



Use of Cross Disciplinary Groups to Improve PSM Student Peer Education

66th Annual Meeting of the Midwestern Association
of Graduate Schools
Cincinnati, OH
April 22nd, 2010



Grand Valley Overview...

- ▶ Established in 1960, 50th-yr celebration in 2010-11
 - ▶ History as an undergraduate institution serving west Michigan
- ▶ Current total enrollment is 24,408; ~15% graduate
 - ▶ 123 doctoral and 3,435 masters students for 2009-10
 - ▶ ~ 25% of degrees awarded annually are graduate degrees
- ▶ 28 graduate degree programs
 - Clinical doctorates
 - DPT in Physical Therapy
 - DNP in Nursing
 - EdS program in Educational Leadership
 - 25 Master's degree programs; 46 degree options

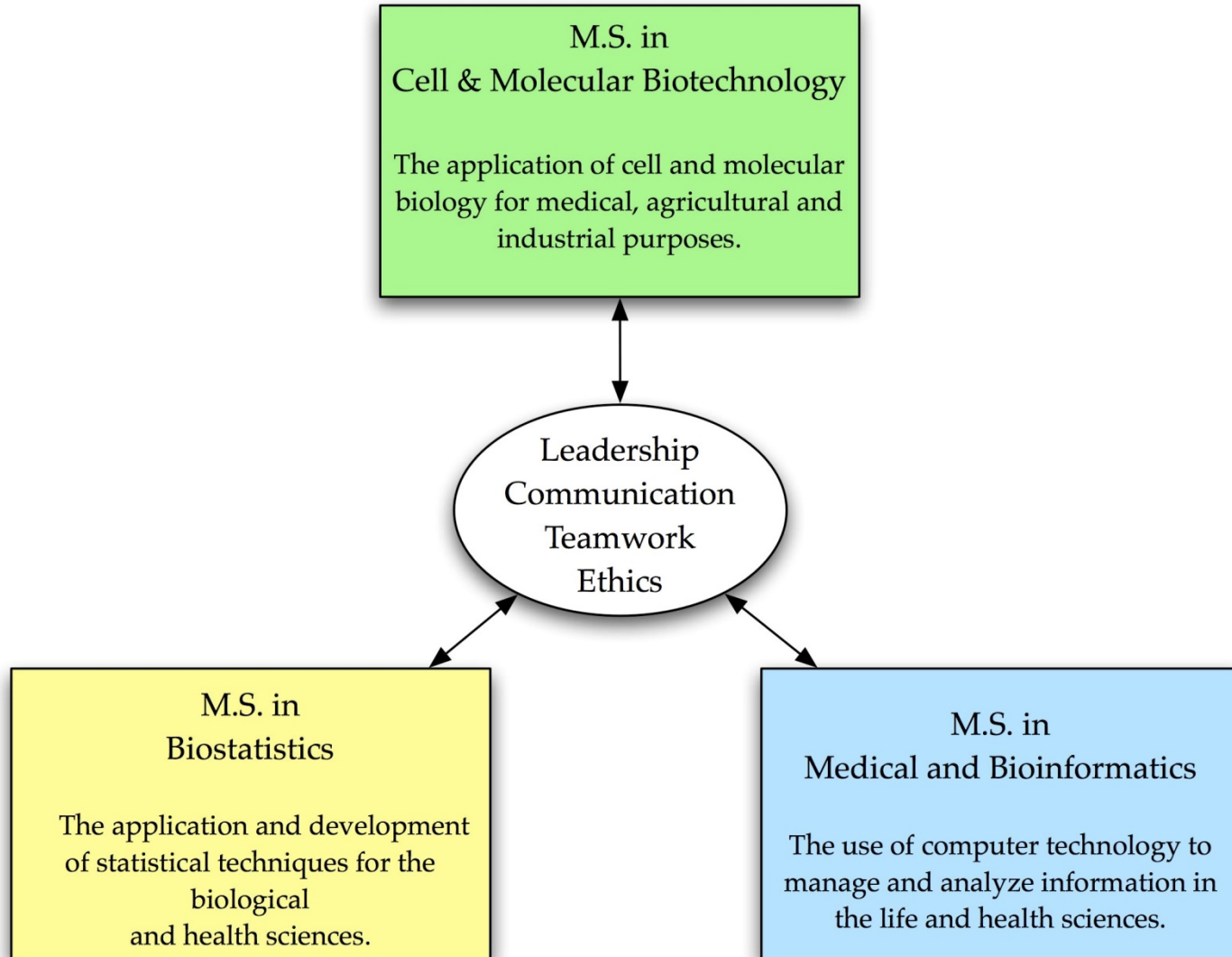


PSM Program History at GVSU

- ▶ Sloan Foundation Grant – 2003
- ▶ First students matriculated in F'04
 - ▶ ~ 10 each in Biotechnology, Bioinformatics, and Biostatistics
- ▶ Today...
 - ▶ 85 active students across programs (28, 25, and 31, respectively)
 - ▶ 38% are international students
 - ▶ 45% are female
 - ▶ 18% are part-time
 - ▶ 45 graduates (18 in Biotech; 15 in Biostats; 12 in Bioinformatics)
 - ▶ Lost 12 Biotech students over time to MS in CMB
- ▶ Fall 2011 enrollment goal
 - ▶ 100 FTE students



Our current PSM programs....



Medical & Bioinformatics, M.S. Medical and Bioinformatics utilizes computer technology to manage and analyze information in the life and health sciences. This degree is granted by the School of Computing and Information Systems within the Padnos College of Engineering and Computing.

Cell & Molecular Biology, M.S. (Biotechnology Emphasis) Biotechnology involves the industrial use of living organisms to produce food, drugs, and other products. This degree is granted by the Cell and Molecular Biology Program within the College of Liberal Arts & Sciences.

Biostatistics, M.S. Biostatistics involves the application of statistical techniques to scientific research in the life and health sciences. This degree is granted by the Statistics Department within the College of Liberal Arts & Sciences.



GVSU PSM Internships

Internship Sites	Num Interns	Num BINF	Num BSTA	Num CMB
Number of Internship Sites Thru W09	17	5	8	10
Van Andel Research Institute	11	2	3	6
Arivium	5	4		1
Mich Blueberry Growers	3			3
MPI Research	3		3	
Next Generation Therapeutics	3			3
Spectrum Health	3	2	1	
Annis Water Resources Institute	2		1	1
Cleveland Clinic	2	1		1
Kent County Health Department	2		2	
St Marys Healthcare	2	2		
Center for Molecular Medicine	1			1
GVSU- CMB	1			1
Mich High Throughput Screening Center	1			1
Michigan State University	1			1
Pfizer Animal Health	1		1	
Priority Health	1		1	
QST Consultations	1		1	
Internship Totals Thru W09	43	11	13	19



GVSU 2008 PSM Biostatistics Grads Stay in Michigan



From left: Craig Johnson, Heather Houseman, Becky Twing,
Justin Sjogren and Tom Holmes



GVSU PSM CMB Biotech Grads

Laboratory of Mass Spectrometry and Proteomics



From left: Cavey, Lehner, Davidson

From Left: Greg Cavey, P.I.,
Caryn Lehner, GVSU PSM Cell & Molecular Biotechnology M.S. 2007,
Paula Davidson



Patrick Richardson ^{1st}

Biostatistician at the Van Andel Research Institute

Greater Grand Rapids, Michigan Area | Biotechnology

Patrick Richardson is working on SAS Certification. 24 days ago

Current

- **Biostatistician at The Van Andel Institute**
- **Principal at Richardson Consulting Services, L.L.C.**

Past

- Finance Manager at Rapid Air
- Commercial Pilot / Flight Instructor at Rapid Air

