

AN URGENT NEED FOR PHARMACEUTICAL EDUCATION REFORM IN LIBYA

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According to the available evidence from quality research

- **Pharmacists have shown to:**
 - Positively influence morbidity and mortality,
 - Reduce medication errors,
 - Enhance quality use of medicines, and
 - Increase access of the general public to medicines

In addition:

- **Medicines are:**
 - Costly,
 - Internationally abundant (hard to select from)
 - Dangerous commodities that can inflict harm.

Therefore:

- Pharmacists need to acquire the **appropriate** basic knowledge and skills from tertiary education institutions on all aspects of development, selection and use of medicines.



SKILLS

etwinning

students

learning

language

develop

teachers

thinking

project

ICT

tools

pupils

successfully

together

Multiple across

theory

aims

Children

work

trailer

sing

main

Developing

use

creative education

help

organizational

Intelligences

cooperation

critical

collaboration

important

passing

Gardner

think responsible

play

EU

etc

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efficiently

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make

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Multiple across

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Thanks

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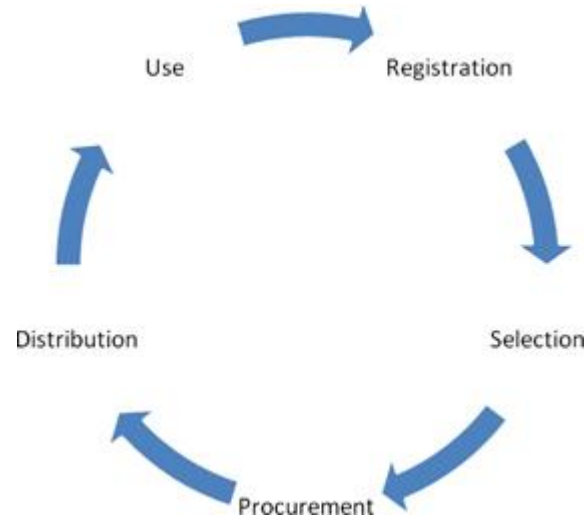
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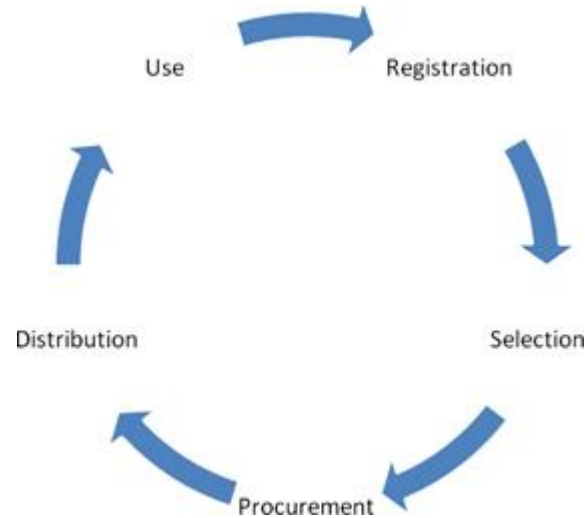
Medicines Management Cycle



The Libyan Pharmaceutical Sector

- According to the WHO the Libyan pharmaceutical sector is highly flawed and requires urgent reform.

Medicines Management Cycle



The Libyan problem

- The WHO has identified inadequate tertiary education systems as one of the main challenges that face the development of the Libyan healthcare system (particularly outdated curricula).

The Libyan problem

- Pharmaceutical education curricula are:
 - Outdated,
 - Oversized with unnecessary extra information.

The Libyan problem

- No national Libyan standards for pharmaceutical education (including curricular standards) exist despite the availability of a **general** national accreditation body for higher education.

The Libyan Problem

- However, the national accreditation body
Lacks independence and is governed by the
same ministry that governs higher education.

The Libyan problem

- In addition, no quality regional curricular standards for pharmaceutical education exist.

Our benchmark

- WHO recommendations for curricular standards of the tertiary pharmaceutical education.
- Available international curricular standards for tertiary pharmaceutical education.

