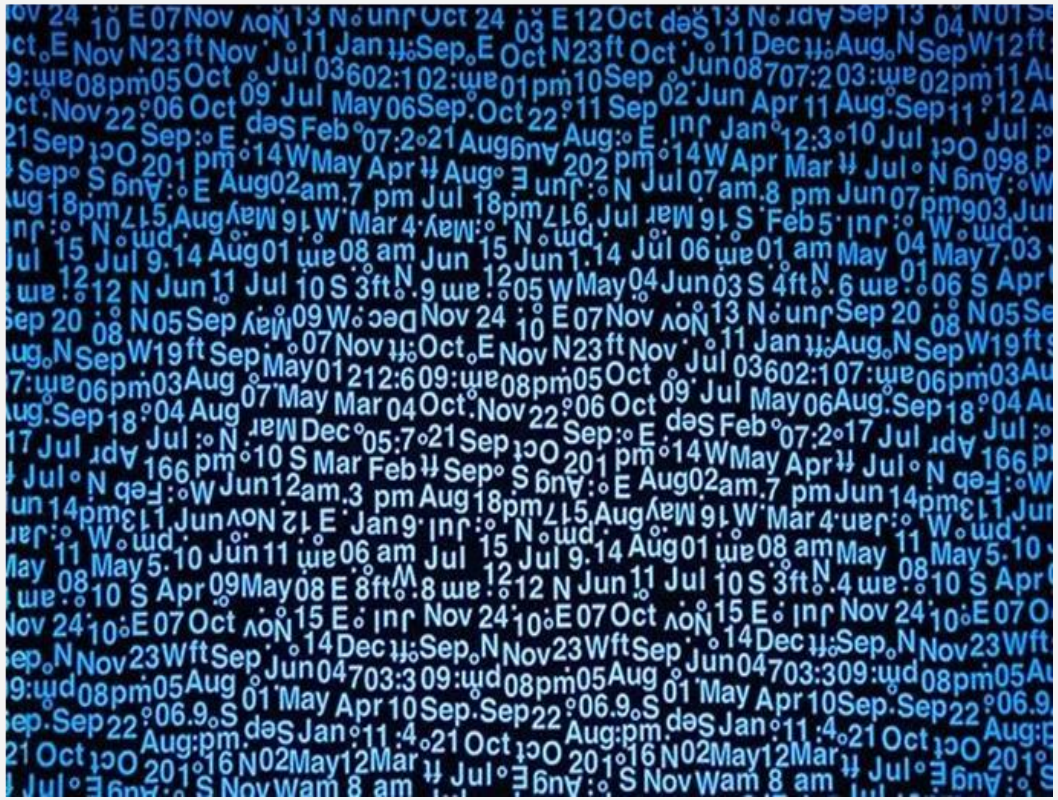
DATA FROM PRE LEARNING MANAGEMENT SYSTEM

- ✓ Admission data;
- ✓ O-level results (WAEC, NECO, NABTEB);
- ✓ NCE
- ✓ JUPEB
- ✓ Jamb result; and
- ✓ Institution Portal information

LEARNING MANAGEMENT SYSTEM

Learning Management System (LMS) such as blackboard, Edmodo, google classroom can be used to get students data