Education

- Grand Valley State University
- Davenport University
- Aquinas College

Recommendations

3 people have recommended Patrick

Connections

32 connections

Websites

- [Van Andel Research Institute](#)
- [Prgm of Translational Medicine](#)
- [Коммерсант](#)

Public Profile

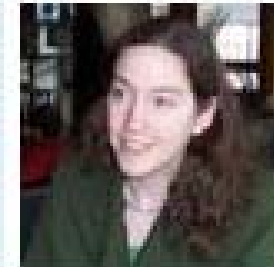
<http://www.linkedin.com/in/patrickjrichardson>

PSM Biostatistics M.S., 2008

Susan Conarroe 1st

Biomedical Informatics Professional

Greater Seattle Area | Information Technology and Services



Current

- **Informatics Supervisor, UW Autism Center at University of Washington** 

Past

- Clinical Research Technician at Spectrum Health 
- Visiting Researcher at Van Andel Institute 
- Senior Developer at Case's Ladder

[see all...](#)

Education

- Grand Valley State University
- Centre College

PSM Medical & Bioinformatics M.S. 2007

GVSU PSM Cell & Molecular Biotechnology Grad


Bertrand Eban

Associate Scientist at Emergent BioSolutions

Greater Grand Rapids, Michigan Area | Biotechnology



Current

- **Associate Scientist at Emergent BioSolutions** 

Past

- Research Assistant (Intern) at Michigan high throughput screening center
- Laboratory Technician at South Texas Nuclear pharmacy

Education

- Grand Valley State University
- Texas Southern University
- Ngoa et nkele

PSM Cell & Molecular Biotechnology M.S., 2008

Blueberry breeder felt need to go back to school

Photos



Dennis R.J. Geppert/The Holland Sentinel

At age 53 Ed wheeler will graduate from Grand Valley State University with his masters in Science on Saturday.

Wheeler is not a typical student.

Wheeler felt he needed to go back to school based on his work with developing varieties of blueberries.

By **ROEL GARCIA**

The Holland Sentinel

Posted Apr 26, 2008 @ 06:00 AM

Laketown Township, MI — Ed Wheeler balanced many aspects of his life for three years: family, work and graduate school.

Today, April 26, Wheeler graduates from Grand Valley State University with a master's degree in cell molecular biology.

The Laketown Township resident is 53, been married to wife JayLynn for eight years and has two grown children and works full-time as a blueberry breeder for Michigan Blueberry Growers Association in Grand Junction. He finished his undergraduate degree from Western Michigan University in 1977.

-
- ▶ In addition to technical skills, ethics and critical thinking, PSM degrees emphasize “soft skills” including :
 - ▶ Interpersonal skills
 - ▶ Leadership skills
 - ▶ Communication skills
 - ▶ Problem solving skills
 - ▶ Teamwork



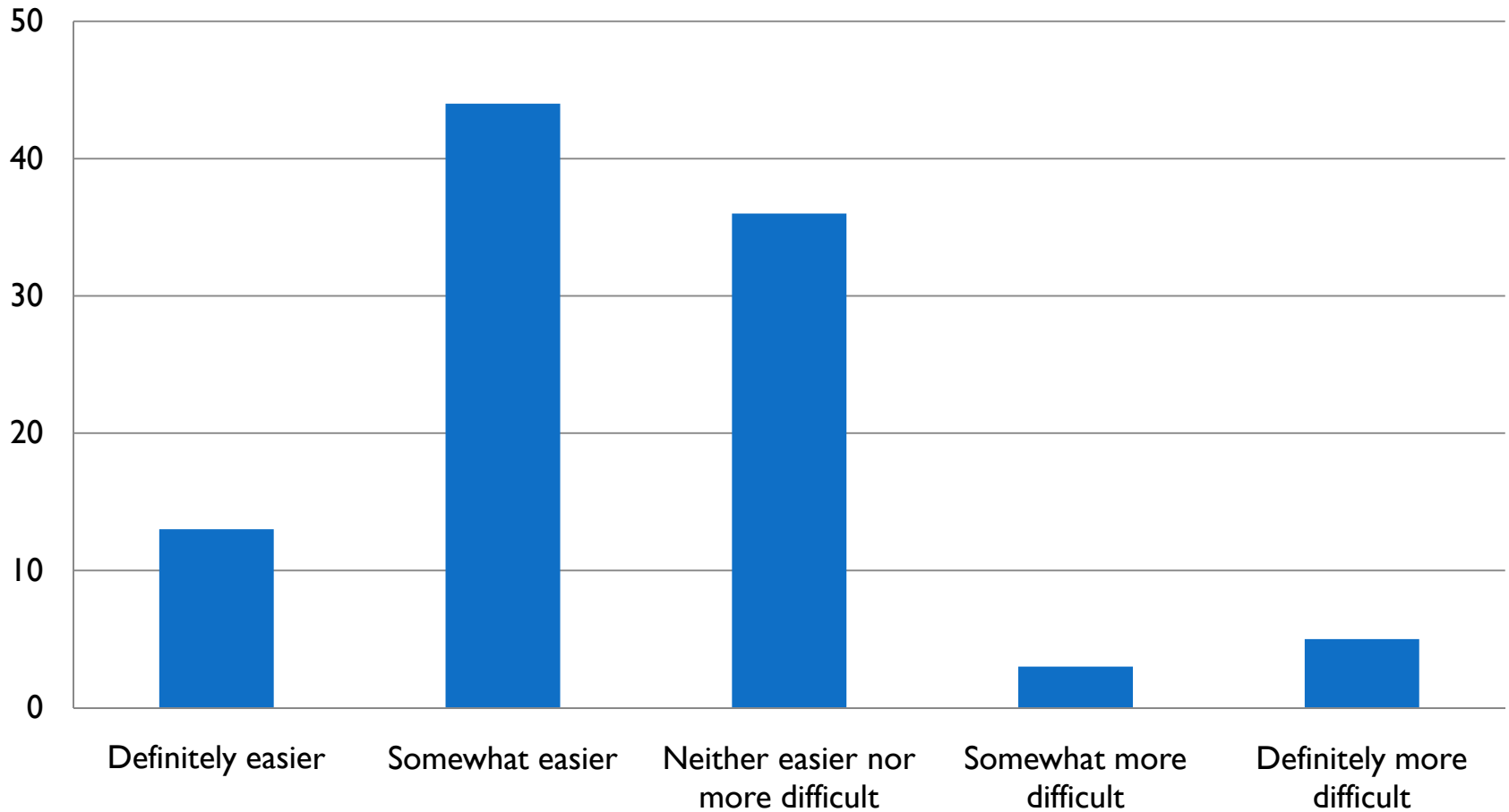
PSM Interdisciplinary Survey Items

- ▶ Did you find/feel working in an interdisciplinary group...
 - ▶ Made the task easier or more difficult?
 - ▶ Allowed your group to be more successful working on the project?
 - ▶ Helped you learn more about the subject?
 - ▶ Promoted “peer teaching?”
- ▶ Do you think that jobs in industry require work in interdisciplinary groups?
- ▶ Do you feel that it would be beneficial to your education to work in interdisciplinary groups?
- ▶ Please write any comments you have about working in interdisciplinary groups



