Integrating Information Communication and Technology into Classroom in Higher Education

A Framework for Sustainable Academic Planning

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Sustainable Methodologies for Integrating ICT into Classroom in Higher Education

Learning Outcomes

Understand the importance of choosing a sustainable teaching and learning methods that effectively integrate ICT in a classroom environment .

Synthesise the aims of teaching and learning methods using ICT .

Evaluate a supportive learning environment.

Describe the ingredients of quality teaching and learning using ICT.

Objective

Choosing a sustainable teaching and learning methods that enhance the quality of student experiential learning

Effective Teaching and Learning Methods!

*Important **ingredient** in creating a course that **interest learners (students)** and keep them **engaged**.*

Global and Local Positioning of ICT

- **Globally, ICT has** *dramatically reshaped the teaching and learning processes.*
  - **It has become a tools for** *teaching, learning, curriculum and staff development etc* .

- **ICT usage in higher education (HE) of developing economy (DE) is more** *critical today than ever before.*
  - **Sadly, ICT advantages are often** *under-utilised in the DE* .

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Poor Adoptions of ICT in DE

Research suggested that ICT adoptions in HE of DE are *often poorly implemented* **due to** *unfounded optimism* **and** *serious obstacles*.

– *Regrettably, significant numbers of academia are still hesitant or reluctant to adopt ICT in their teaching tasks.*
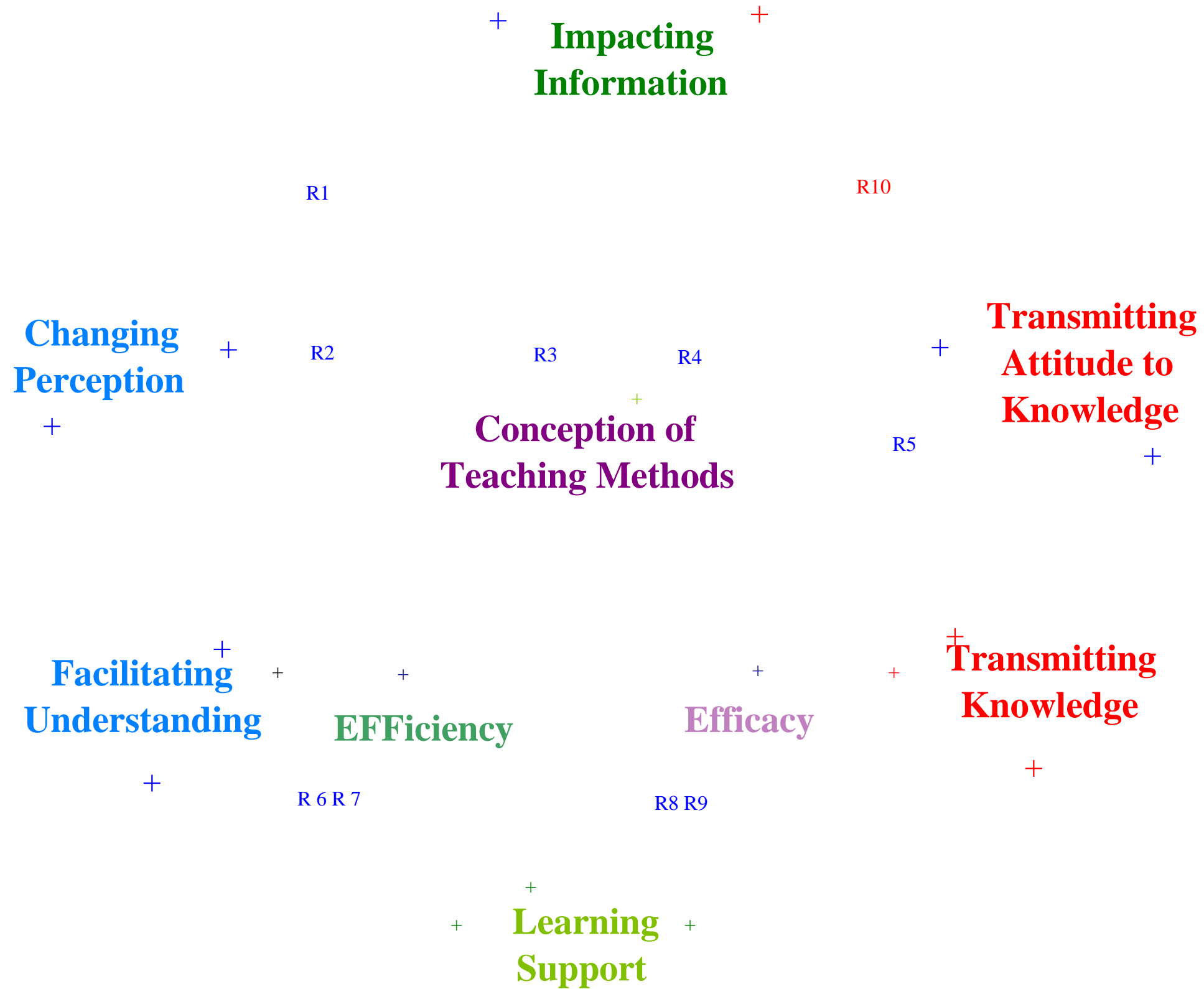
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The Dilemma

