Merits of the Carnegie Classification System: A User-Driven Multi-Dimensional Framework for Higher Education

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This presentation

- ☐ Classifications vary because a classification has to fit the purpose and purposes vary

- ☐ Most classifications are therefore context-specific and seemingly ad-hoc but they seem to do the job, more or less.

- ☐ Most systematic and user-friendly classification method is the Carnegie-2005; it is multi-dimensional and user-driven

- ☐ Carnegie method applied to SA system gives some useful insights

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Types classification

- ☐ Ranking

  For parents/students - information at a glance

- ☐ Policymaking

  For assessing role of tertiary institutions in national development

Classifications - Ranking

- ☐ **US** (US News & World Reports, 3571): National, Masters, Liberal Arts, Baccalaureate

- ☐ **UK** (THES, Guardian):

- ☐ **CANADA** (Macleans, 47): Medical Doctoral, Comprehensive, Primarily Undergraduate

- ☐ **AUSTRALIA** ():

- ☐ **ASIA** (Asia Week, 116) : Multi-disciplinary, Science and Technology

- ☐ **INDIA** (India Today): By 6 disciplinary areas

Classifications – official and other
(historical, administrative or level of qualification based)

- US (Carnegie Basic, 3527): Doctoral, Masters, Baccalaureate, Associate,

- UK (89, IHEM Country Report-2007): Old; New (Red Brick, 1900-1962; Plate glass, 1962-1992; Newer); Open

- AUSTRALIA (37, Dept Education):Comprehensive, Specialist, Other;

- AUSTRALIA (35, Ramsden-1999):Sandstone Universities, Universities of Technology, Wannabee Sandstones and New Universities

- KOREA (47, Shin-2009):Research, Research Active, Doctoral

- INDIA (UGC): Central Universities, State universities, Universities of Technology, Deemed Universities and Private Universities

- SOUTH AFRICA (23,CHE): Traditional Universities, Universities of Technology, Comprehensive Universities

- GENERIC (Moodie-2009):World Research U –*THES, Jiao Tong, AsiaWeek*; Selecting U, Recruiting U, Vocational Institute

Carnegie classification is the most systematic

- **In 1970**, the Carnegie Commission on Higher Education developed a classification of colleges and universities to support its program of research and policy analysis. Derived from empirical data on colleges and universities, the Carnegie Classification was published for use by other researchers in 1973, and subsequently updated in 1976, 1987, 1994, 2000, and 2005. For over three decades, the Carnegie Classification has been the leading framework for describing institutional diversity in U.S. higher education. It has been widely used in the study of higher education, both as a way to represent and control for institutional differences, and also in the design of research studies to ensure adequate representation of sampled institutions, students, or faculty

- With the **2005 revision**, the single classification system was replaced by a set of multiple, parallel classifications. The new classifications provide different lenses through which to view U.S. colleges and universities, offering researchers greater flexibility in meeting their analytic needs. They are organized around three fundamental questions: what is taught (Undergraduate and Graduate Instructional Program classifications), who are the students (Enrollment Profile and Undergraduate Profile), and what is the setting (Size & Setting). The original Carnegie Classification framework—now called the Basic classification—has also been substantially revised.

- Basic classification continues to be based on academic hierarchy or distribution of the levels of qualifications offered

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Carnegie, Basic - 2005

- ☐ **Doctorate-granting Universities -** awards 20 or more doctorate per year

- ☐ **Master's Colleges and Univer*sities* -** awards more than 50 masters degrees and less than 20 doctorates per year

- ☐ **Baccalaureate Colleges** – bachelors degrees represent at least 10% of all degrees awarded and fewer than 50 Masters or 20 doctoral degrees are awarded per year

- ☐ **Associate's Colleges** – bachelors degrees represent less than 10% of all degrees awarded

Carnegie-Extensive
(sample profile for Ohio State university according to Carnegie-Extensive