LEARNING EVIDENCES VIA LMS (GONZÁLEZ & HERNÁNDEZ-GARCÍA

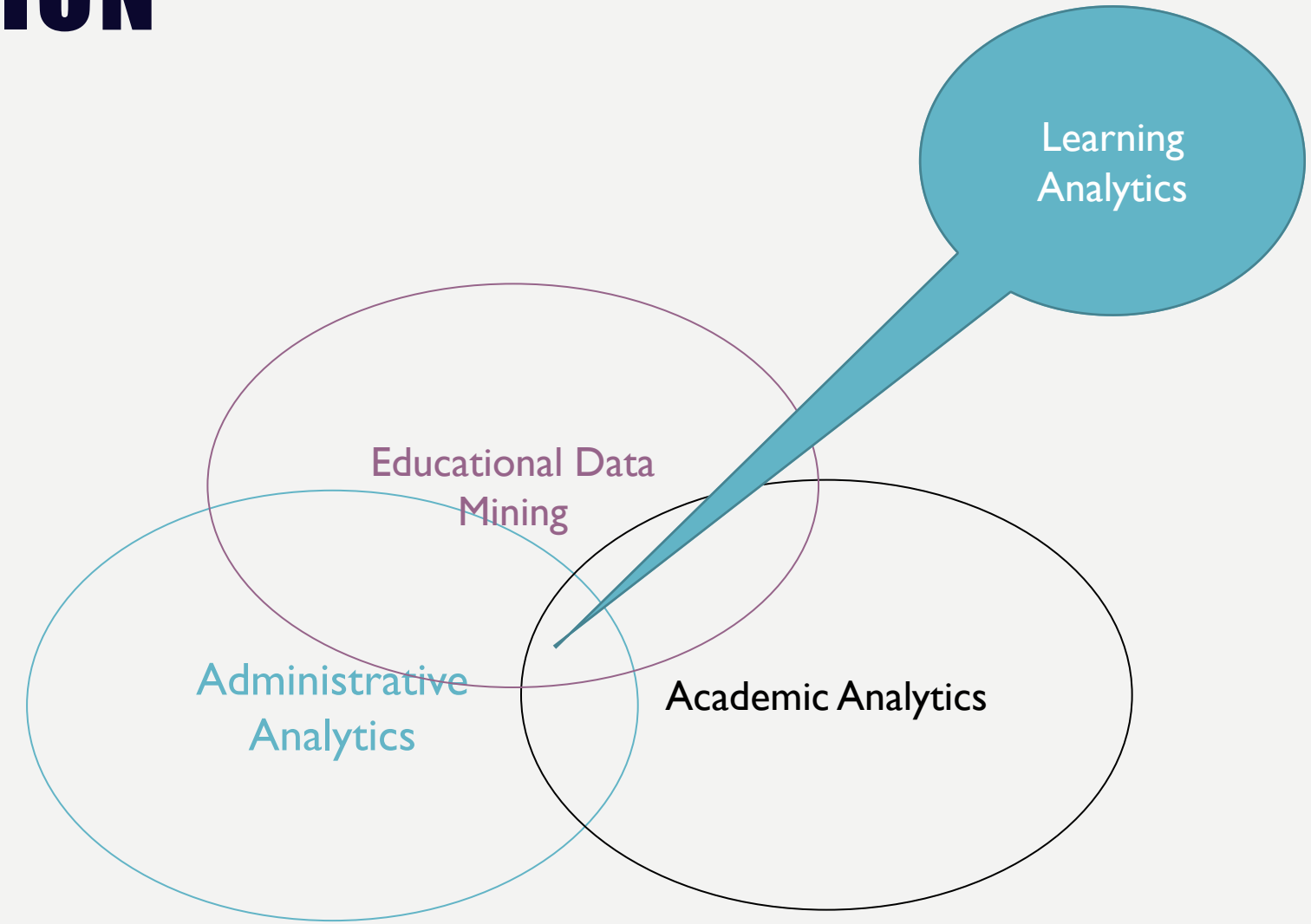


DATA PROLIFERATION

Proliferation of data is known as Analytics. It offers insights into the;

- Intricacies of using technology for instructional activities
- analyzing data to fine tune instructional activities

CATEGORIES OF ANALYTICS IN EDUCATION



EDUCATIONAL DATA MINING

Educational Data Mining

- guide the future academic progress of an institution of learning
- maximize campus resources
- Optimize subject curriculum renewal

ACADEMIC ANALYTICS

Academic analytics is institutional based

- Improvement and accountability
- Ranking (business mind in the university)
- teaching designs such as lesson plan and its effectiveness
- Predict and make decisions about students
- Policy making

LEARNERS ANALYTICS

Aim

measurement, collection, analysis, and reporting of data about learners and their contexts