There are no *holistic solutions* to the *problems of ICT* adoption as is often seen as *a mere technical issue*.

Summary of Literatures

Author(s) and Dates	Research Focus	General Remarks
Ulmanisa and Denins (2012)	Describe a managerial model for ICT adoption. The authors propos ed a decision model based on objective (economic) and managerial (firms level factors) components using a survey of 500 busines ses in Latvia in 2008.	Perceived efficiency gains, technology abs orption capacity etc mediates the adoption of ICTs.
Bidarian et al (2011)	Discusses the entrance of ICT into educational field as a valuable chance for performing some modifications and innovations that would result in efficiency increase of education sys tems.	Betterment factors would enable decision makers to effect the required changes.
Vekiri (2010)	Describes an exploratory study of middle school information science in Greece and concluded that the study does not support the notion that boys have more positive ICT self-efficacy and value beliefs than girls.	Boys' and girls' beliefs are differentially affected by parents, teachers, and school IS instruction.
Al-Senaidi et al (2009)	Investigates the perceived barriers to adopting ICT in Omani Higher Education institution.	Faculty members perceived moderate barriers in application of ICT.
Su (2008)	Studied the performance of university students who learned s cience texts using ICT including animation, static figures, power point, and e-plus software.	Application of ICT multimedia will improve students ' performance.
Sutherland et al (2004)	Teams of teachers embedded ICT in everyday class room practices as a mechanism for enhancing learning.	It is important for young people to be able to work with both digital and non-digital tools.
Lim and Hang (2003)	ICT integration processes from socio-cultural and pedagogical perspectives.	Effective integration of ICT in a learning environment depends on the way ICT is situated.

Sustainable Conception of Teaching Methods

Impacting Information

R1

R10

Changing Perception

R2

R3

R4

Conception of Teaching Methods

Transmitting Attitude to Knowledge

R5

Facilitating Understanding

EFFiciency

Efficacy

Transmitting Knowledge

R 6 R 7

R8 R9

Learning Support

Aims of Teaching and Learning Methods

Disseminate knowledge to students

Develop students'

    capabilities to use ideas and information

    ability to test ideas and evidence

    ability to generate ideas and evidence

    capacity to plan and manage their own learning

Facilitate personal development of students

Methods of Knowledge Dissemination

Lectures/demonstrations

Worksheet/directed private study

Handouts

Develop skills in library and learning resources

Visits to gallery and museums

Knowledge Dissemination

Open learning materials

Assignment requiring up to date knowledge

Outside speakers

Up to date text books

Work shadowing/placements

Guided reading/book list

Internet/Intranets

Video and audio tapes

Giving /taking notes

Lectures - Teaching and Learning Methods (TLM)

Purpose – avenue for **subject-matter overview** and stimulation of interest rather than *dissemination of facts*.