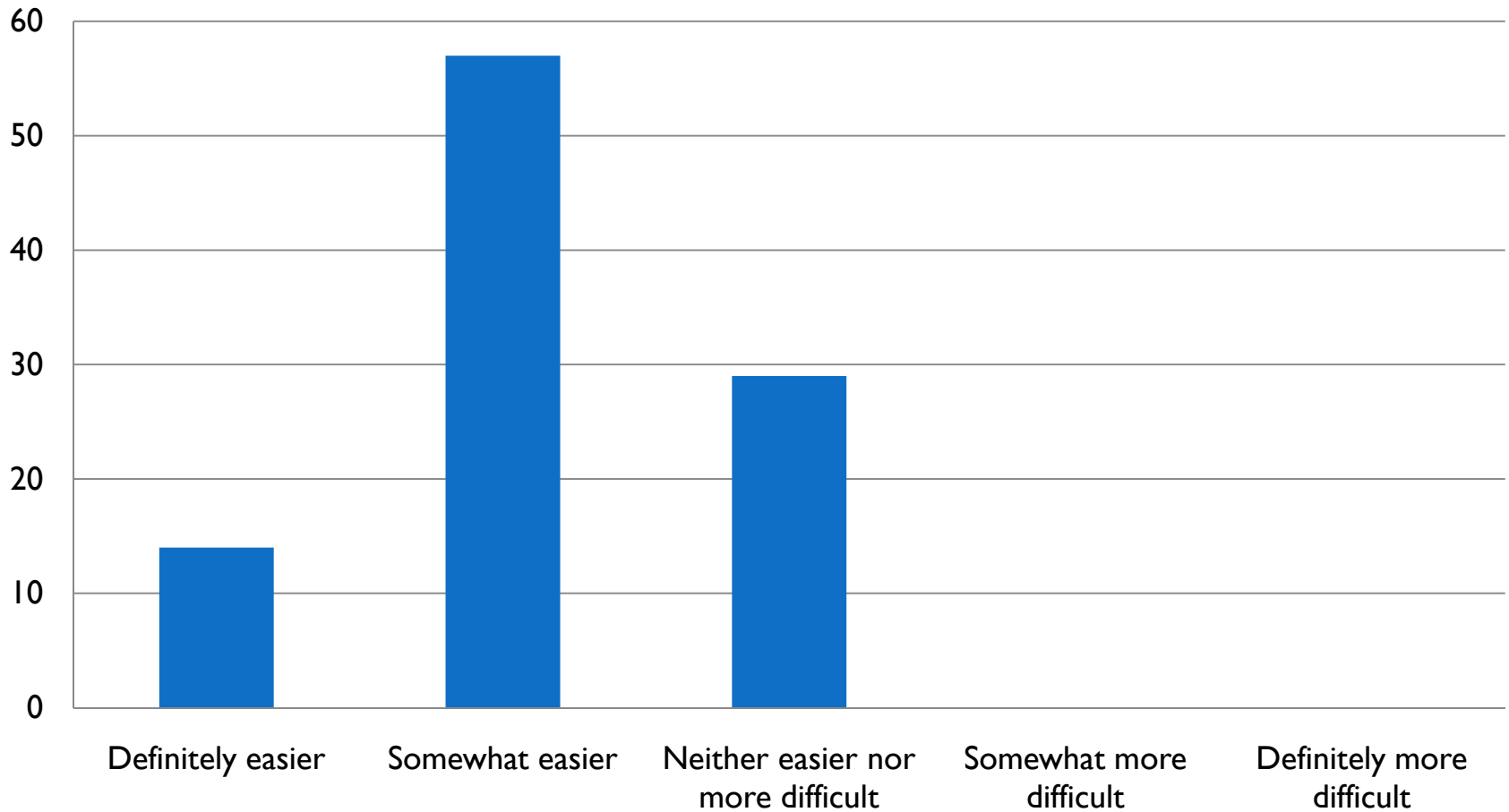
Made the task easier or more difficult?

All PSM Students



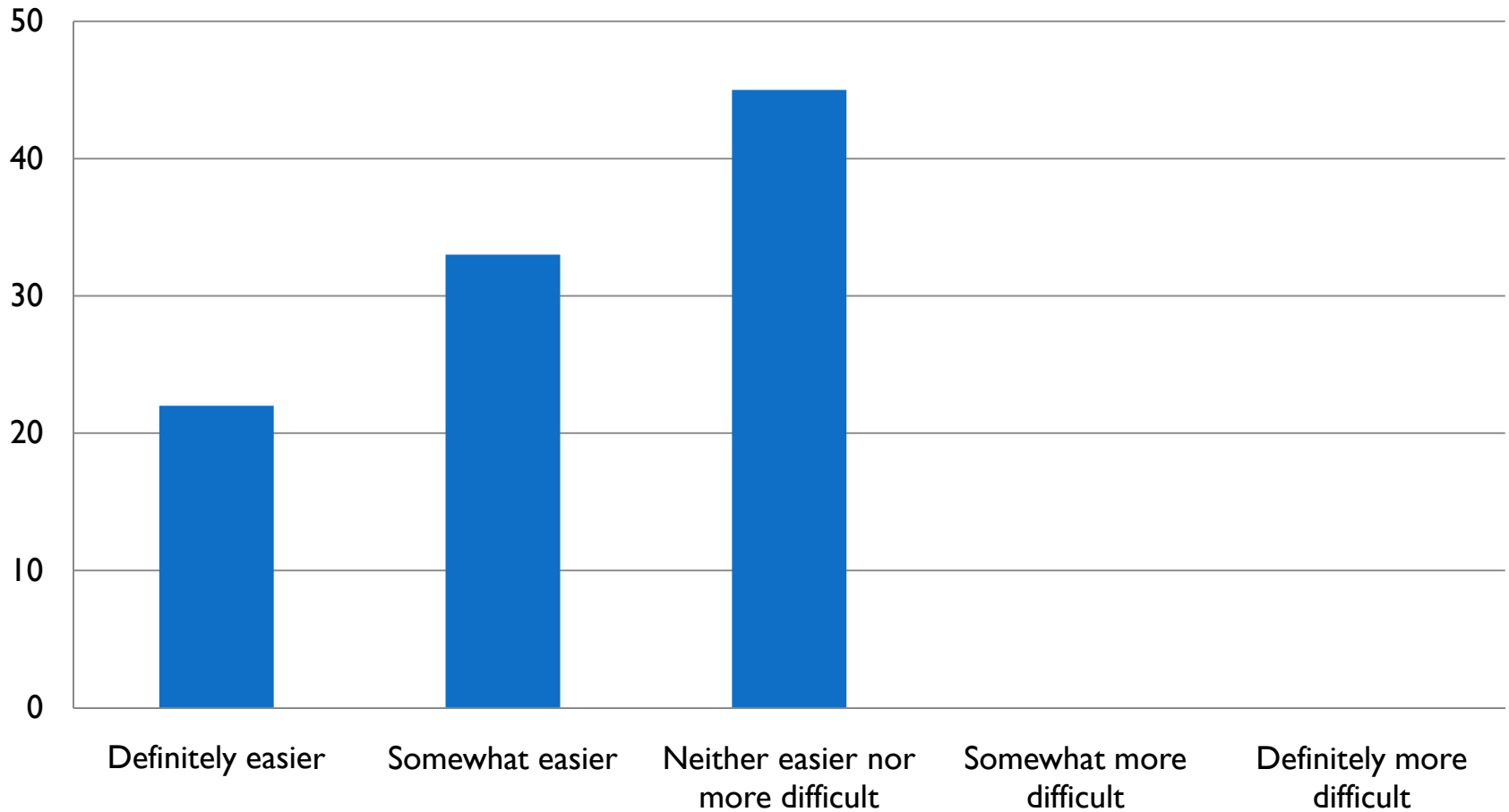
Made the task easier or more difficult?

