بسم الله الرحمن الرحيم

Supervising Postgraduate Students- impact on the productivity and excellence of faculty/university

Arjumand Warsy

aswarsy@ksu.edu.sa

LECTURE OUTLINE

SUPERVISING POSTGRADUATE STUDENTS-IMPACT ON THE PRODUCTIVITY AND EXCELLENCE OF FACULTY/UNIVERSITY

- Productivity and Excellence in a Faculty/University
- How is the excellence of a University evaluated?
- University Ranking
- Role of Post Graduates in elevating excellence in a University
- Post-graduate teaching and supervision
- Role of a good supervisor
- How?
- Drawbacks of poor supervision

"Productivity"

- **Productivity:** A term used from the industrial age." A measure of the efficiency of a person, machine"

- i.e. high rate of output.

    In our topic it implies: "increase in the number of postgraduates who have the capability to be employed by the University as faculty".

"EXCELLENCE"

- "The quality of being outstanding or extremely good".

- Quantifiable factors or performance indicators.

- It expresses excellent practice, or simple 'quality metrics' which summarize the various manifestations of excellence in the activities at the Universities.

- It is evaluated against agreed standards that apply across the range of different academic disciplines and different types of institutions.

- Universities are expected to demonstrate good practice in a range of different areas.

MEASURE OF UNIVERSITY EXCELLENCE

- During the past few years, higher education institutions (Universities) have discovered the concept of excellence.
- "Ranking" of the University has stimulated the concept of Excellence.
- "Ranking" leads to enhancement in quality.
- Excellence cannot be achieved easily and quickly.
- To reach excellence much work is needed

THE POSITION OF A UNIVERSITY AMONG THOUSANDS OF GLOBAL UNIVERSITIES---BY RANKING

UNIVERSITY RANKING

- Universities and colleges are ranked according to their position amongst World Universities, or local Universities
- **'Rankings'** of institutions in higher education is obtained by various combinations of different factors.
- 'Ranking' of a University in World Universities is published annually
- Different 'rankings' use a combination of different parameters:
  - funding and endowment,
  - research excellence and/or influence,
  - specialization expertise,
  - admissions,
  - student options,
  - award numbers,
  - internationalization,
  - graduate employment,
  - industrial linkage,
  - historical reputation and
  - other criteria.
- **Rankings** have most often been conducted by magazines, newspapers, websites, governments, or academics.
- Rankings mostly evaluating on institutional output by research

MANY ORGANIZERS CONDUCT GLOBAL RANKINGS OF UNIVERSITIES USING SET CRITERIA

- Academic Ranking of World Universities
- Center for World University Rankings
- Eduniversal
- G-factor
- Global University Ranking
- HEEACT—Ranking of Scientific Papers
- Human Resources & Labor Review
- High Impact Universities: Research Performance Index
- Leiden Ranking
- Nature Index
- Newsweek
- Professional Ranking of World Universities
- QS World University Rankings
- Reuters World's Top 100 Innovative Universities
- Round University Ranking
- SCImago Institutions Rankings
- Times Higher Education World University Rankings
- U-Multirank
- UniRanks "The Ranking of Rankings"
- University Ranking by Academic Performance
- U.S. News & World Report's Best Global Universities Rankings
- Webometrics
- Wuhan University
- Several others

MOST INFLUENTIAL GLOBAL RANKINGS

- Several organizations produce worldwide university rankings.

- Three of the longest established and most influential global rankings are those produced by
  - Shanghai Ranking Consultancy (the Academic Ranking of World Universities; ARWU),
  - Times Higher Education (THE) and
  - Quacquarelli Symonds (QS).

REGIONAL AND NATIONAL RANKINGS

e.g.

- Asia
- Europe
- North America
- Oceania
- South America

العربية

KSU News
King Saud University
جامعة الملك سعود

Search

ADMIN› COLLEGES› EVENTS› MEDICAL CITY› INTERNATIONAL› PATENTS & INVENTIONS› RESEARCH› STUDENTS› SAUDI ARABIA›

Shanghai Rankings lists King Saud University among world's top 400

Main, University Rankings

Monday 1431/09/06 on 2010/08/16

Earlier this week, the Institute of Higher Education of Shanghai Jiao Tong University unveiled the 2010 Academic Ranking of World Universities (ARWU), which lists King Saud University (KSU) as one of the top 400 universities in the world.