The WHO has identified the recommended quality of a pharmacy graduate:

- ***The 7 star pharmacist***

1. * Caregiver
2. * Communicator
3. * Manager
4. * Life-long-learner
5. * Teacher
6. * Leader
7. * Researcher



MELISSA G. STREBLOW

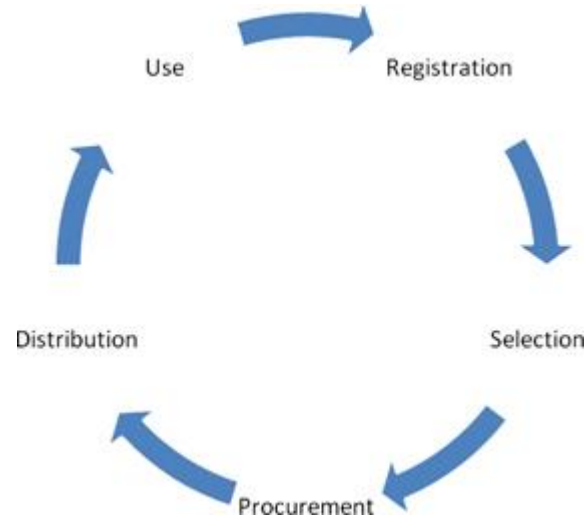
International standards for pharmaceutical education

- Are in line with the WHO recommendations.
- Cover all aspects of knowledge and skills required for a pharmacist:
 - General (professional) knowledge and skills.
 - Practice oriented knowledge and skills

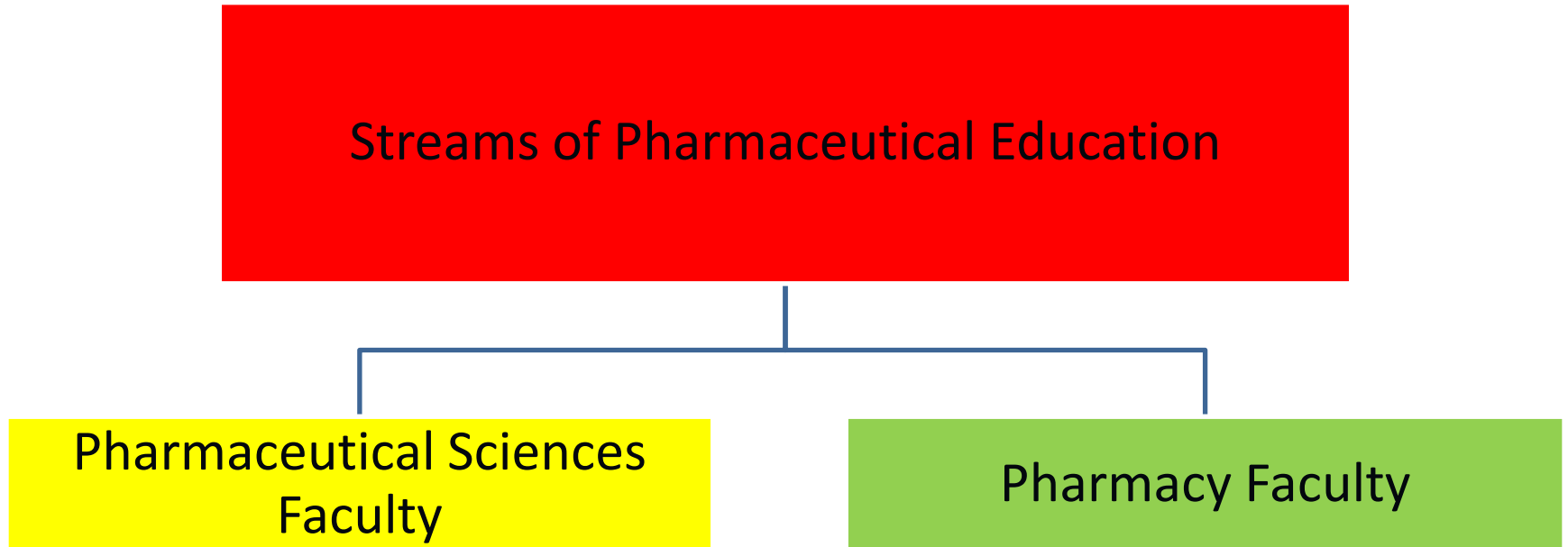
A word cloud visualization centered around the theme of 'SKILLS'. The largest word is 'SKILLS' in a dark green font at the bottom center. Other prominent words include 'students', 'learning', 'etwinning', 'teachers', 'project', 'develop', and 'language'. The words are scattered across the image, with colors ranging from dark green to dark red. The background is white.