Purpose

understanding and optimizing learning

Context

environment in which it occurs

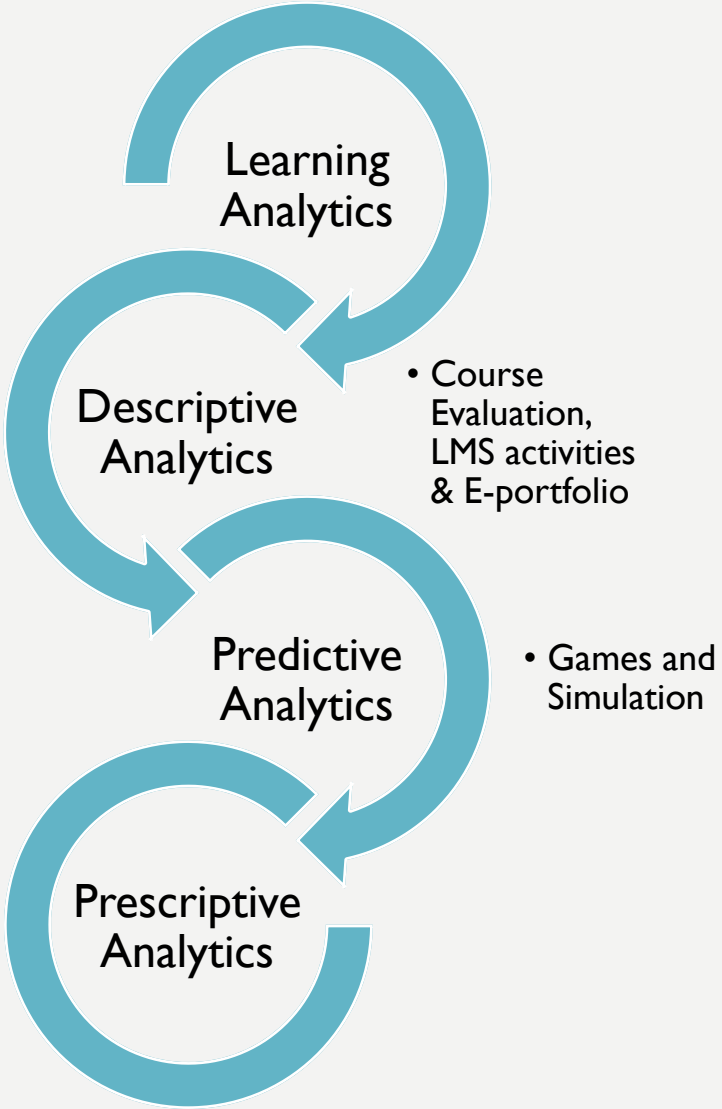
LEARNING ANALYTICS: BENEFITS IN EDUCATION

- Identifying target courses
- Curriculum improvement
- Student learning outcome, behavior, and process
- Personalized learning
- Improved instructors performance
- Post-educational employment

STEPS FOR LEARNING ANALYTICS

- Pre-Instructional Activities : good ground for instructional activities
- Instructional Activities
- Data Collection: formative and summative
- Data Processing and Storing: data Cleaning and reduction
- Analyzing: derivation of value for learning action
- Visualization: Graphical representation of data

LEARNING ANALYTICS FRAMEWORK



DESCRIPTIVE ANALYTICS

It allows instructors to make strategic decision on:

- teaching style for each students;
- Instructional activity;
- students engagements and interaction;
- lesson effectiveness; and
- Feed back

PREDICTIVE ANALYTICS

Predictive analytics offers insight on:

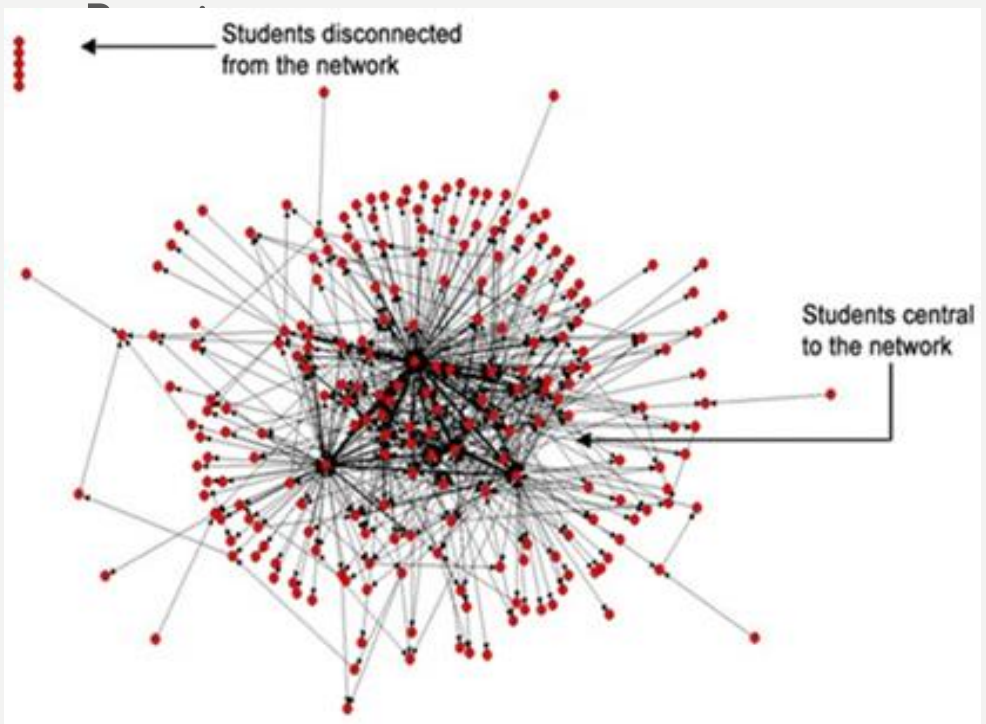
- students understanding of the course content and context;
- determine the performance level of the students;
- engagement level of the students
- determine students at risk
- students academic growth
- intervention and correct issues earlier

PRESCRIPTIVE ANALYTICS

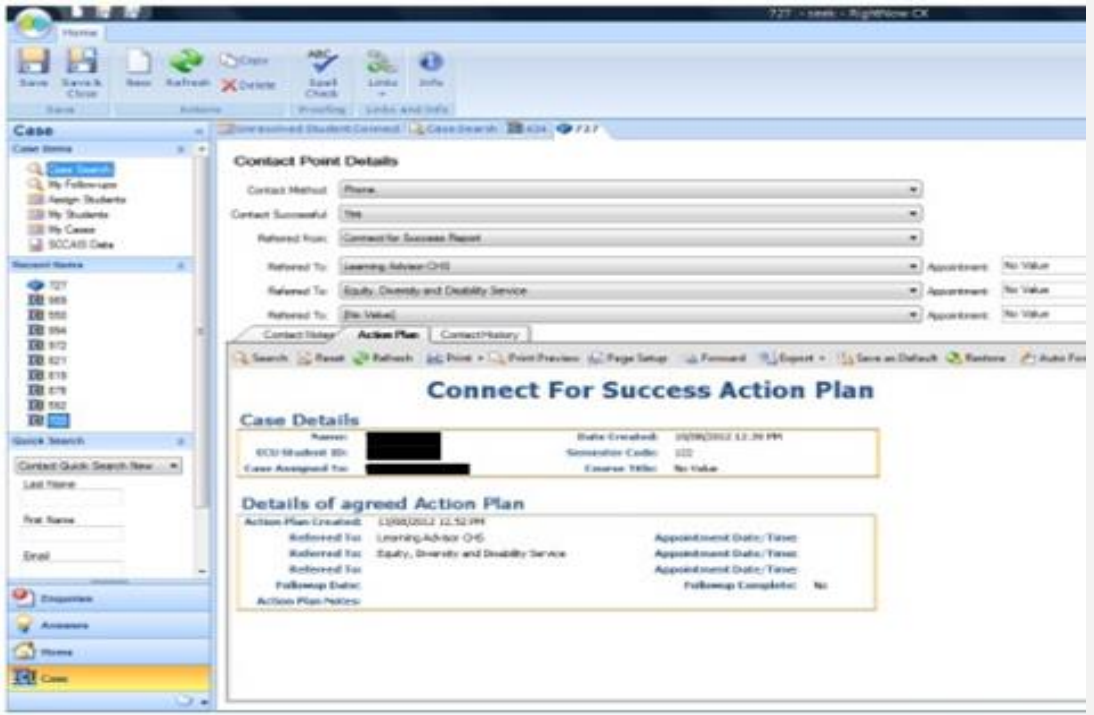
- It provides facilitators with actionable decisions;
- alternative suggestions to enhance instructional activities;
- use of different educational resources and tools; and
- adaptive instructional technique based on students performance