Over the past few years, Saudi Arabian universities have made remarkable gains in the ARWU, which announces new rankings annually, with King Saud University arguably establishing itself as the Kingdom's premier institute of higher education. Not only did ARWU rank KSU highest in Saudi Arabia, but the top university in the Middle East. Saudi Arabia's King Fahd University of Petroleum and Minerals was ranked in the grouping just below King Saud.

STICKY NEWS

KSU Professor Delivers Invited Lecture at Information Security Forum

Up Coming Research Event at King Saud University

Home | About ⌄ | Rankings ⌄ | Survey ⌄ | Universities | GRUP | Initiative ⌄ | Conference | Study in China | Advertise with Us ⌄

Home>> ARWU 2017

2017 2016 2015 2014 2013 2012 2011 2010 2009 2008 2007 2006 2005 2004 2003

Academic Ranking of World Universities 2017

Top 500 | 501-800 | Methodology | Statistics

World Rank	Institution*	By location All ▼	National Rank	Total Score	Score on Alumni ▼
1	Harvard University	🇺🇸	1	100.0	100.0
2	Stanford University	🇺🇸	2	76.5	44.5
3	University of Cambridge	🇬🇧	1	70.9	81.4
4	Massachusetts Institute of Technology (MIT)	🇺🇸	3	70.4	68.7
5	University of California, Berkeley	🇺🇸	4	69.1	64.4
6	Princeton University	🇺🇸	5	61.1	54.4
7	University of Oxford	🇬🇧	2	60.1	50.8
8	Columbia University	🇺🇸	6	58.8	62.8
9	California Institute of Technology	🇺🇸	7	57.3	50.5
10	University of Chicago	🇺🇸	8	53.9	59.2
101-150	King Abdulaziz University	🇸🇦	1-2		0.0
101-150	King Saud University	🇸🇦	1-2		0.0

Academic Ranking of World Universities 2017

Saudi Arabia 🇸🇦

Country Rank	Institution	World Rank
1-2	King Abdulaziz University	101-150
1-2	King Saud University	101-150
3	King Abdullah University of Science and Technology	201-300
4	King Fahd University of Petroleum & Minerals	401-500
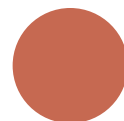
PERFORMANCE OF KSU

Performance in Academic Ranking of World Universities
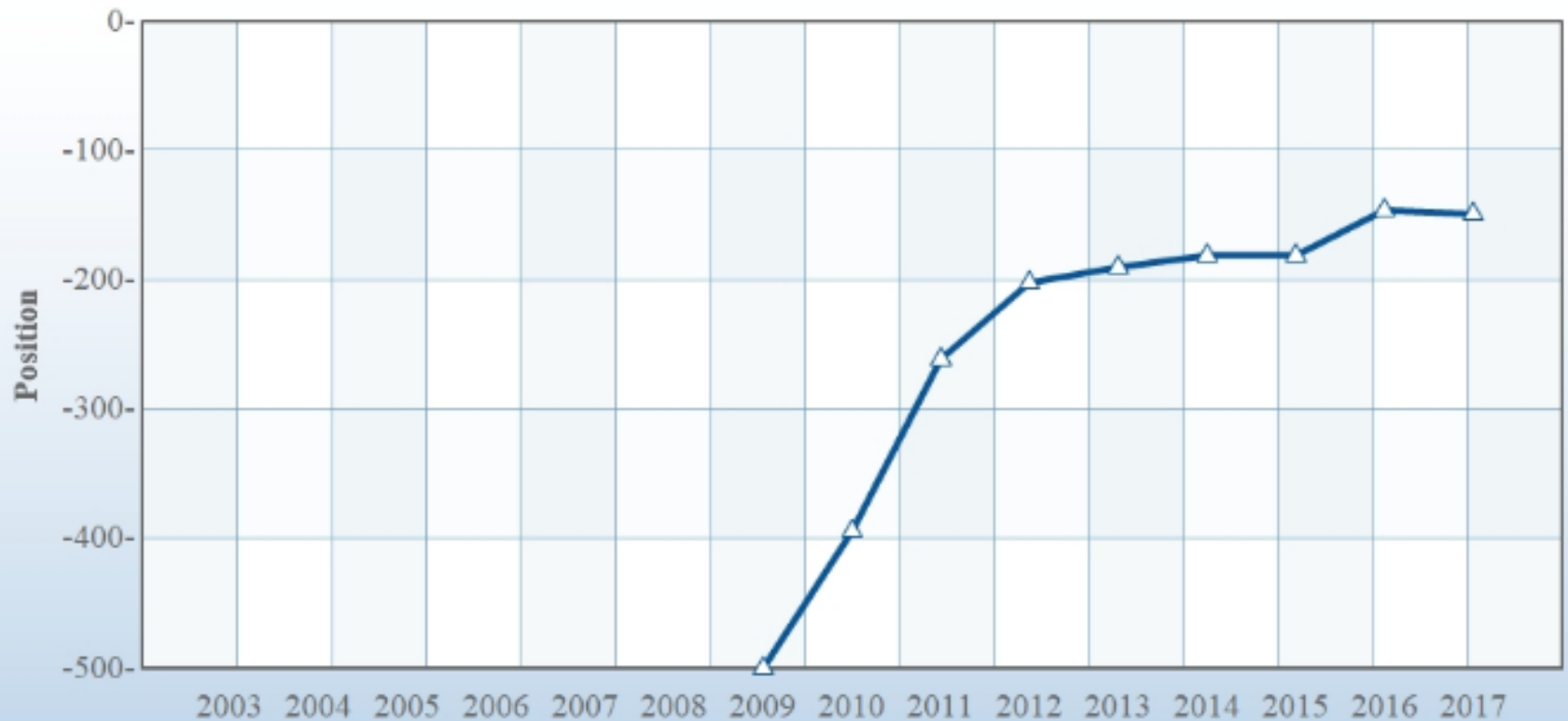
ARWU	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Institutional Ranking	/	/	/	/	/	/	402-501	301-400	201-300	201-300	151-200	151-200	151-200	101-150	101-150