Medicines Management Cycle

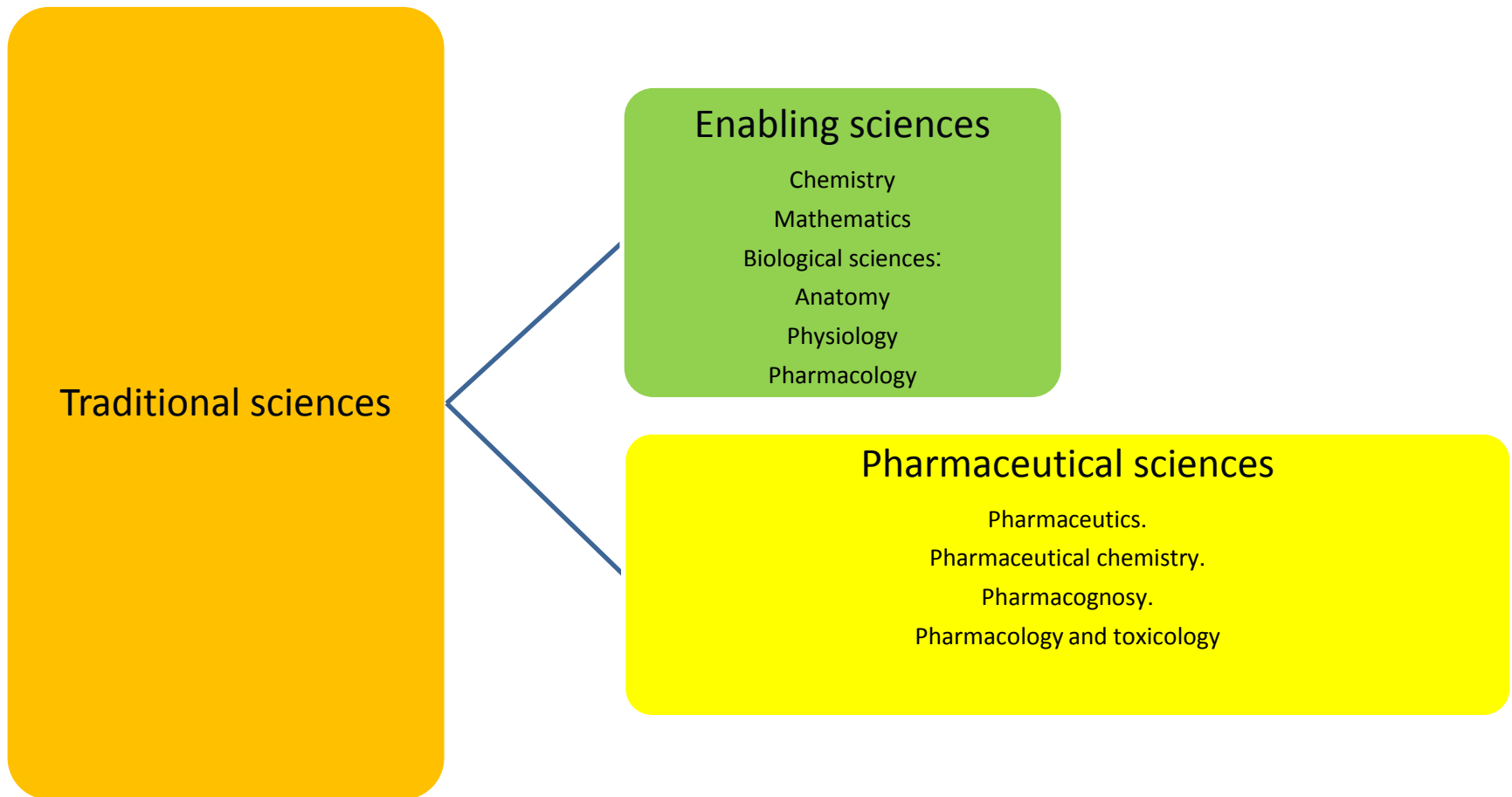


International Streams of Pharmaceutical Education