- ☐ **Undergraduate Instructional Program**
  Balanced (A&S/Prof;) High graduate coexistence
- ☐ **Graduate Instructional Program**
  Comprehensive doctoral with Medical/Veterinary
- ☐ **Enrolment Profile:**
  HU
- ☐ **Undergraduate Profile:**
  FT/More selective/Lower Transfers-in
- ☐ **Size and Setting**
  Large/4Y/Res
- ☐ **Community Engagement (elective)**
  Curricular Engagement and Outreach and Partnerships

Carnegie Basic Classification 2005(a)	South Africa CHE Classification		
	(Traditional) Universities	Comprehensive Universities	Universities of Technology
Doctoral (c)	n=9 Wits (VH research) UCT (VH research) UKZN (VH research) SUN (VH research) UP (VH research) UFS (High research) NWU (Low research) RU (Low research) UWC (Low research)	n=4 UNISA(High research) UJ (High research) NMMU (Low research) UZ (Low research)	
Master's (d)	n=2 UL (large master's) UFH (small master's)	n=1 Univen (small master's)	n=3 TUT (medium master's) CPUT (small master's) DIT (small master's)
Bachelor's (e)		n=1 WSU (Associate's dominant)	n=2 CUT (Associate's dominant) VUT (Associate's dominant)
Associate's (f)			n=1 MUT (Rural-Large)

Notes:

	South Africa CHE Classification		
Carnegie Undergraduate Instructional Program Categories	**(Traditional) Universities**	**Comprehensive Universities**	**Universities of Technology**
Arts & Sciences+	n=0	n=0	n=0
Balanced	n=6 **Wits** **UCT** **UKZN** **SUN** **UP** **RU**	n=2 UJ **Univen**	n=3 **CPUT (Small Masters)** **DIT (Small masters)** **TUT (Medium Masters)**
Professional +	n=5 **NWU** **UFH** **UL** **UFS** **UWC**	n=4 **NMMU** **UNISA** **UZ** **WSU (Associate's-Dominant)**	n=3 **CUT (Associate's-Dominant)** **MUT (Associate's-Dominant)** **VUT (Associate's-Dominant)**

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Carnegie Basic Categories	Carnegie Undergraduate Instructional Program Categories		
	Arts & Sciences + Professional	Balanced	Professional + Arts & Sciences
Doctoral	n=0	n=7 **Wits (24,198)** **UCT (21,224)** **UKZN (37,582)** **SUN (21,943)*** **UP (46,122)** **RU (5,922)** **UJ (42,883)**	n=6 **NMMU (24,245)** **NWU (38,708)** **UNISA (227,539)** **UFS (24,132)** **UWC (14,838)** **UZ (10,591)**
Master's	n=0	n=4 **CPUT (29,158)** **DIT (22,765)** **TUT (51,446)** **Univen (11,173)**	n=2 **UFH (8,526)** **UL (16,560)**
Bachelor's	n=0	n=0	n=3 **CUT (10,458)** **VUT (17,185)** **WSU (24,085)**
Associate's	n=0	n=0	n=1 **MUT (10,096)**

Number of Public Sector Institutions, by Carnegie Basic Type

	South Africa	USA
Doctoral	13	195
Master's	6	265
Bachelor's	3	147
Associate's	1	871

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Percentage Distribution of Institutions

60% of the Public Tertiary institutions in the US are at the associate level (Cf. 4% in SA with an inverted pyramid structure))

	US	SA
Doctoral	13%	57%
Masters	18%	26%
Bachelors	10%	13%
Associate	59%	4%
	1,478	**13**

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Output of Bachelor's degrees

In the Public Sector in the US, Doctoral institutions produce 62% of the Bachelors degrees

In SA too Doctoral institutions produce 78% of the Bachelors degrees

Distribution of Bachelor Graduates, by Type of inst.