PARAMETERS USED IN GLOBAL UNIVERSITY RANKING

- Academic performance,
- Research performance,
- Faculty expertise,
- Resource availability,
- Socially significant activities of graduates,
- International activities, and
- International opinion

CENTER FOR WORLD UNIVERSITY RANKINGS

RANKINGS ARE BASED ON:

- Quality of education, Student to staff ratio
- Alumni employment,
- Quality of faculty,
- Number of publications,
- Number of publications in high-quality journals,
- Citations,
- Scientific impact and
- Number of patents

impact of **scientific** research upon human society

SPECIALS

▶ See all specials

Journal home	Subscribe
Current issue	E-alert sign up
For authors	RSS feed

Science jobs   Science events

natureevents directory

IBS - Conference on Climate Change and Human Migration
27 November 2017 — 01 December 2017
Korea, Republic of

Biopharma Innovation Cup 2018
16 July 2018 — 24 July 2018
Frankfurt, Germany

Asia Pacific Vascular Biology Organization Conference
17 November 2017 — 20 November 2017
Pearl River New City, Tianhe District, Guangzhou, China

Post a free event ▸ | More science events ▸

IMPACT: THE SEARCH FOR THE SCIENCE THAT MATTERS

Every government and organization that funds research wants to support science that makes a difference — by opening up new academic vistas, stimulating innovation, influencing public policies or directly improving people's lives. But separating the best from the rest has never been harder. This *Nature* special issue examines, through journalism and comment, how the impact of research is traced and measured — and asks whether today's evaluation systems elevate the most influential science.

- <u>**Research that matters**</u>
  - **Opens new academic vistas (ideas/views)**
  - **Stimulate innovation**
  - **Influence public policies**
  - **Improve peoples lives**

# Indicators and their Weight used in shanshai ranking (Academic Ranking of World Universities)

Indicators and Weights for ARWU

Criteria	Indicator	Code	Weight
Quality of Education	Alumni of an institution winning Nobel Prizes and Fields Medals	Alumni	10%
Quality of Faculty	Staff of an institution winning Nobel Prizes and Fields Medals	Award	20%
	Highly cited researchers in 21 broad subject categories	HiCi	20%
Research Output	Papers published in Nature and Science*	N&S	20%
	Papers indexed in Science Citation Index-expanded and Social Science Citation Index	PUB	20%
Per Capita Performance	Per capita academic performance of an institution	PCP	10%
Total			100%

* For institutions specialized in humanities and social sciences such as London School of Economics, N&S is not considered, and the weight of N&S is relocated to other indicators.