Pharmaceutical Sciences Faculty

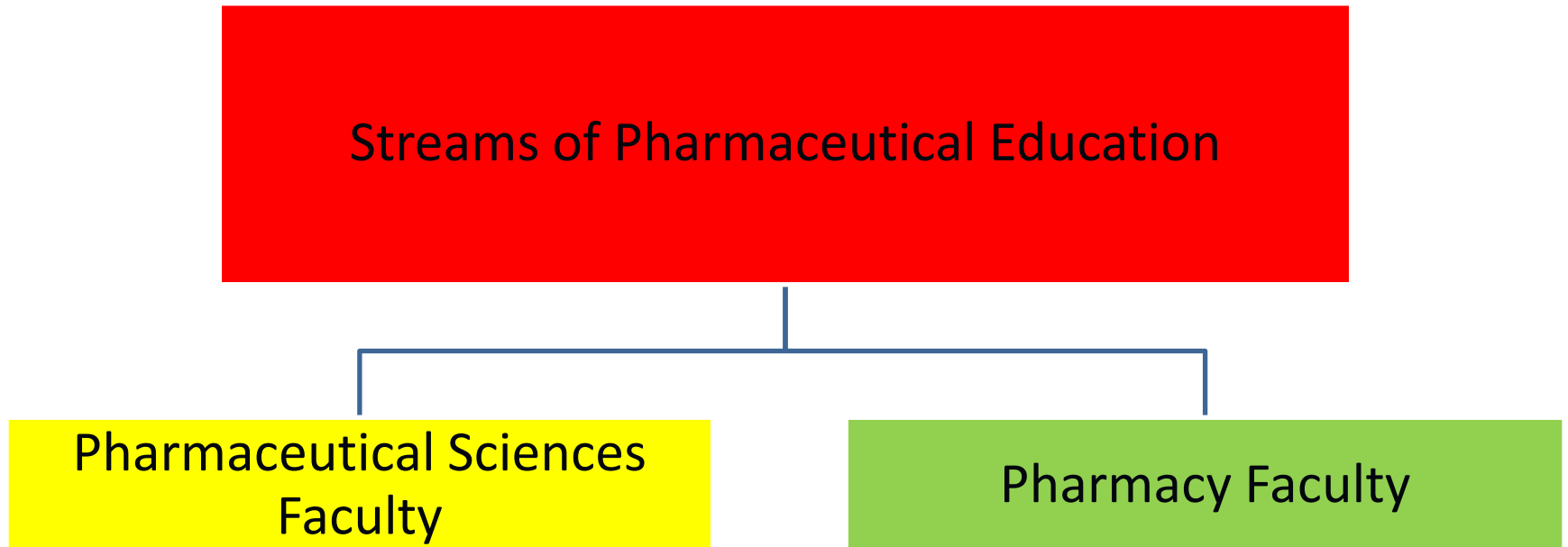
(Laboratory and Pharmaceutical industry based education)



