Gate-keepingInto the KnowledgeSociety:

HaveWe Gotit Right?

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Overview

- Study comparesuniversity entrance scores with subsequentgrades in ten differentdisciplines.

- Cohort is approximately7000 students admittedto a university in Queensland, Australia between2003 to 2005.

Participant'sInterests

- Directly involved in admissions

- Academics
  - Which disciplines?

- Interestedin non-traditionalstudents

- Interest in Generic Skills?

Admissions

- The majority of students(two thirds) were non-school leavers – i.e. did not use the school leaving certificateas their entrance criteria.

- Admission is usually based on a single numericalrank, called a TertiaryEntrance Rank (TER)

SchoolLeavers

- School Leavers receive a single rank based score, called an Overall Position (OP), that is directly translatableto a TER.

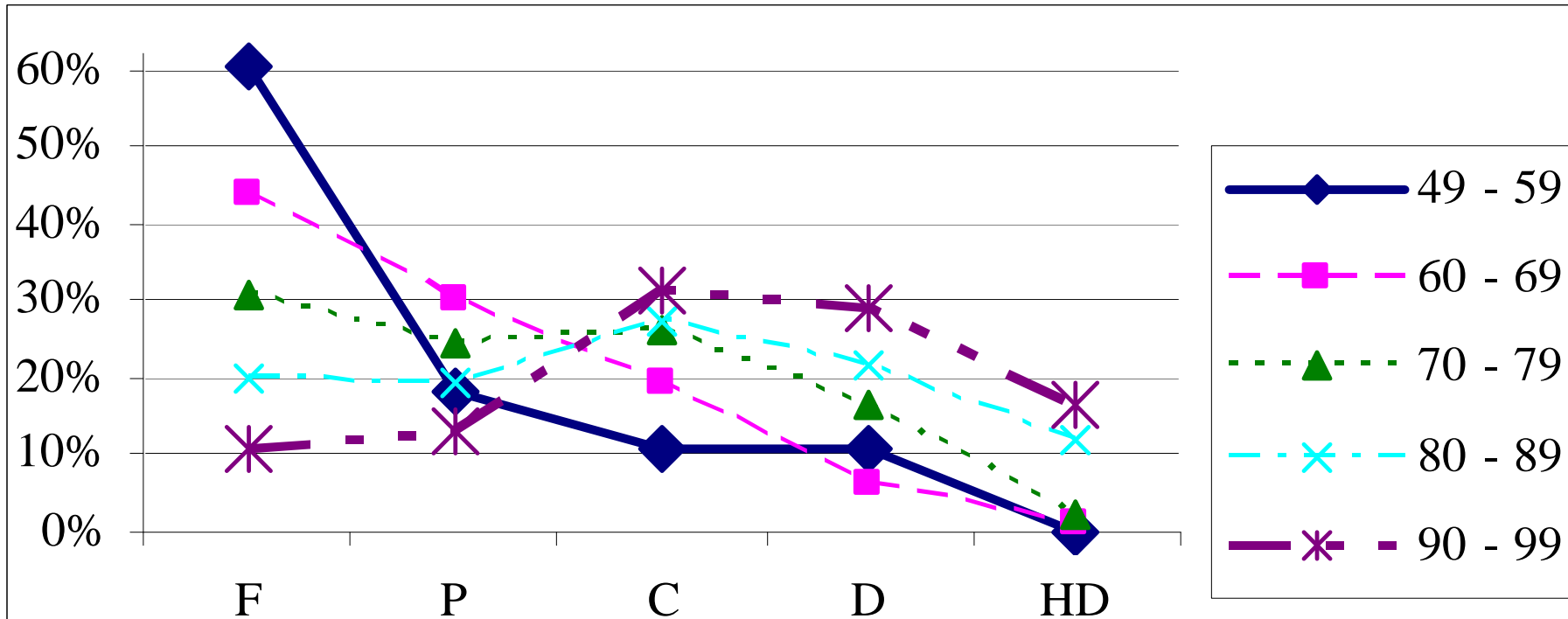- They also receive scores in up to five generic skills known as Field Positions.

UniversityGrades

- University coursesare classifiedinto ten discipline areasdepending on what is taught.