○ http://www.shanghairanking.com/ARWU-Methodology-2011.html

IN CONCLUSION, FACULTY PLAY AN ESSENTIAL ROLE IN HELPING A UNIVERSITY TO ACHIEVE EXCELLENCE.

SUPERVISING POSTGRADUATE STUDENTS-

IMPACT ON THE PRODUCTIVITY AND EXCELLENCE OF FACULTY/UNIVERSITY
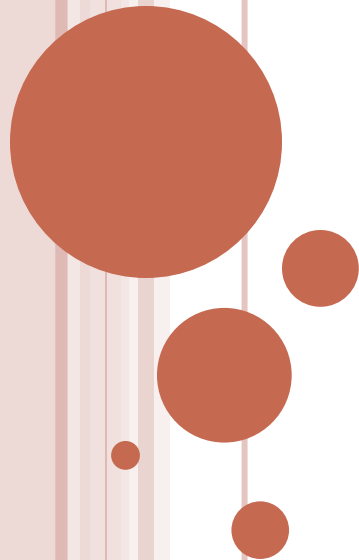
TODAYS POSTGRADUATES ARE TOMORROWS STAFF/LEADERS

Tomorrow's Staff

To highlight the importance of 'todays graduate'
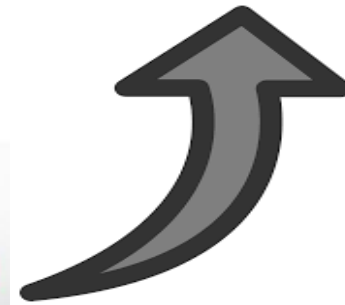
Today's Postgraduate

POSTGRADUATE TEACHING/SUPERVISION AND UNIVERSITY EXCELLENCE

- We must take action to increase the standard of our post graduates. We must lay down:
  - the 'best' practices in postgraduate education?
  - how can excellence in postgraduate teaching and learning be achieved?

IN FUTURE, WE WANT KSU TO BE RANKED IN THE TOP 5% UNIVERSITIES OF THE WORLD

RECTOR'S MESSAGE

- "Cultivation of students' enthusiasm for life-long learning, which will help them in their path to becoming future leaders of the Kingdom and invaluable agents of knowledge".

Mission:

- To provide distinctive education, produce creative research, serve society and contribute in building the knowledge economy and community through learning, creative thinking environment, the optimal use of technology and effective international partnership.

Vision:

- To be a world class university and a leader in building the knowledge society

STRATEGIC PLAN OF KSU

- '**KSU strives for excellence in research and teaching.**
- Strategic objective #1 – Good everywhere; Great in focus areas (Strengthen our comprehensive university with academic areas of research and teaching excellence)
- Strategic objective #2: Distinctive faculty (Attract and develop distinctive faculty)
- Strategic objective #4: Stronger graduates (Enable KSU students to learn hard and soft skills throughout their academic life)

- Numerous initiatives have been taken in KSU to promote excellence (e.g. challenging educational environments for those students who are willing and capable of achieving higher levels of accomplishments).

Q- Can it deliver, what it promises?.
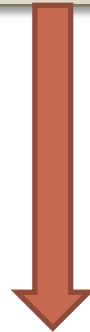
- If 'YES', it will be seen in its ranking.

TRADITIONALLY, WHAT WAS A TEACHERS JOB?