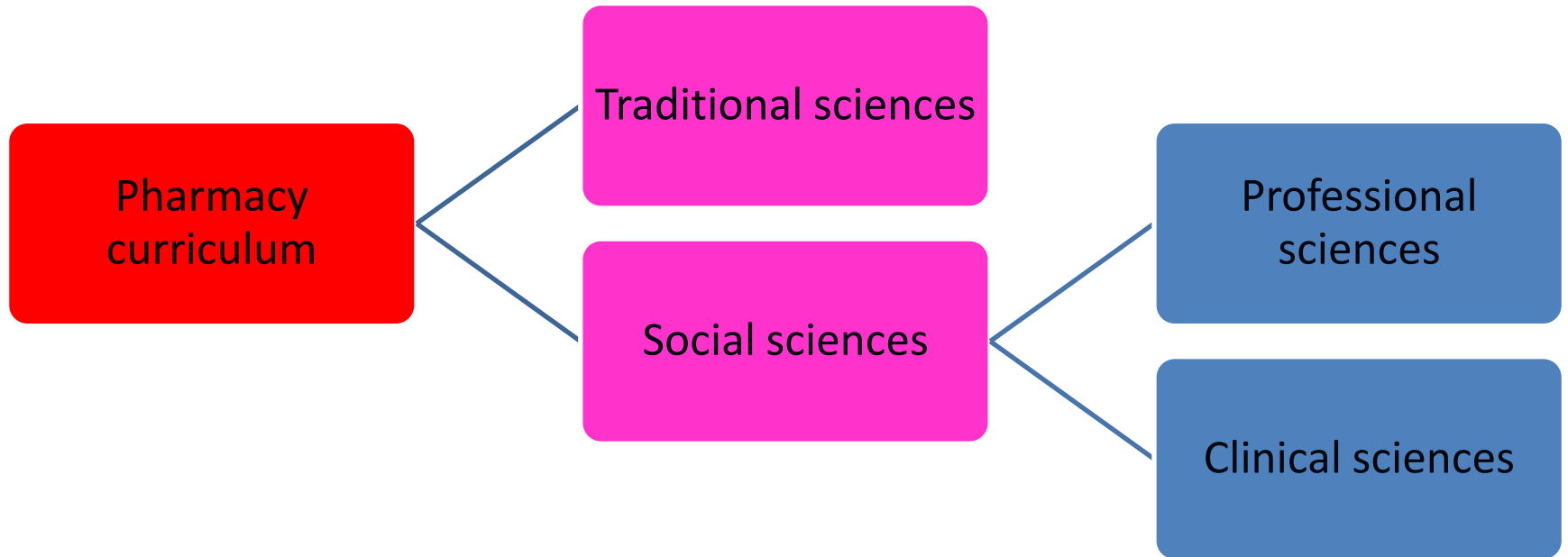
Faculty of Pharmaceutical sciences

- Graduates are **pharmaceutical scientists** (not pharmacists) with knowledge and skills directed at laboratory-based pharmaceutical research and development.