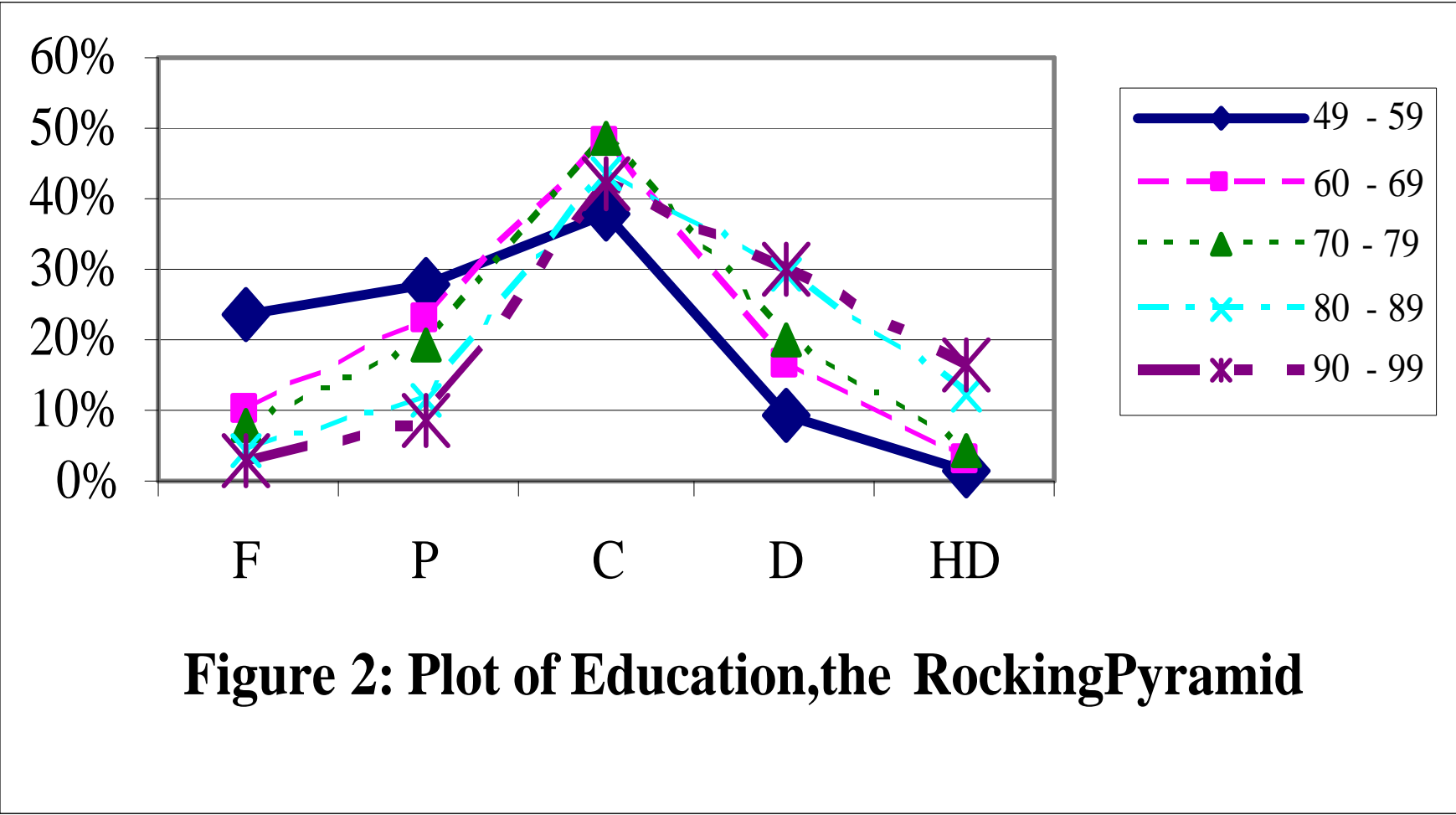- Letter grades were convertedinto numericalv alues for theanalysis.

Description	OP	Extended Writing	Short Written Communi-cation	Basic Numeracy	Complex Reasoning	Extended Perform-ance	Non-OP TER
Natural and physical sciences	-0.47	-0.42	-0.45	-0.45	-0.44	-0.47	0.28
Information technology	-0.49	-0.47	-0.47	-0.48	-0.45	-0.46	0.33
Engineering and related technologies	-0.47	-0.47	-0.49	-0.43	-0.43	-0.50	0.28
Architecture and building	-0.56	-0.34	-0.52	-0.45	-0.72	-0.52	0.24
Agriculture, environmental and related studies	-0.32	-0.35	-0.34	-0.26	-0.20*	-0.24	0.24
Health	-0.33	-0.32	-0.31	-0.30	-0.26	-0.31	0.23
Education	-0.33	-0.32	-0.31	-0.29	-0.28	-0.30	0.18
Management and commerce	-0.46	-0.44	-0.44	-0.44	-0.37	-0.41	0.27
Society and culture	-0.41	-0.39	-0.39	-0.36	-0.32	-0.36	0.27
Creative arts	-0.36	-0.33	-0.34	-0.29	-0.28	-0.37	0.25

Table 3: Pearson's Correlation Coefficient of University Grades and Entrance Grades