○ Give a lecture, give exams, announce results
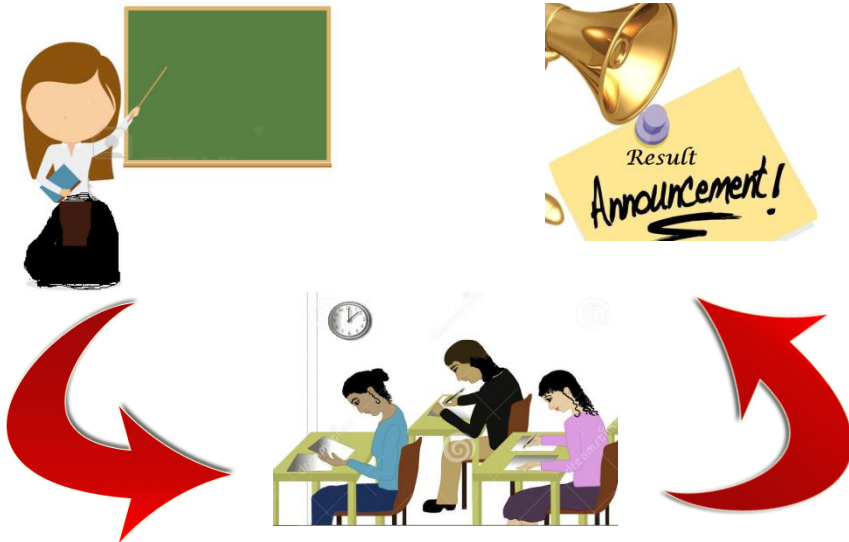
In the present time
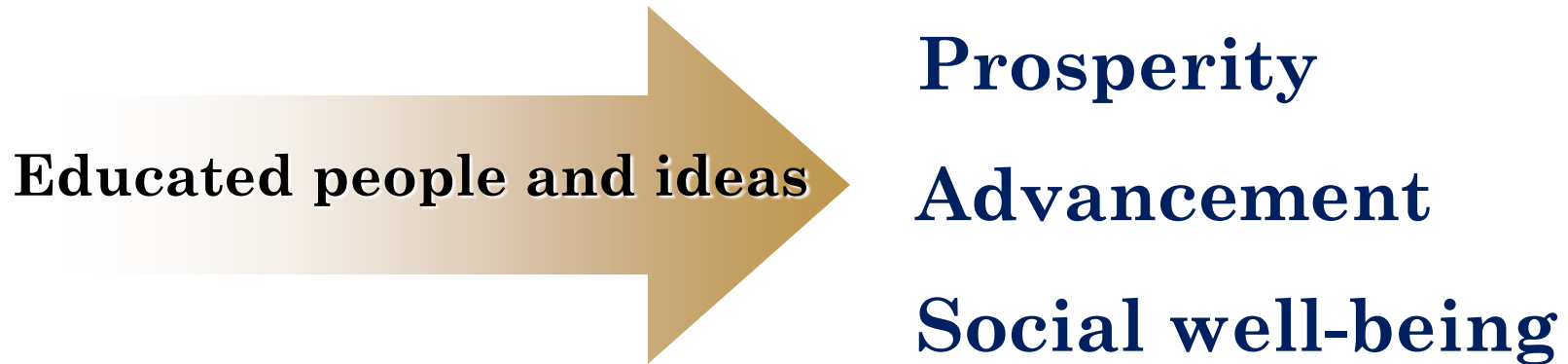The ability to perform on standardized tests, regurgitating information, does not equal success in creating a workforce to sustain the economy.

Teach

THIS IS THE AGE OF KNOWLEDGE
"KNOWLEDGE-BASED-ECONOMY"

Educated people and ideas →

Prosperity

Advancement

Social well-being

Educated people are the most valuable resource for 21st societies and their institutions!!!

THIS HAS PLACED A GREAT BURDON ON US- THE EDUCATORS (THE UNIVERSITY STAFF)

- If we are to compete in the global race, we need to equip our future staff/leaders with the skills to adapt, innovate and flourish
- We have to provide:
  - High quality learning experience to our students
  - Up to-date Knowledge
  - Innovative ability
  - High quality research
  - **High Quality supervision**