Time Limit for Undergraduate Courses – **Fifty-minute** lectures followed by *in-class exercise* remains a favourable and sustainable method.
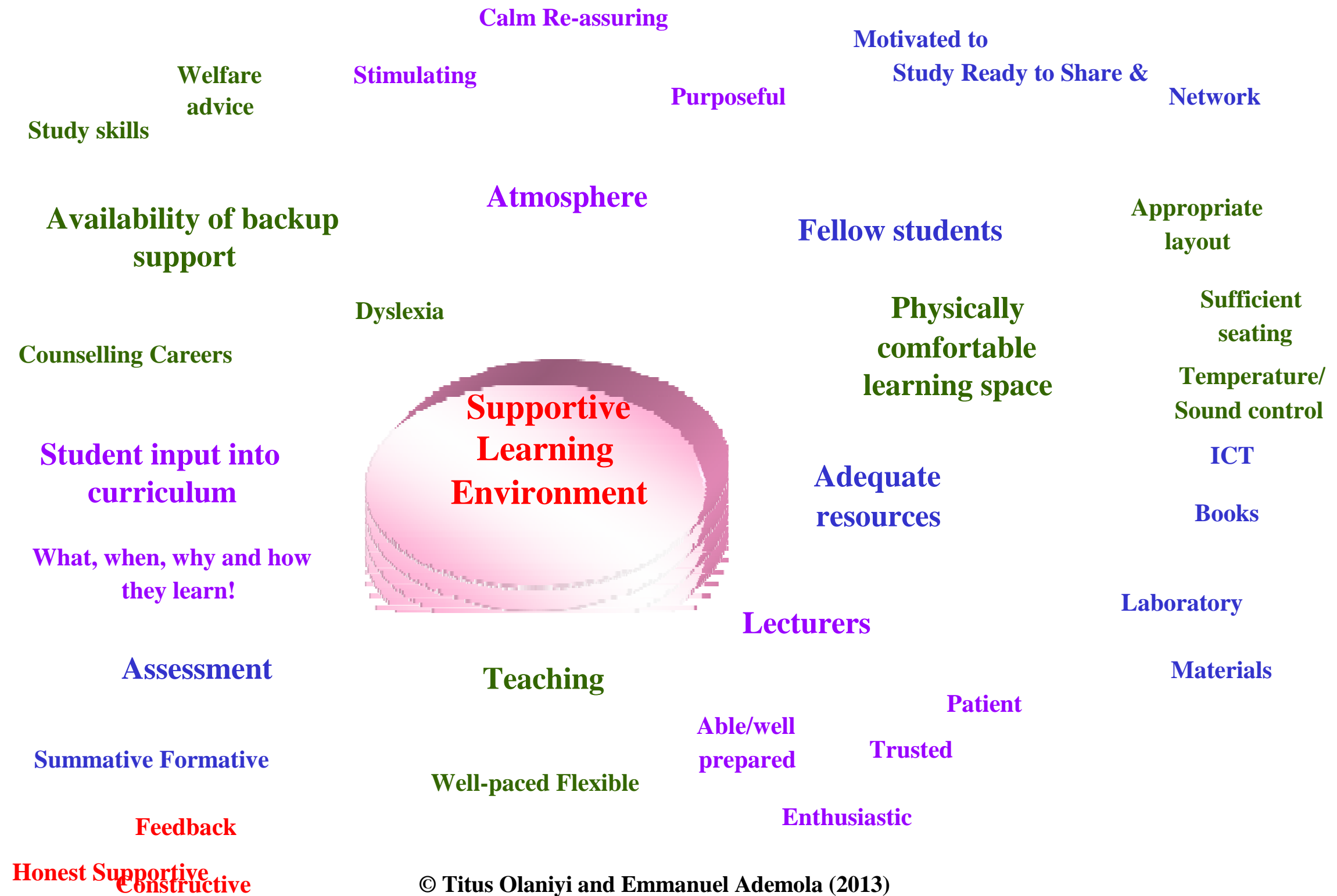
Tutorials and Seminars FLM

Purpose – avenue for clarity of objectives (learning outcomes) and reinforcement of the lecture themes in a less-structured environment.