Twodistinct Patterns

Figure 1: Plot of Engineering, the Diving Fish

Figure 2: Plot of Education, the RockingPyramid

Littledifference inpatterns between schoolleavers andothers

Figure 3: OPs tudents in Engineering

Figure 4: Non-OP students inEngineering
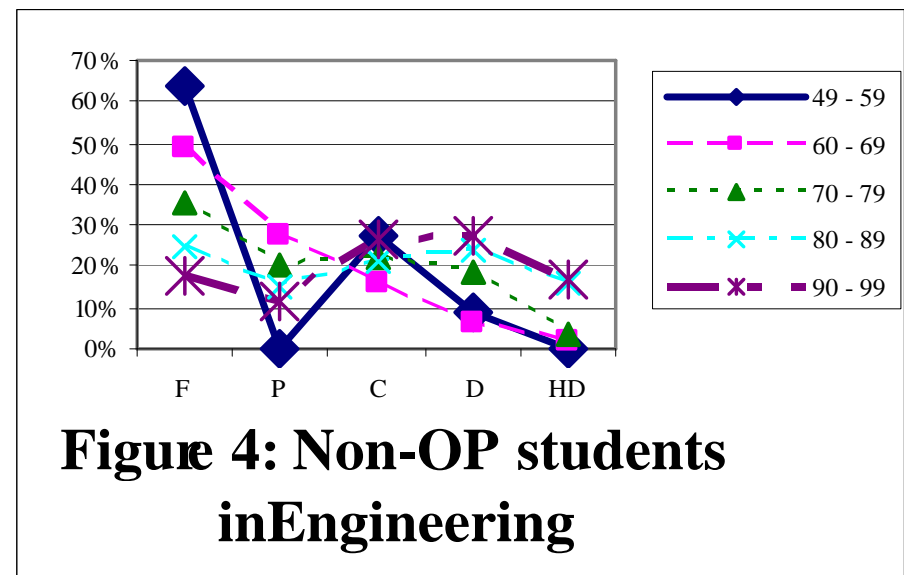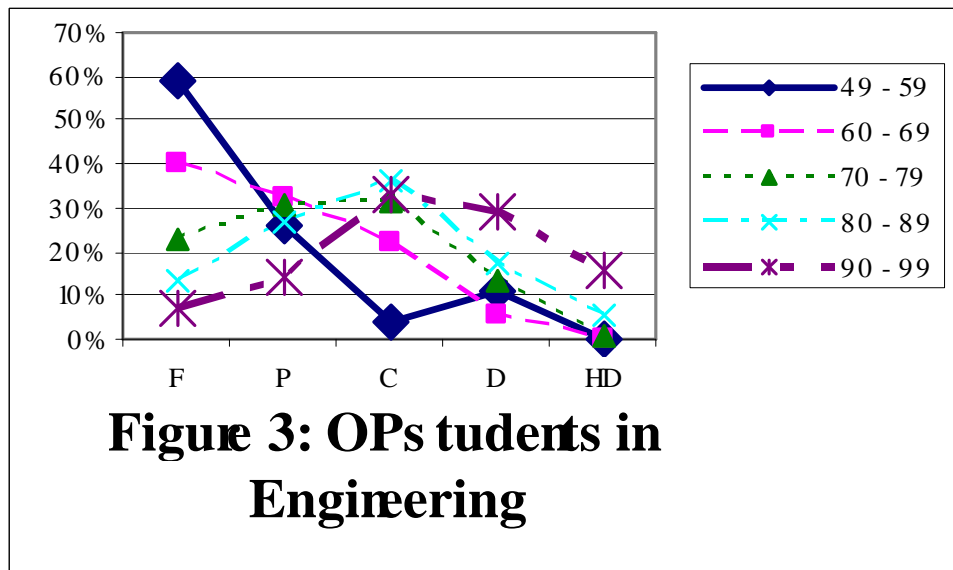
StudyLimitations

- Only one university. We would characteriseit as "not a prestige university", and results may vary at other universities.

- Groupinginto disciplines subject to some bias

- University gradeswere collected across multiple years, but more first year grades

Whomdo wewant toselect to enteruniversity?

1. Those who deserve the reward of university study, having worked the hardestto gain it;

2. Those who will succeed most at university;

3. Those who will gain most from a university education;and/or

4. Those whose educationwill deliver the most to society.

Conclusion

"We live in a knowledgesoc iety, where university degreesare the admission tickets that prescribethe type of seats one gets. Deciding who is grantedadmission to what programneeds to be donew ell, from both an ethical perspectiveand the perspectiveof public good."

"Selecting university students purely on school-leaving academicqualifications is both economicaland transparent.

However, as this paper and others show, only at most 40% of a student's university grades can be predictedby a school-level qualification,and even this only for some academic disciplines."

"Our research suggests that different disciplines adopt different teaching strategies, and these may make traditional selection methods even less relevant.

Furthermore, the massification of higher education is opening up universities to non-traditional students. Our data suggest that the predictability of non-traditional students' university grades may be lower but of a similar pattern."

"The trues uccess of our students is not in their university grades,but in the value they add to society 10 to 20 years after they leave our influence.

What matters most is what works best, for our society and for our students, those who are admittedto university as well as those who are refused."

"The answers to how to get university selection right is complex and situated, and requires much furtherresearch and debate.

The transformationof higher educationfor the knowledgesoc iety is likely to require the transformationof our selection processes,and we needto attendto this transformationwith a balance of sound science and ethics."

Discussion

Shouldw e selectstudents?

If so, how?