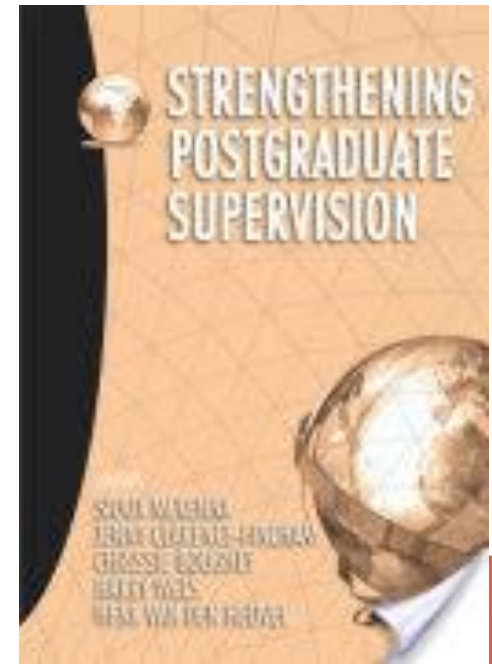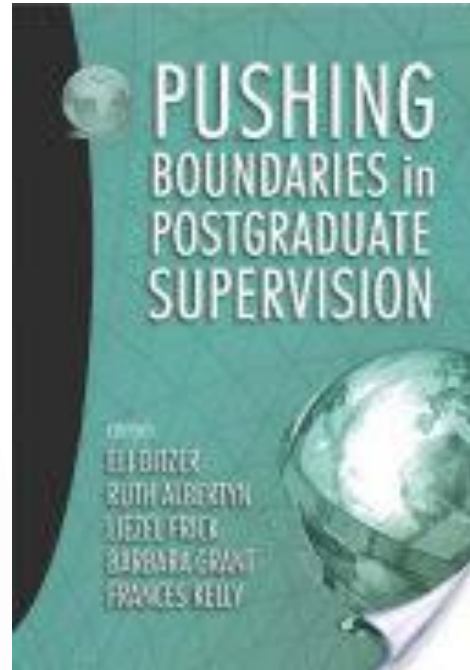# MANY BOOKS HAVE BEEN WRITTEN ON THE TOPIC OF SUPERVISING POSTGRADUATES

MANY MANY MANUSCRIPTS HAVE BEEN PUBLISHED

Articles

Postgraduate research supervision: a critical review of current practice

Antoinette McCallin ✉ & Shoba Nayar

📄 Full Article | 🖼 Figures & data | 📄 References | ❝ Citations | 📊 Metrics | 🖶 Reprints & Permissions | Get access

Abstract

Changes in the funding and delivery of research programmes at the university level have, in recent years, resulted in significant changes to research supervision. This paper critically reviews key influences effecting postgraduate supervision. Analysis draws on literature spanning 2000–2010 to determine the

People a

Article
Rethe

A BRIEF SUMMARY OF SUPERVISION MODELS
by Kendra L. Smith, Ph.D., LPC, ACS
September 2009

Clinical supervision for mental health professionals started out much like "apprenticeships" in other fields. That is, a student/apprentice with minimal skill/knowledge would learn the work by observing, assisting, and receiving feedback from an accomplished member of the same field. It was believed that because the "master" was quite good at the work, he or she would be equally good at teaching/supervising. In fact, this is not the case. Today, we realize that, though clinical supervision and counseling have much in common (e.g., the ability to engage in an interpersonal relationship), the two tasks also utilize separate and distinct skills. This means that a "master" clinician may not be always be a "master" supervisor without the addition of training and competency in supervisory knowledge and skills. Furthermore, the concept of "master-apprentice" supervision evokes a hierarchy of power that favors the master as the "authority," a dynamic that is not supported in today's literature on supervision.

Developing effective supervisors: Concepts of research supervision

A. M. Lee
University of Surrey
Guildford, United Kingdom
e-mail: a.lee@surrey.ac.uk

Abstract

Educating our early career researchers is becoming more complex. The range of doctoral degrees, the fast moving nature of knowledge, internationalisation, the demands of funding bodies and employers are all pulling on PhD supervisors. The untrained PhD supervisor will copy (or avoid copying) the way that they were

SEVERAL SUPERVISORY MODELS HAVE BEEN DESIGNED

- Psychotherapy-Based Supervision Models
  - Feminist Model of Supervision
  - Cognitive-Behavioral Supervision
  - Person-Centered Supervision
- Developmental Models of Supervision
  - Integrated Development Model
  - Ronnestad and Skovholt's Model
- Integrative Models of Supervision
  - Bernard's Discrimination Model
  - Systems Approach

STAGES OF RESEARCH/SUPERVISION
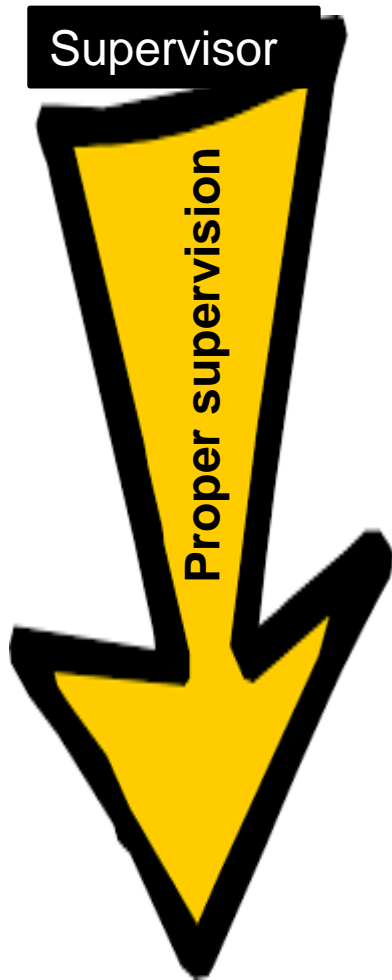
Supervisor