LEARNING ANALYTICS TOOLS

Social Networks Adapting Pedagogical



Connect for Success (C4S)



THE SOCIAL NETWORKS ADAPTING PEDAGOGICAL PRACTICE (SNAPP)

The tool generates visual representations (social network diagrams);

activity and patterns of behaviour on LMS;

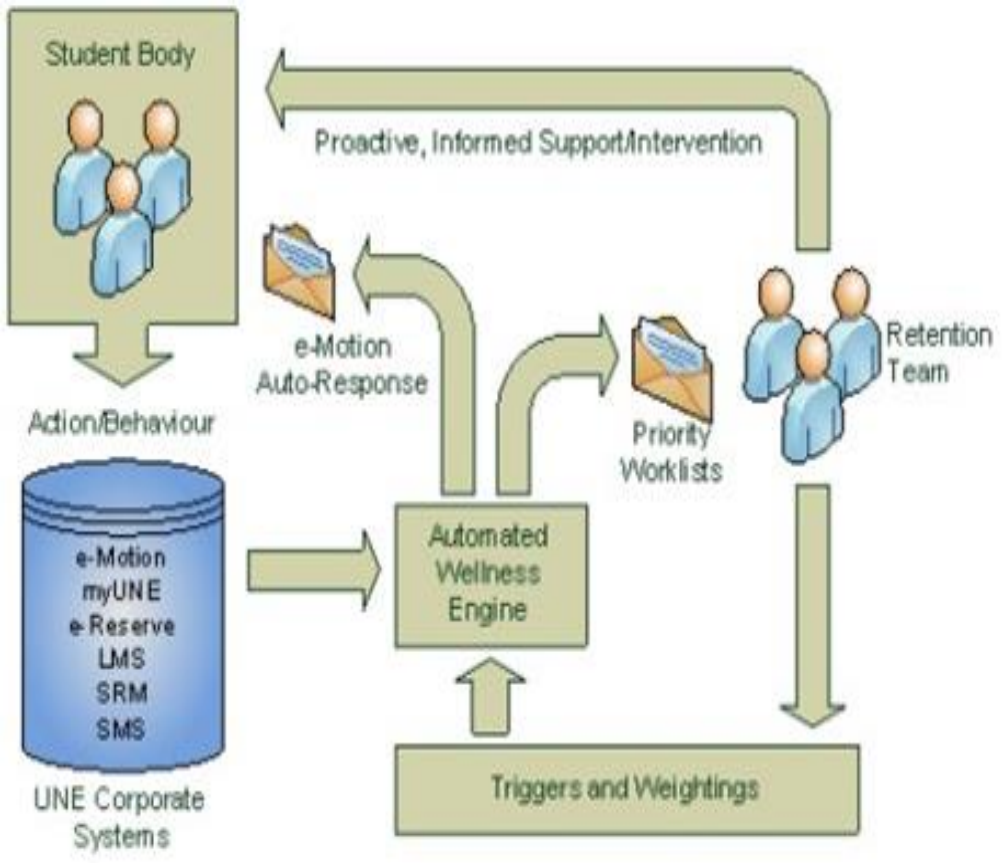
users' level of engagement; and

participation in comparison to other learners.

CONNECT FOR SUCCESS (C4S)

- the tool seeks to improve learner success;
- retention and graduation rates;
- extra support requirement; and
- Immediate referral

Automated Wellness Engine (AWE)



Personalized Adaptive Study Success(PASS)

AUTOMATED WELLNESS ENGINE (AWE)

- generates daily or weekly wellness reports
- reasons for withdrawal and wellness-happiness ratings

PERSONALISED ADAPTIVE STUDY SUCCESS (PASS)

performance levels,

self-assessment,

predictive course mastery,

highlight social interaction,

recommends content and activities and

provides a personalised environment.


THANK
YOU
return