	US	SA
Doctoral	62%	78%
Masters	34%	18%
Bachelors	5%	4%
Associate	0%	0%
	1,025,961	51,267

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Output of Bachelor's degrees

In USA an SA the Bachelor's degree output per inst by doctoral and Master's institiutions are comparable but in SA the output per inst at the bachelor level at 631 is much higher than that of USA at 312

US

	Num Insts	Num Bach Grads	Grads/Inst
Doctoral	195	632,397	**3243**
Masters	265	345,264	**1303**
Bachelors	147	48,125	**327**
Associate	871	175	**0**
ALL	**1,478**	**1,025,961**	

Source: Webcaspar, 2007

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South Africa

	Num Insts SA	Num Bachelor's SA	
Doctoral	13	39,932	3072
Masters	6	9,414	1569
Bachelors	3	1,892	631
Associate	1	29	29

Efficiency in Bachelor's graduate output; Num graduates per inst

	US	SA
Doctoral	3,243	3,072
Masters	1,303	1569
Bachelors	327	631
Associate	0	29

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Associate Degrees

USA produced 6 associate level graduates for every 10 Bachelor's graduates but SA produced 8 for every 10 Bachelor's

Associate Level institutions in USA produced 91% of Associate level graduates. Interestingly in SA, Doctoral, Master's and Bachelor's institutions produced 96% of the associate degrees or equivalent

Distribution of Associate Graduates, by Type of inst.

	US	SA
Doctoral	2%	44%
Masters	3%	37%
Bachelors	3%	14%
Associate	91%	5%
	557,791	42, 441

Summary of Observations

- ☐ A&S v PROF dimension does not make sense for SA;

    Given interest in S&T capacity development STEM v A&HS, ACADEMIC v PROF and UG/GRAD dimensions?

- ☐ Similar to the public sector in US, most Bachelors degrees in SA are awarded by doctoral and masters institution than bachelors instss

    Doctoral insts are more efficient in producing Bach degrees?

- ☐ Unlike US, there are no dedicated public institutions in SA for awarding associate degrees. 95% of Associate degrees are awarded by doctoral, masters or bachelor's insts

    Are there sufficient number of 2-year diploma or associate-degree programs in SA? Are they counted somewhere else? Report under tertiary education?

- ☐ Private sector data for USA is not included here because there are no parallel datasets for the private sector in south Africa

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Summary

- ☐ Classifications vary because a classification has to fit the purpose and purposes vary
- ☐ Most classifications are context-specific and seemingly ad-hoc,
- ☐ A user-driven, multi-dimensional framework for classification is more important than a classification itself
- ☐ Most systematic and user-friendly classification method is the Carnegie-2005
- ☐ Carnegie method applied to SA system shows that
    - ■ Current classification may be as good as any new
    - ■ Modified Carnegie method applied to SA gives some useful insights
    - ■ Recommend the development of a framework with a multiplicity of selected dimensions suited for analytical purposes in SA

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Thank you

US System, is pyramid-shaped, in terms of insts
(thanks to a large number of private insts at the Bachelor's level

	US, Public (1478)	US, Private (1682)	US, all (3160)
Doctoral	195	191	386
Masters	265	436	701
Bachelors	147	862	1009
Associate	871	193	1064

Source: Webcaspar, 2007

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… But Bachelor's graduates are produced mostly by doctoral institutions

	US, Public	US, Private	US, All
Doctoral	39%	12%	51% 832,855
Masters	21%	15%	36% 585,331
Bachelors	3%	9%	12% 194,230
Associate	0%	0%	1% 55
	1,025,961	587,009	1,612,970

Source: Webcaspar, 2007

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In the US, Public sector accounts for

	Num Insts, US	Num Grads, US	Grads/Inst
Doctoral	195	632,397	3243
Masters	265	345,264	1303
Bachelors	147	48,125	327
Associate	871	175	0

Source: Webcaspar, 2007

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In SA too Doctoral insts produce more Bachelors degrees per inst than all other insts

	Num Insts SA	Num Bachelor's SA	
Doctoral	13	39,932	3072
Masters	6	9,414	1569
Bachelors	3	1,892	631
Associate	1	29	29