Proper supervision

Research Topic/Question

Literature Search

Formulation of a hypothesis

Prepare Proposal

Design Research Plan

Start the research- collect data

Analyse data- Results

Prepare thesis/ write papers

Final Presentation and Oral

Degree rewarded by the University

Excellence

AGREEING TO SUPERVISE

- Supervision is a big responsibility, a serious commitment (may be for several years)
- Only agree to supervise if you are sure you will do so responsibly
- Supervise in the field of your interest, research, specialty
- Tell supervisee the rules, roles, responsibilities of the supervisee and your expectations, and accept only those who agree.
- Tell how frequently you have to meet the supervisee.
- Make clear issues of intellectual property and authorship.
- Explain issues related to ethics, plagiarism, patients consent etc

Role of the Supervisor

- Supervisor is a:
  - mentor (guide, advisor, counselor, teacher, guru)
  - trainer,
  - supporter,
  - critic,
  - and fellow researcher
- As a potential advisor you must be willing to provide the above to the supervisee
- As supervisor remember you must be:
  - friendly
  - encouraging
  - open to criticism
  - know limitations
  - be accessible

SUPERVISORS MUST:

- Respect, compliment and encourage your students
- •Treat each student as an individual
- •lookout for and address signs of dissatisfaction
- •Set milestones
- Be aware of and follow policies
- •Keep a close watch of the progress reports
- Avoid conflicts with the supervisee
- Solve conflicts as soon as possible

SELECTION OF THE RESEARCH TOPIC

- May be topic of supervisor interest or supervisee interest.

- Assist the supervisee in identifying a suitable research topic.

- Select a doable topic [requirements, time line, expertise available]

- If possible, a topic that will add to knowledge, create a difference to mankind, useful to community.

- A relatively new topic, or new aspects or new directions of a topic.

Research Topic/Question

Literature Search

Formulation of a hypothesis

Prepare Proposal

Design Research Plan

Start the research- collect data

Analyse data- Results

Prepare thesis/ write papers

Final Presentation and Oral

Degree rewarded by the University

LITERATURE SEARCH

- Stress the need and importance of a good and through literature review (*what has been done, how was it done, what were the results, what avenues need further explorations, what were the difficulties, problems etc*)

- Explain how to select relevant references, use, record and quote references.

- Assist supervisee during the preparation of the literature review.

Research Topic/Question

Literature Search

Formulation of a hypothesis

Prepare Proposal

Design Research Plan

Start the research- collect data

Analyse data- Results

Prepare thesis/ write papers

Final Presentation and Oral

Degree rewarded by the University

FORMULATION OF A HYPOTHESIS

- Formulate a hypothesis- literature review and previous studies help hypothesis formulation)

- (the research will help find prove the hypothesis as correct or wrong)

Research Topic/Question

Literature Search

Formulation of a hypothesis

Prepare Proposal

Design Research Plan

Start the research- collect data

Analyse data- Results

Prepare thesis/ write papers

Final Presentation and Oral

Degree rewarded by the University

PROPOSAL PREPARATION

- Guide the supervisee during the proposal preparation process.
- Give the relevant form or tell the site where the forms are available
- Each section of the proposal form has to be appropriately filled.
- Studies on humans, animals require ethical approval (IRB).
- Require informed consent
- Guide in project design, methodologies to be used, sample collection procedure, sample storage procedure etc.

Research Topic/Question

Literature Search

Formulation of a hypothesis

Prepare Proposal

Design Research Plan

Start the research- collect data

Analyse data- Results

Prepare thesis/ write papers

Final Presentation and Oral

Degree rewarded by the University

COMPONENTS OF THE PROPOSAL

- Title
- Introduction
- Literature review/previous studies
- Statement of the problem and the hypothesis
- Methods and materials
- Study Design
- Time line
- Requirements and Budget
- List of references
- Appendices

IN STARTING THE RESEARCH

- Mentor the supervisee thoroughly before the actual research is started.