Biotech



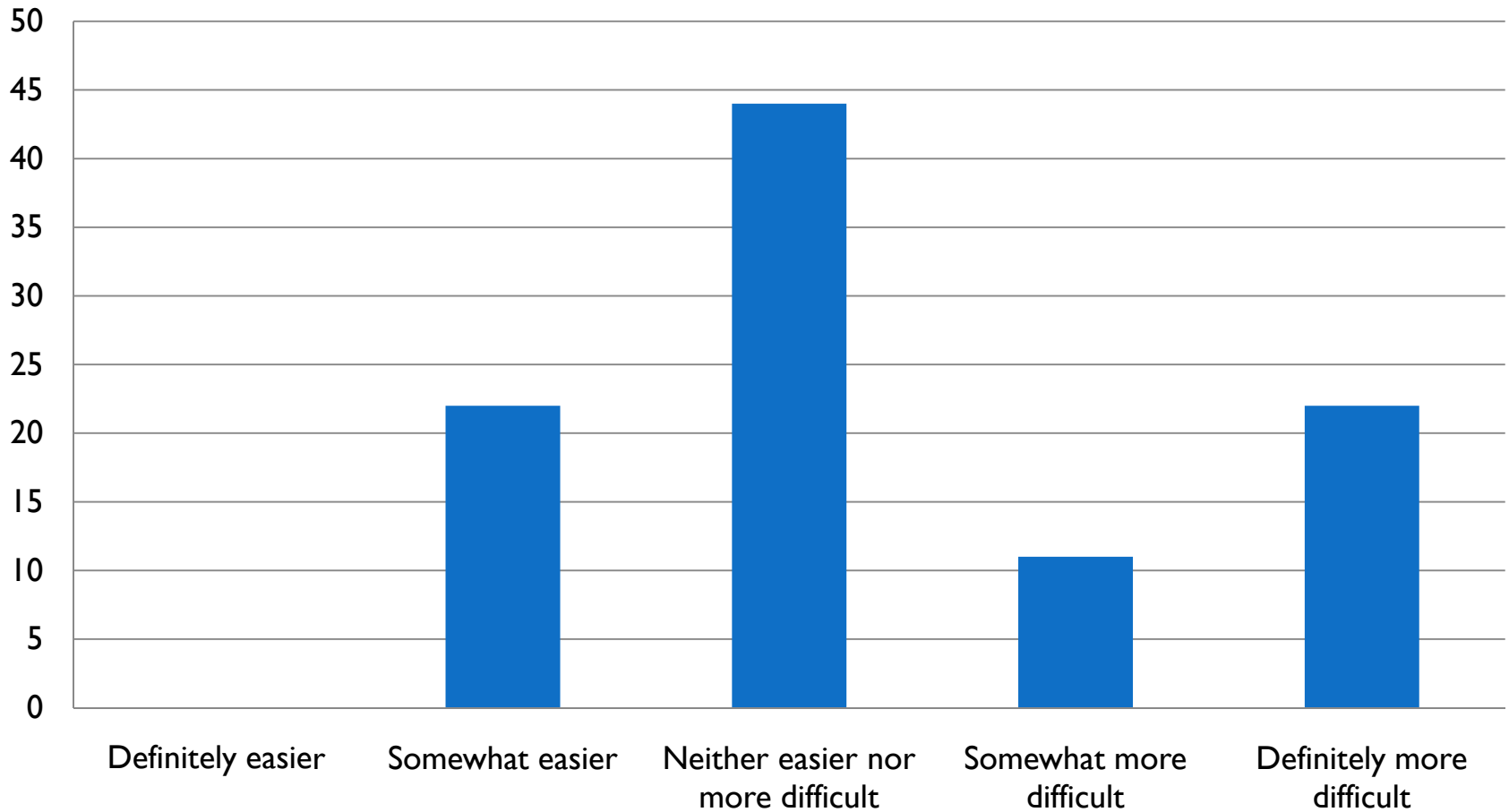
Made the task easier or more difficult?

Medical and Bioinformatics



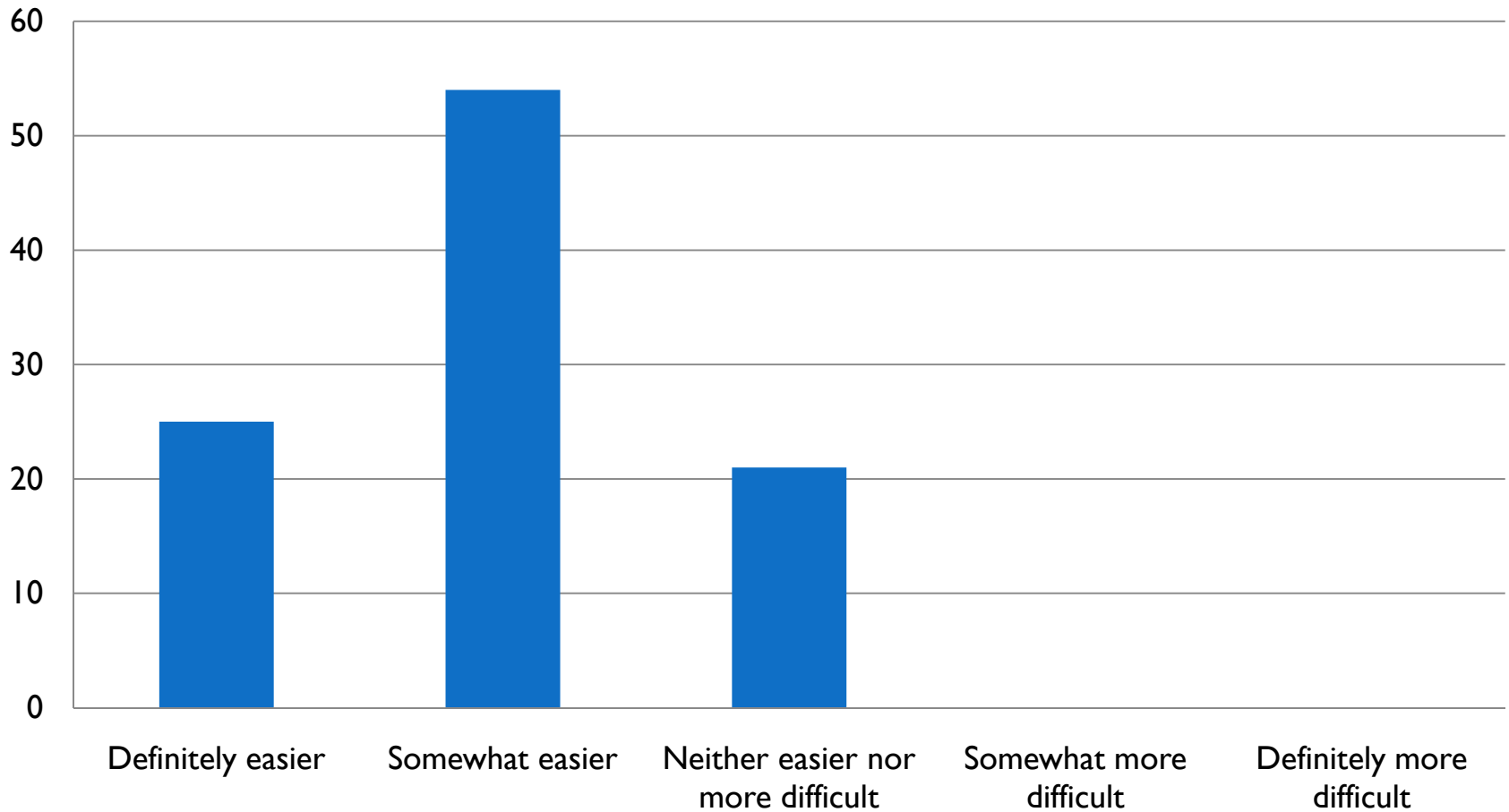
Made the task easier or more difficult?