International Streams of Pharmaceutical Education



Pharmacy practice Faculty



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graph LR; A[Social sciences] --- B[Professional sciences:]; A --- C[Clinical sciences:]; B --- B1[- Evidence-based practice]; B --- B2[- Epidemiology]; B --- B3[- Critical appraisal of medical literature]; C --- C1[- Pharmacotherapy]; C --- C2[- Practice-based Placements];
```

Social sciences

Professional sciences:

- Evidence-based practice
- Epidemiology
- Critical appraisal of medical literature

Clinical sciences:

- Pharmacotherapy
- Practice-based Placements

Pharmacy practice Faculty

- graduates are **Pharmacists** with knowledge and skills directed at rational selection and use of medicines (an essential need for any contemporary healthcare provision).

Pharmacy practice Faculty

- Graduates of this type of faculty are qualified to practice pharmacy in all settings where medicines are selected, prescribed or used (in community, hospital or government settings).

The Libyan Problem

- Type of faculty available is:

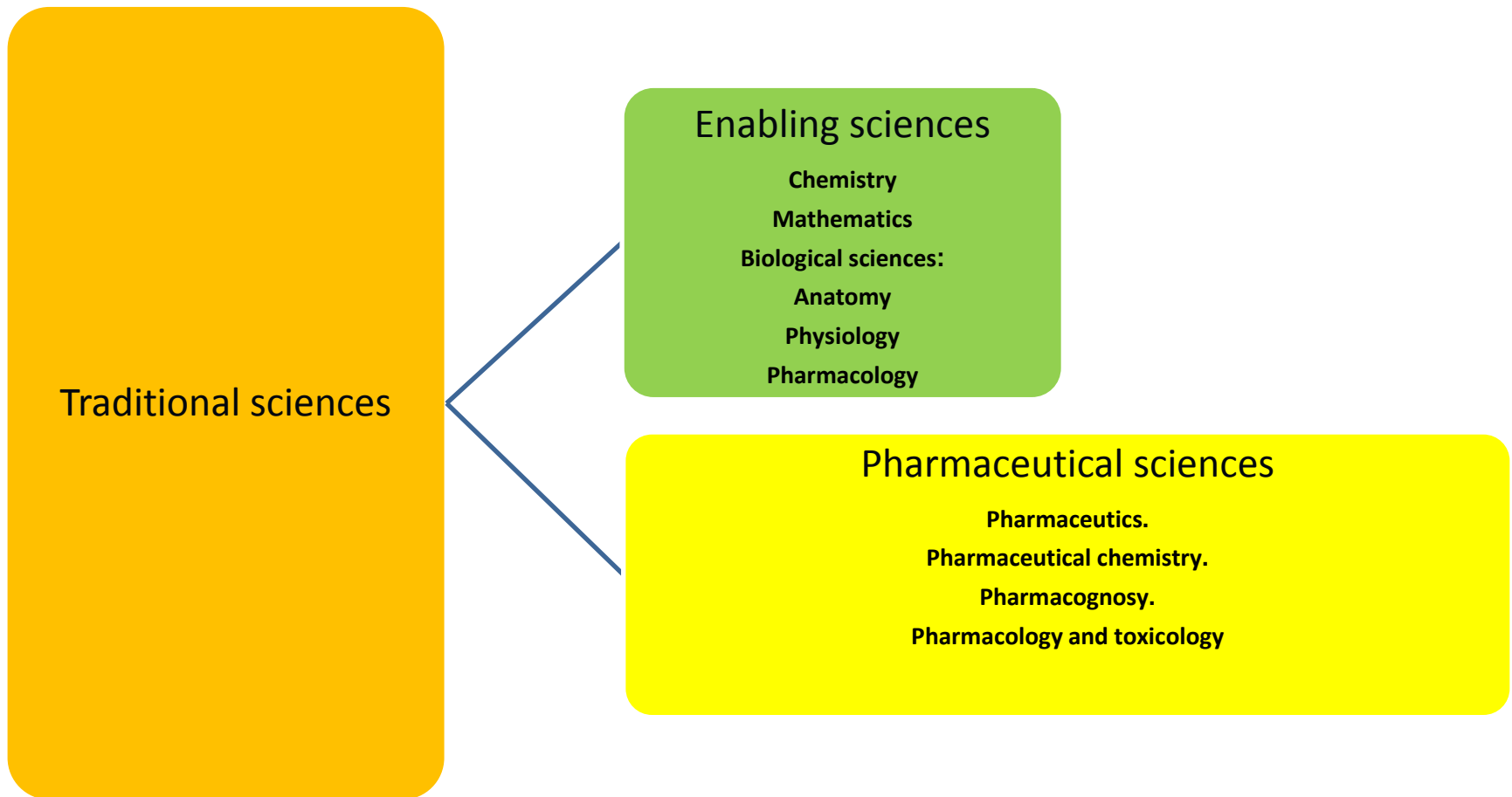
Pharmaceutical science.

The Libyan Problem

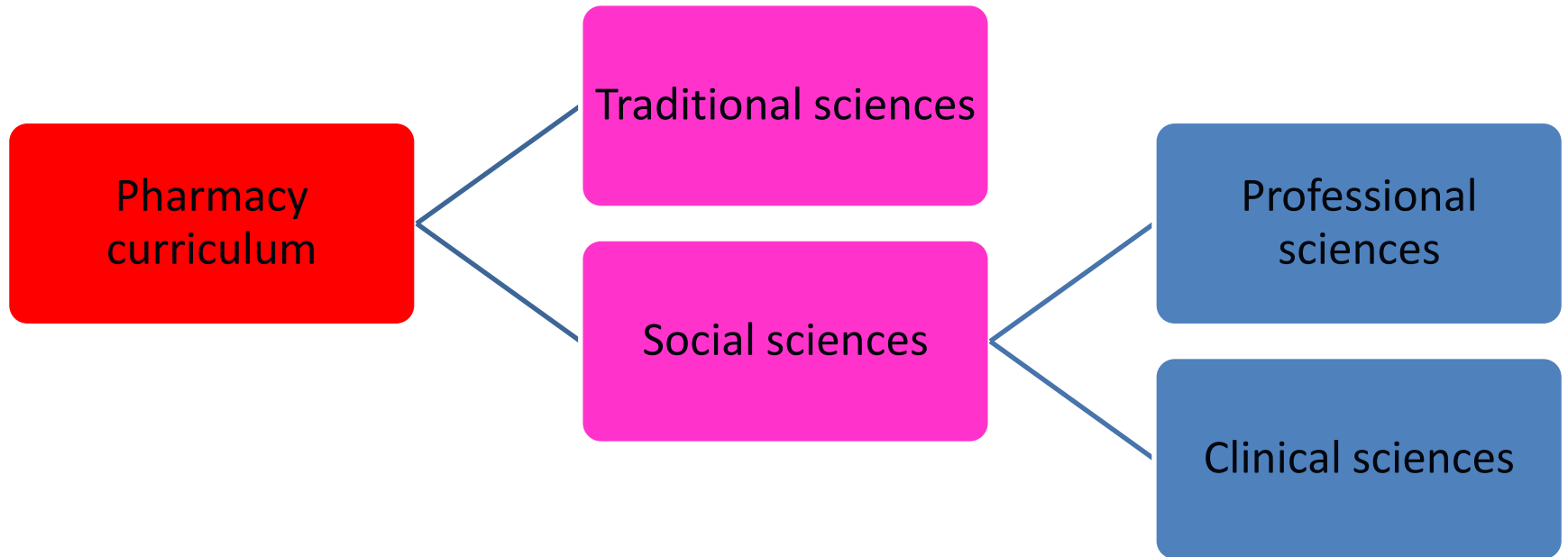