- Guide and help in collecting all the requirements. From sample collection, sample storage, solution preparation, procedures, collection of data, recording data etc etc, supervisee needs guidance.

- Supervisor guides, teaches, discusses, criticizes and evaluates the students performances.

- Direct the supervisee if the experiment does not go as expected, and if new experiments have to be conducted.

- Guide in developing appropriate research practices in the supervisee.

- Help in developing research skill in the supervisee.

- Provide advice and guidance to helping to keep the research on track

Research Topic/Question

Literature Search

Formulation of a hypothesis

Prepare Proposal

Design Research Plan

Start the research- collect data

Analyse data- Results

Prepare thesis/ write papers

Final Presentation and Oral

Degree rewarded by the University

IN DATA ANALYSIS

- Guide the supervisee on the different data analysis strategies or make appointment to see a statistician.

- Discuss the results with the supervisee

Research Topic/Question

Literature Search

Formulation of a hypothesis

Prepare Proposal

Design Research Plan

Start the research- collect data

Analyse data- Results

Prepare thesis/ write papers

Final Presentation and Oral

Degree rewarded by the University

PROVIDE FEEDBACK ON THE SUPERVISEES WORK AND PROGRESS

- Regularly provide feedback to the supervisee, through:
  - formal supervisory meetings
  - General discussion during lab work or informal meetings
  - comments on draft written work and provisional findings/results
  - reviewing the thesis before submission for examination
- A close contact between the supervisor and supervisee is necessary.

PREPARATION OF THE THESIS

- Guides the supervisee during the thesis preparation process
- Mentors during discussion of results
- Reads, makes corrections, advises, rejects
- Helps in finalization of the thesis by the supervisee.
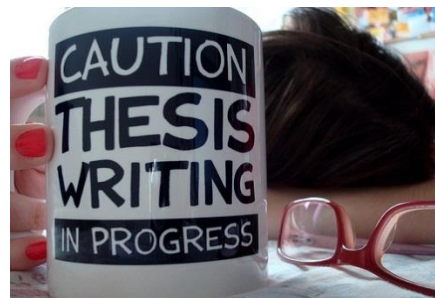
Research Topic/Question

Literature Search

Formulation of a hypothesis

Prepare Proposal

Design Research Plan

Start the research- collect data

Analyse data- Results

Prepare thesis/ write papers

Final Presentation and Oral

Degree rewarded by the University

SUPERVISOR HELPS ENABLE SKILLS AND CAREER DEVELOPMENT IN THE SUPERVISEE

- Supervisors help the supervisee develop himself/herself and develop skills by:
  - working with the supervisee to develop an appropriate training plan
  - providing coaching or training in research skills relevant to the work
  - helping the supervisee understand the importance of a this training programme including transferable skills that will enhance the chance of a good emploment

Finally:

- The supervisor helps in:
  - selection of examination committee,
  - submission of the thesis to committee,
  - setting date for the examination,
  - organizing the oral examination,
  - Finalizing the results
  - Checking the corrections suggested by the examiner

Research Topic/Question

Literature Search

Formulation of a hypothesis

Prepare Proposal

Design Research Plan

Start the research- collect data

Analyse data- Results

Prepare thesis/ write papers

Final Presentation and Oral

Degree rewarded by the University

SUPERVISEE MUST KNOW:

- Supervisors are not there to tell the supervisee what to do on every step

- The responsibility for developing your work rests on the supervisee and not on the supervisor

- A supervisee is responsible for his/her own success.

- A supervisee must try to develop in his/herself communication skills, personal leadership, and team working ability.

- A supervisee is responsible for planning and managing his/her work, develop and communicate ideas, preparing thesis of an appropriate standard and delivering the thesis on time.

- The research degree is the degree awarded to the supervisee

In conclusion

- **Supervisors have an important role and major responsibilities in supervising a postgraduate.**
- Supervision is partly a form of teaching
- An effective supervisor has to be an effective teacher
- They play two complementary roles –
  - provide guidance that leads to the graduate student's professional development and intellectual growth
  - provide assistance and advice that will help the supervisee complete their program and plan the next steps in their career
- The more the supervisee learns during this process of supervision, the better researchers/teachers they will become.

A GOOD SUPERVISOR

An asset to the University

Thank you for listening