Biostats



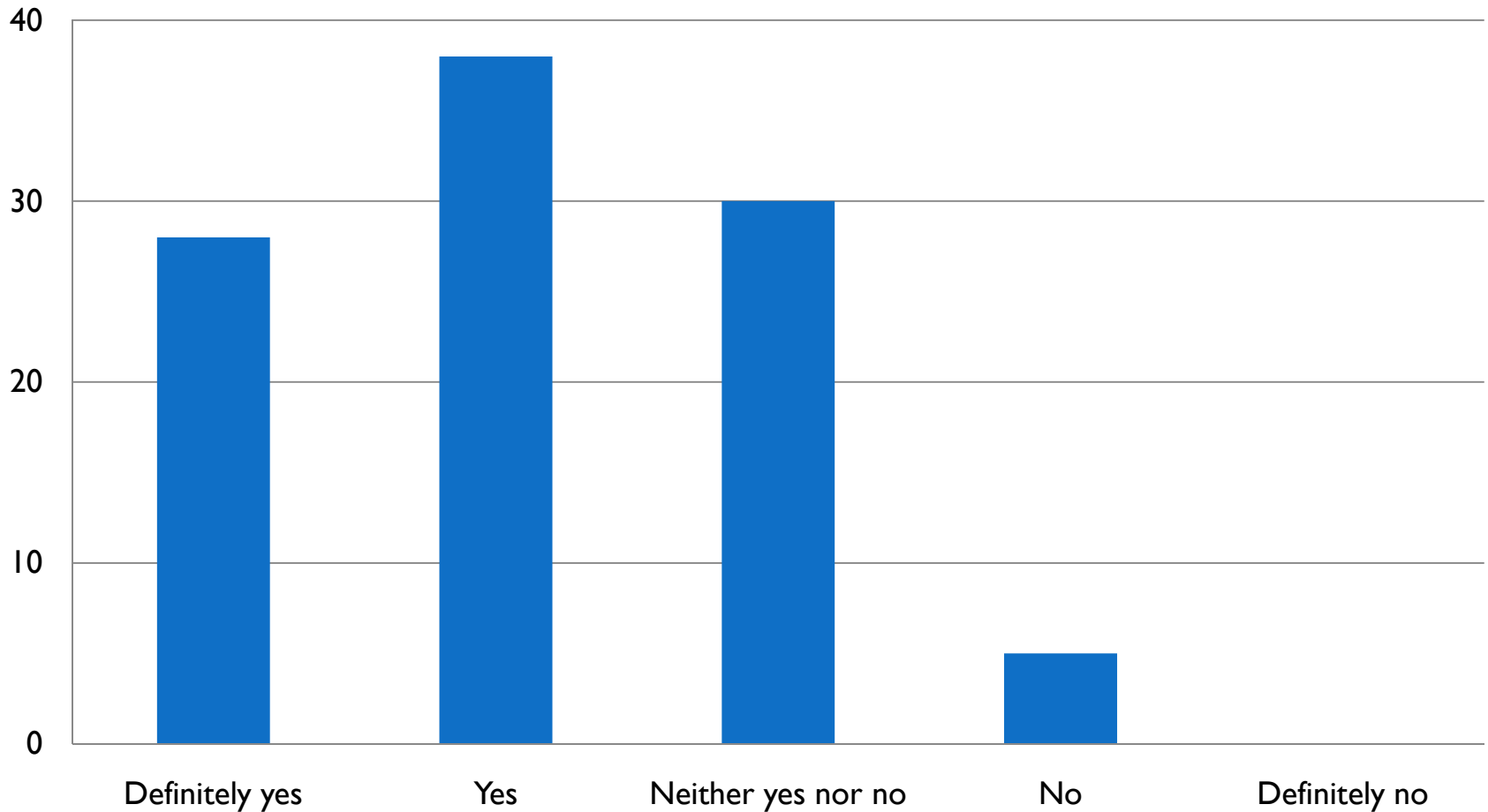
Made the task easier or more difficult?

2nd year PSM



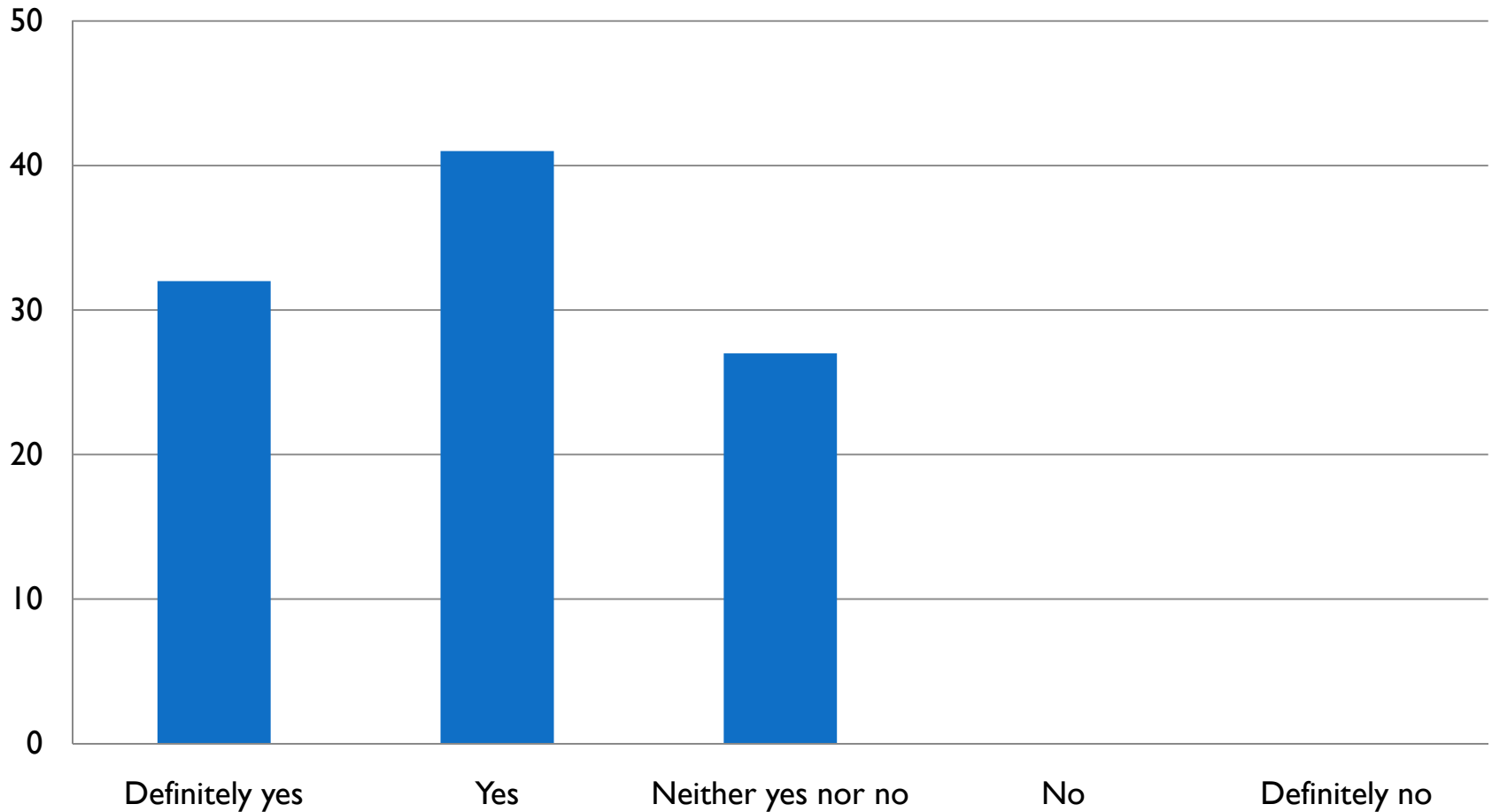
Allowed your group to be more successful?