- **Key Outcome**- is the main source of acquiring some of the 'personal transferable skills',e.g. in presentation and group work.

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Methods of Facilitating Personal Development

Peer/self assessments

Action planning/learning log

Profiling

Open learning/computer packages

Group projects – *time constraints*

Personal Development

Role play

Structured experience in groups

Learning contracts

Study/self help groups

Reflective documents

Time management exercises

Giving feedback

Teaching revision/exam techniques

Provision of clear criteria

Supportive Learning Environment

Calm Re-assuring

Welfare advice

Stimulating

Motivated to Study Ready to Share &

Purposeful

Network

Study skills

Atmosphere

Availability of backup support

Fellow students

Appropriate layout

Dyslexia

Physically comfortable learning space

Sufficient seating

Counselling Careers

Supportive Learning Environment

Temperature/ Sound control

ICT

Student input into curriculum

Adequate resources

Books

What, when, why and how they learn!

Lecturers

Laboratory

Assessment

Teaching

Materials

Patient

Summative Formative

Able/well prepared

Trusted

Well-paced Flexible

Enthusiastic

Feedback

Honest Supportive Constructive

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Ingredients of Quality Teaching and Learning

Clear Objectives - stated in u nit guides, lecture summaries etc (to avoid being forgotten)

Clear Overhead Acetates or Lecture Slides

Paced Delivery - the larger the class and/or the more difficult the material the slower the pace

Appropriate Handouts – for complex diagrams, difficult or critical text.

Question and Answer Sessions – at agreed times and places after the lectures

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State of Art!

- **There is urgent need to provide proactive institutional support, technical training, and time to faculty members.**

- **E-learning is becoming an effective mechanism of delivering educational materials; technology awareness, motivation, and changing learners' behaviour.**

- **Nigerian students must develop their ICT abilities in an integrative teaching and learning environment.**

  - *Regrettably, many institutions in Nigeria have invested heavily in the use of ICT but its benefits are yet to be manifested.*

Way Forward - 1!

- **Effective integration of ICT will depends larger social cultural environment.**

- **No tool is good or bad in itself; its effectiveness utilisation depends on the context of which it is been used.**

- **ICT will facilitate improved students' knowledge and promotes a positive attitude toward learning.**

- **There is urgent need to provide proactive institutional support, technical training, and time to faculty members to learn and upgrade their knowledge and skills in ICT usage.**

Way Forward – 2!

- **The process of choosing a sustainable teaching and learning methods should not be a passive process.**
  - *hence the need for holistic approach in acquiring sustainable ICT technologies.*

- **Academic communities are expected to provide additional ICT skills.**
  - *given the complex dynamics of the job market and increasing demand by employers to recruit multi-tasking candidates.*

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Conclusions 1 – *Integrating ICT in Higher Education Classrooms*

Various methodological approaches such as worksheet and self-directed private study, ICT produced handouts , e-books, internet and intranet, open learning materials, learning resource centres are essential part of modern teaching and learning.

Conclusions 2 – *Integrating ICT in Higher Education Classrooms*

Personal development and creation of supportive learning environment adequacy of resources (*ICT, e-books, laboratory*), lecturers (*able, enthusiastic, trusted and patient*), appropriate assessment and feedback, students and industry input into curriculum development , availability of backup support services amongst others should be made available for integrative learning and development.

Thank you !