- Graduates practice pharmacy as **pharmacists** despite they are **missing** an essential curricular aspect of faculty education.

Pharmaceutical Sciences Faculty

(Laboratory and Pharmaceutical industry based education)



Pharmacy practice Faculty



Social sciences

Professional sciences:

- Evidence-based practice
- Epidemiology
- Critical appraisal of medical literature

Clinical sciences:

- Pharmacotherapy
- Practice-based Placements

Pharmaceutical Sciences Faculty (Laboratory and pharmaceutical industry based education)

Interestingly, no Pharmaceutical Industry exists in Libya for the
Pharmaceutical Sciences faculty graduates to practice the
knowledge they acquired

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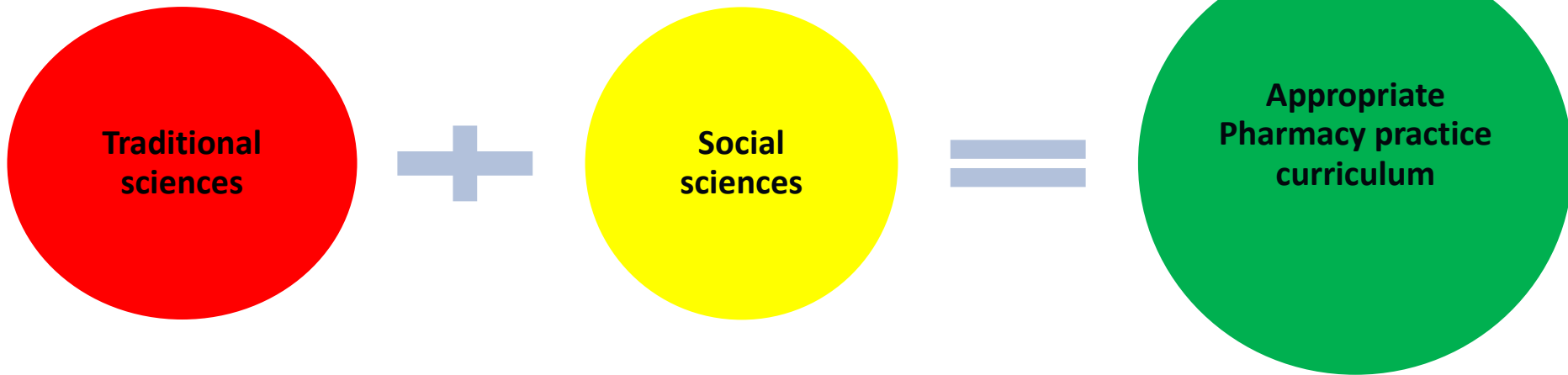
Pharmaceutical Sciences Faculty

(Laboratory and pharmaceutical industry based education)

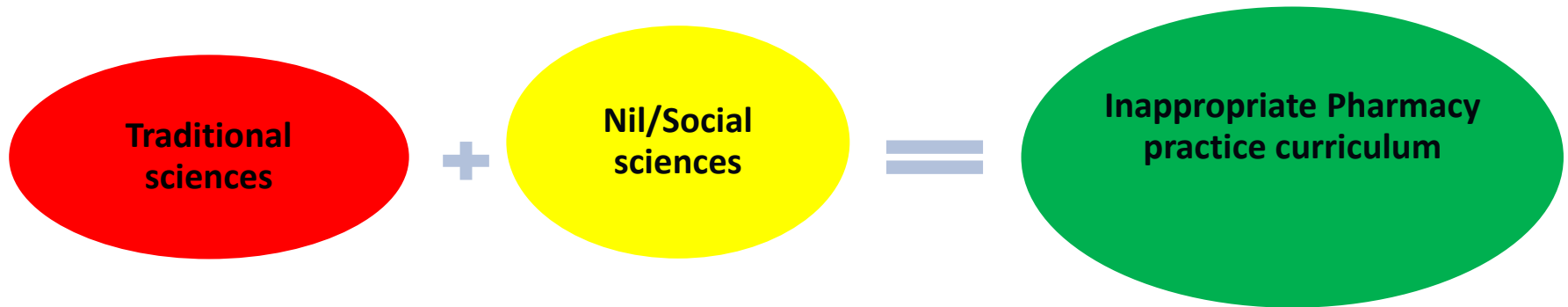
Moreover, graduates of the Pharmaceutical Sciences faculty practice pharmacy in the Libyan healthcare system without any previous educational exposure to an appropriate pharmacy curriculum

!!

Pharmacy Faculty



The Libyan Problem



Ramifications of the Libyan Problem

- Undertraining of pharmacists resulted in poor quality of pharmaceutical services despite the high expenditure on the pharmaceutical sector and on public tertiary pharmaceutical education.

The solution

- Transformation of pharmaceutical education curricula in line with WHO recommendations and quality international standards.

A red oval button with a silver border. The word "easy" is written in white, lowercase, sans-serif font, slanted upwards from left to right.

easy

However

Observed problems

- Resistance of curricular change by old faculty members.
- Extreme shortage of Libyan national (and regional) faculty members who are specialized in pharmacy.

Conclusion

- In the Libyan case, curricular flaws are well identified, therefore, an urgent pharmaceutical education curricular reform is needed.

Conclusion

- We recommend formulation of a collaborative taskforce (national + international members) in order to establish sound and quality foundation for curricular change.

Conclusion

- Quality curricular standards are cornerstones in teaching and learning process.

What about teaching and learning methodologies?

- Well constructed curricula will facilitate a meaningful application of contemporary teaching and learning methodologies.

THANK
YOU!