All PSM Students



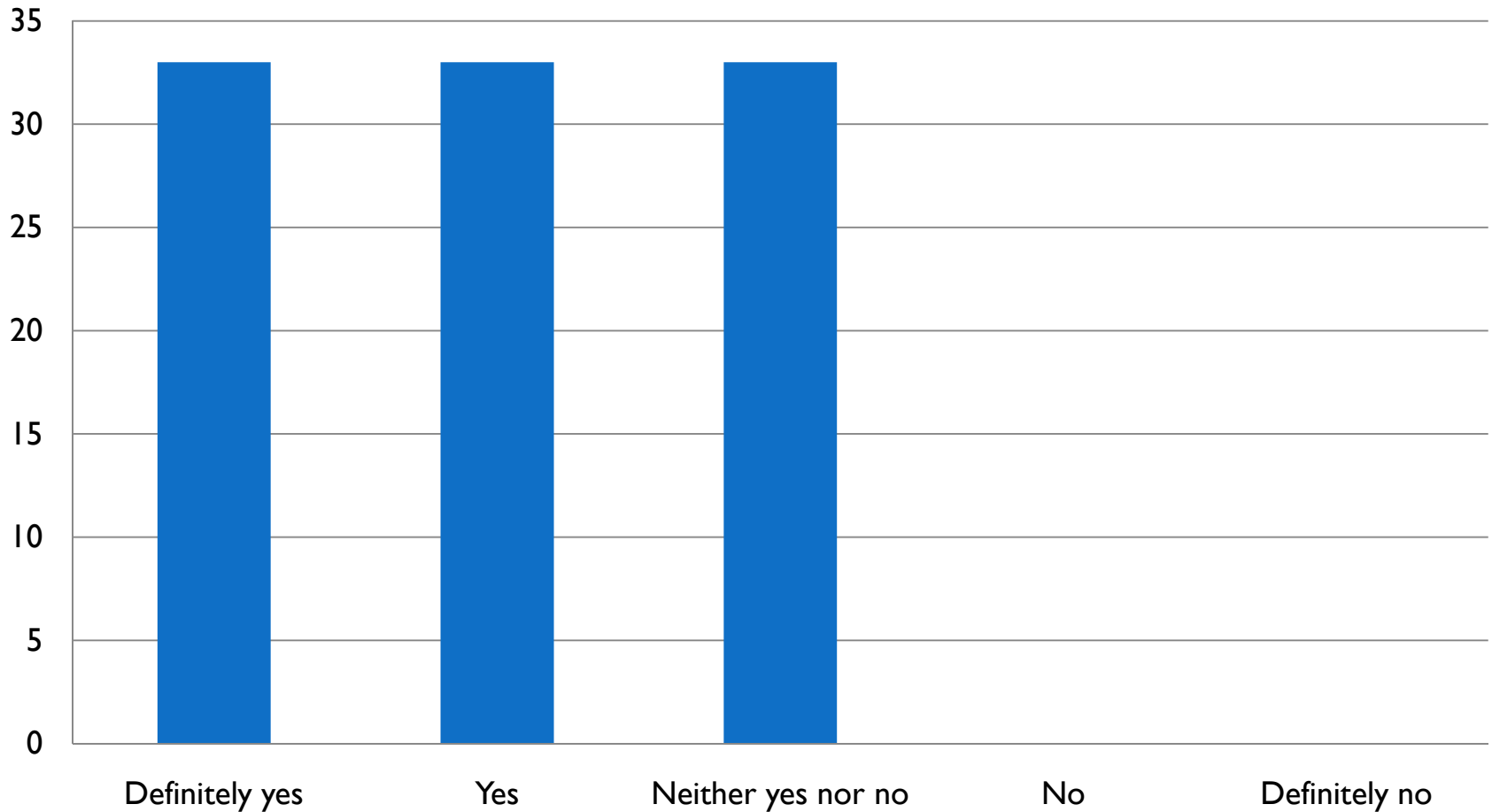
Allowed your group to be more successful?

Biotech



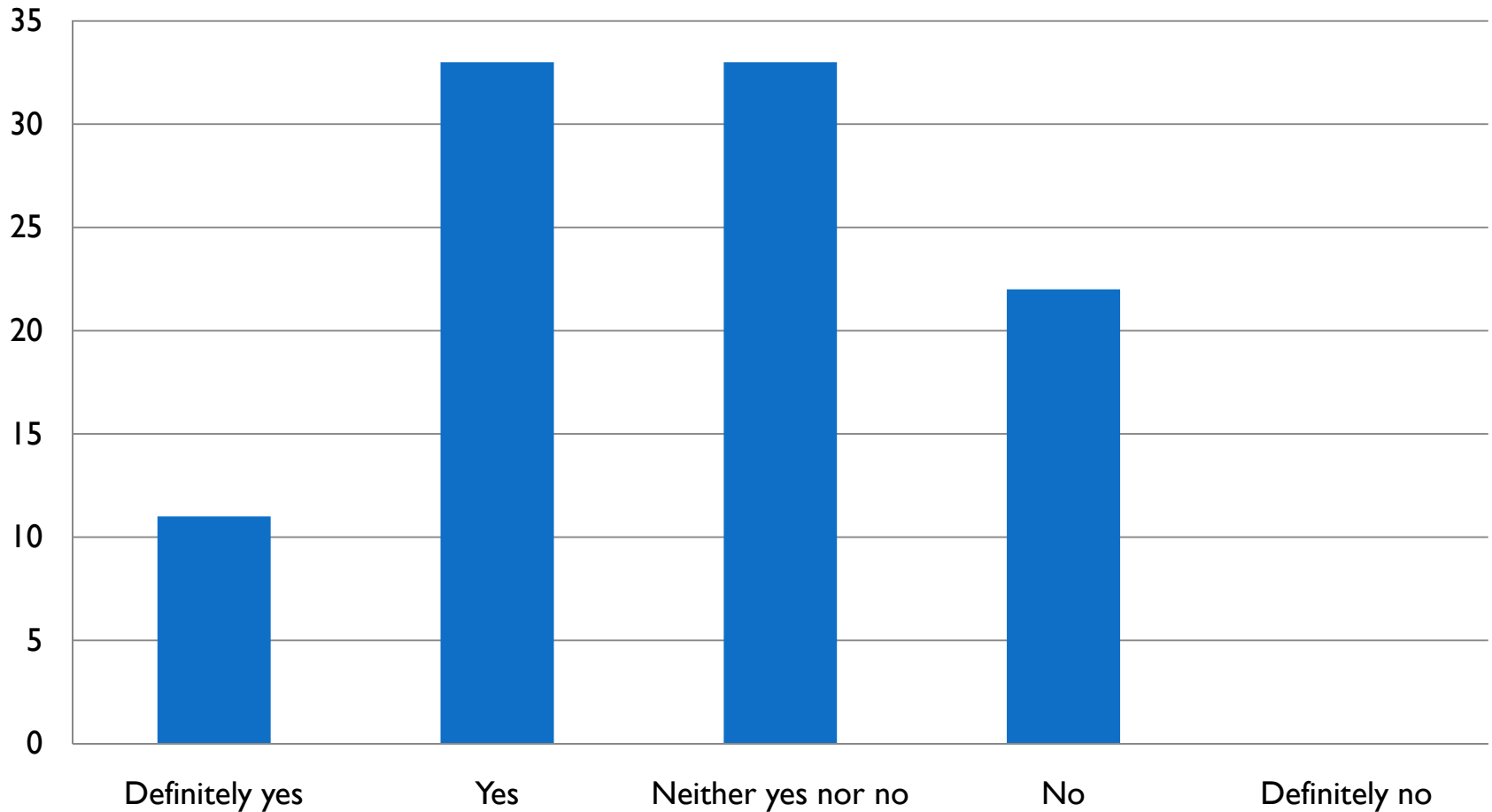
Allowed your group to be more successful?

Medical and Bioinformatics



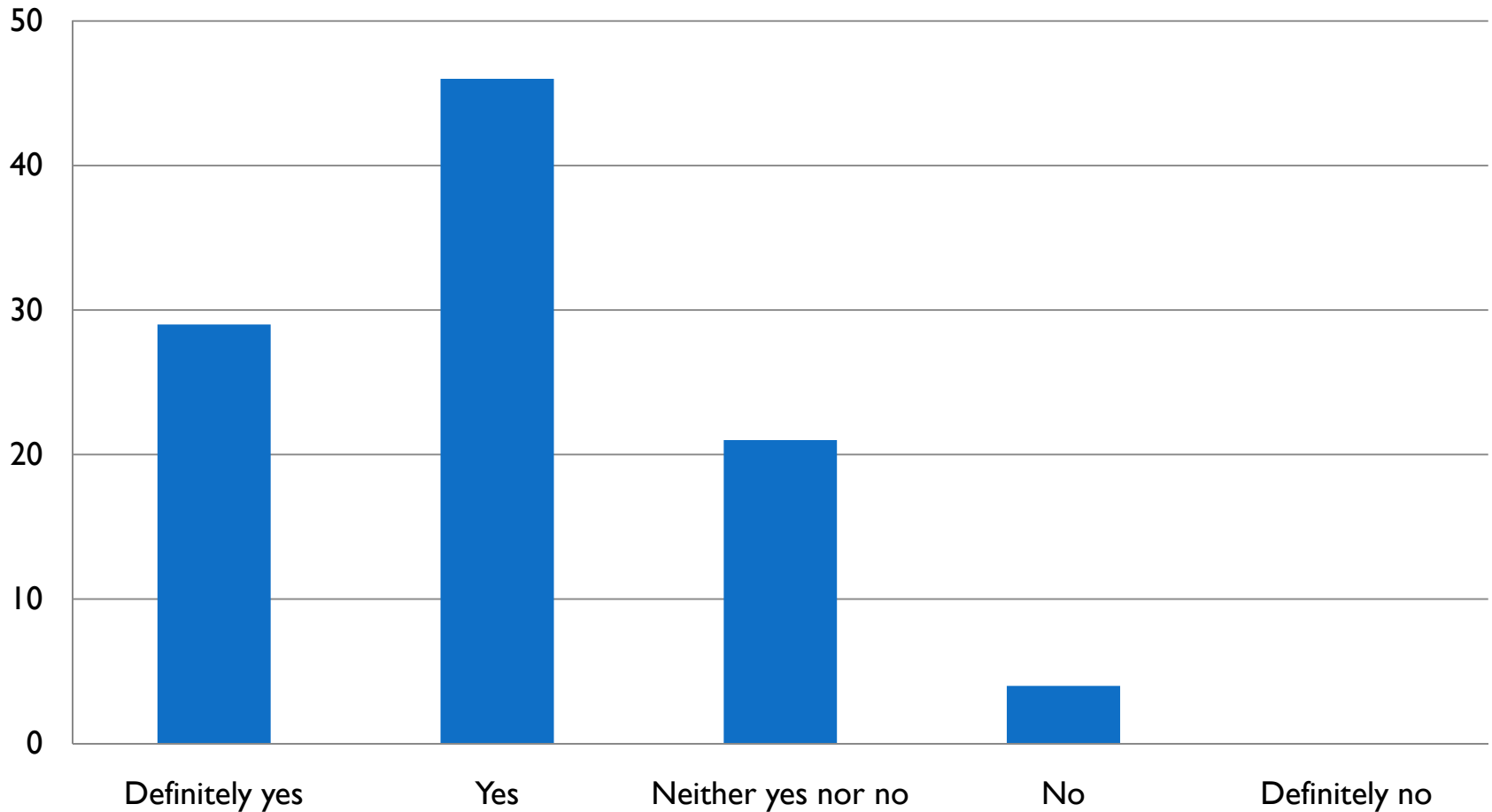
Allowed your group to be more successful?

Biostats



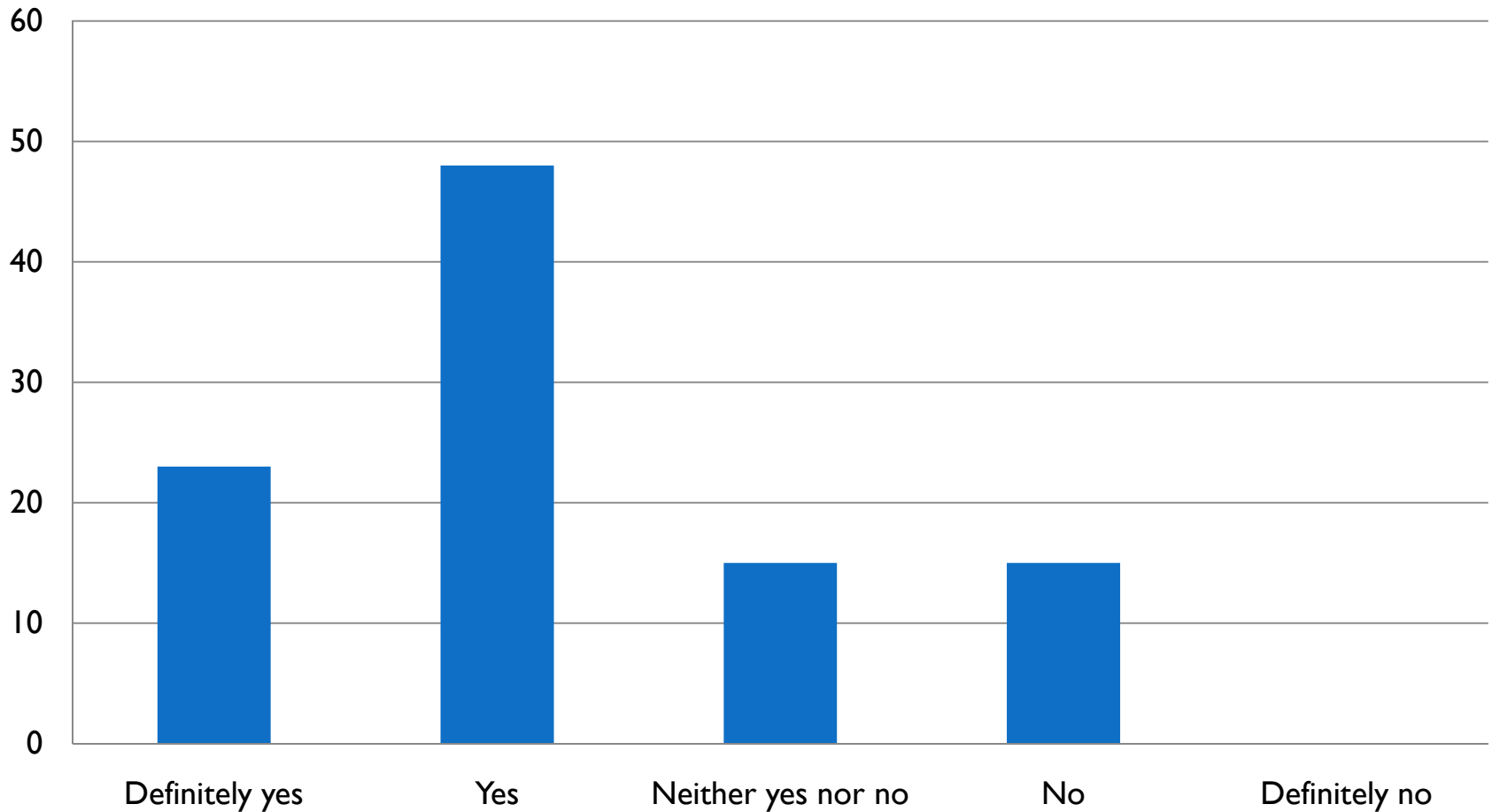
Allowed your group to be more successful?

2nd year PSM



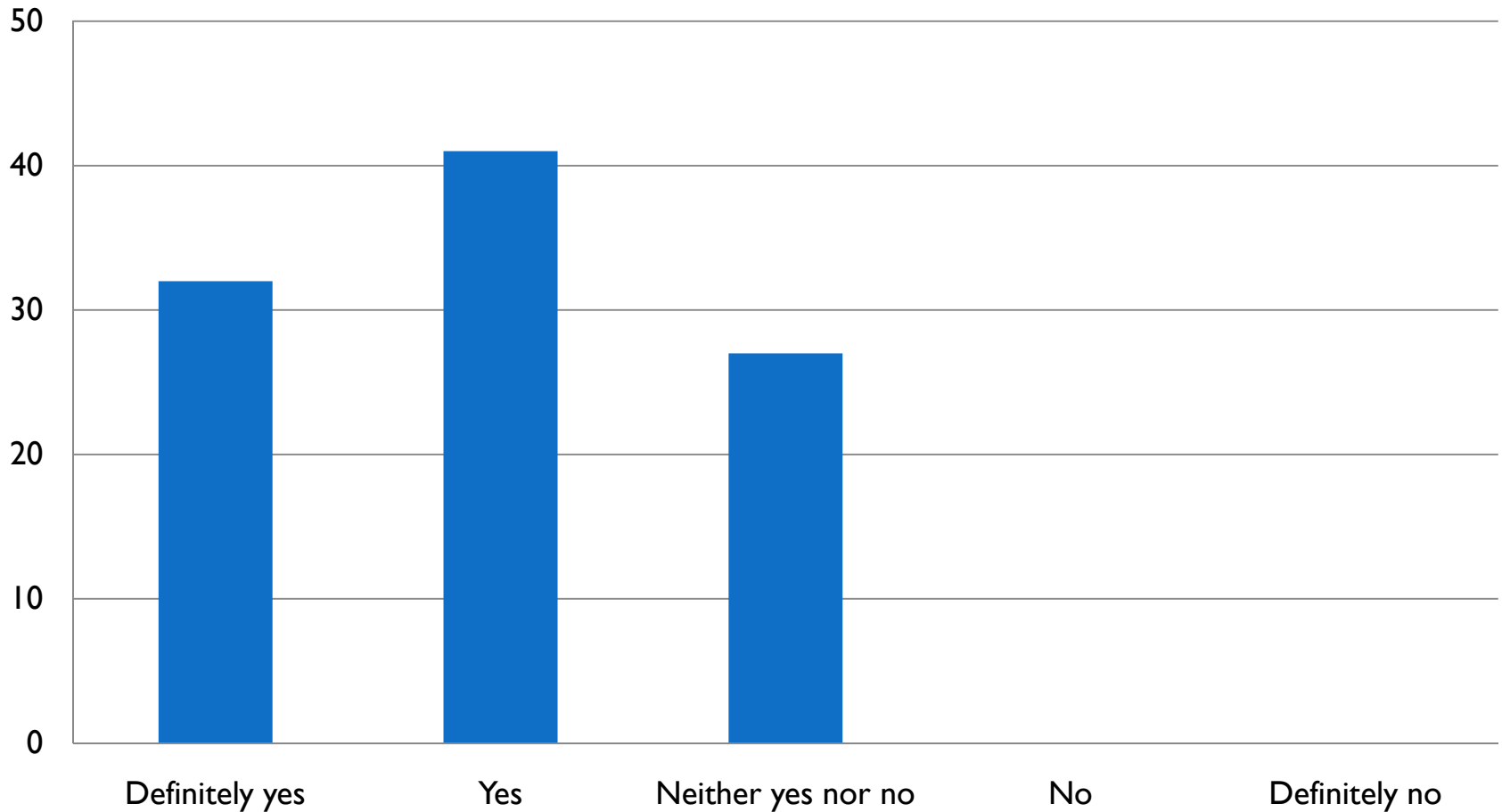
Helped you learn more about the subject?

All PSM Students



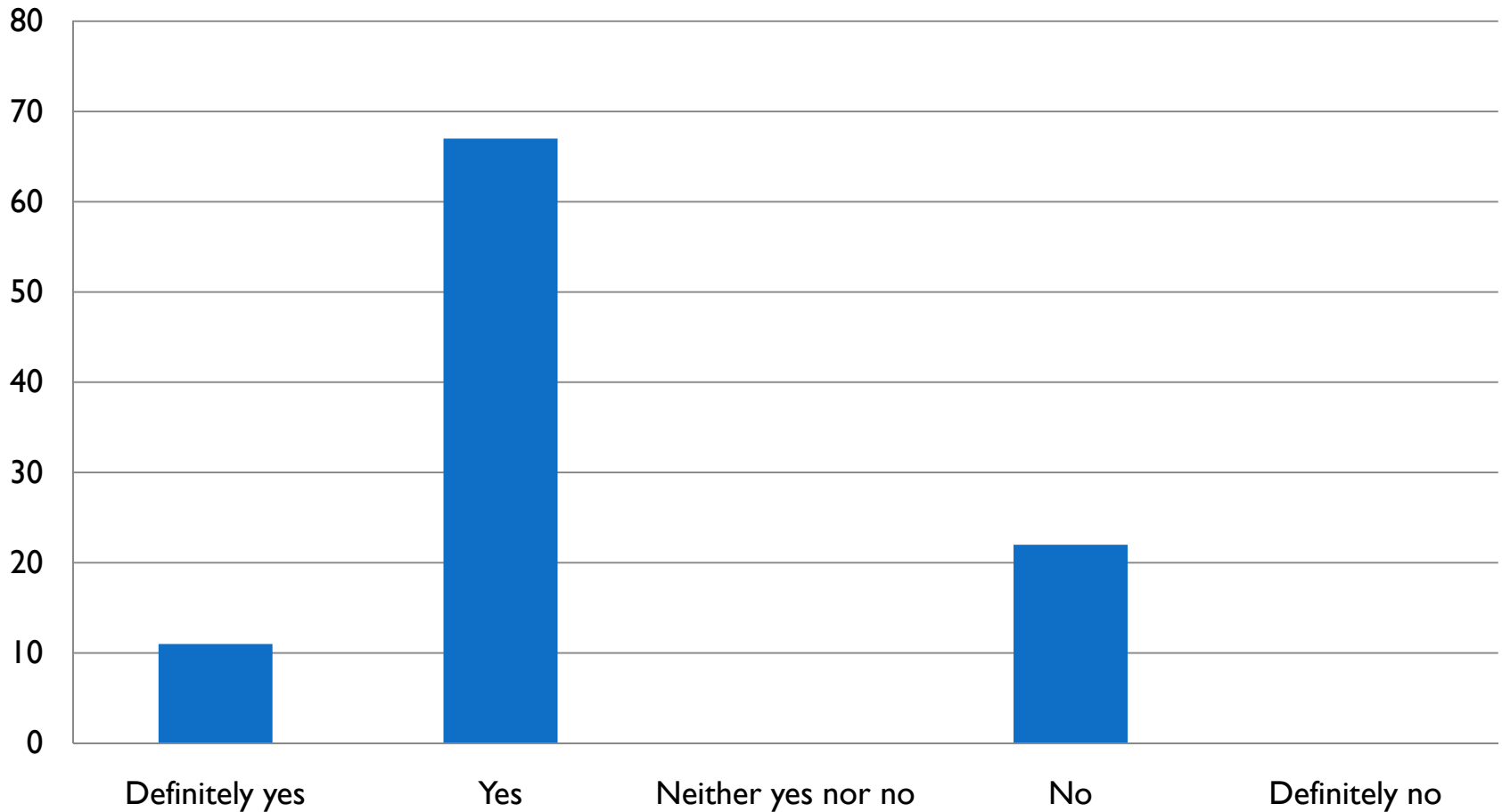
Helped you learn more about the subject?

Biotech



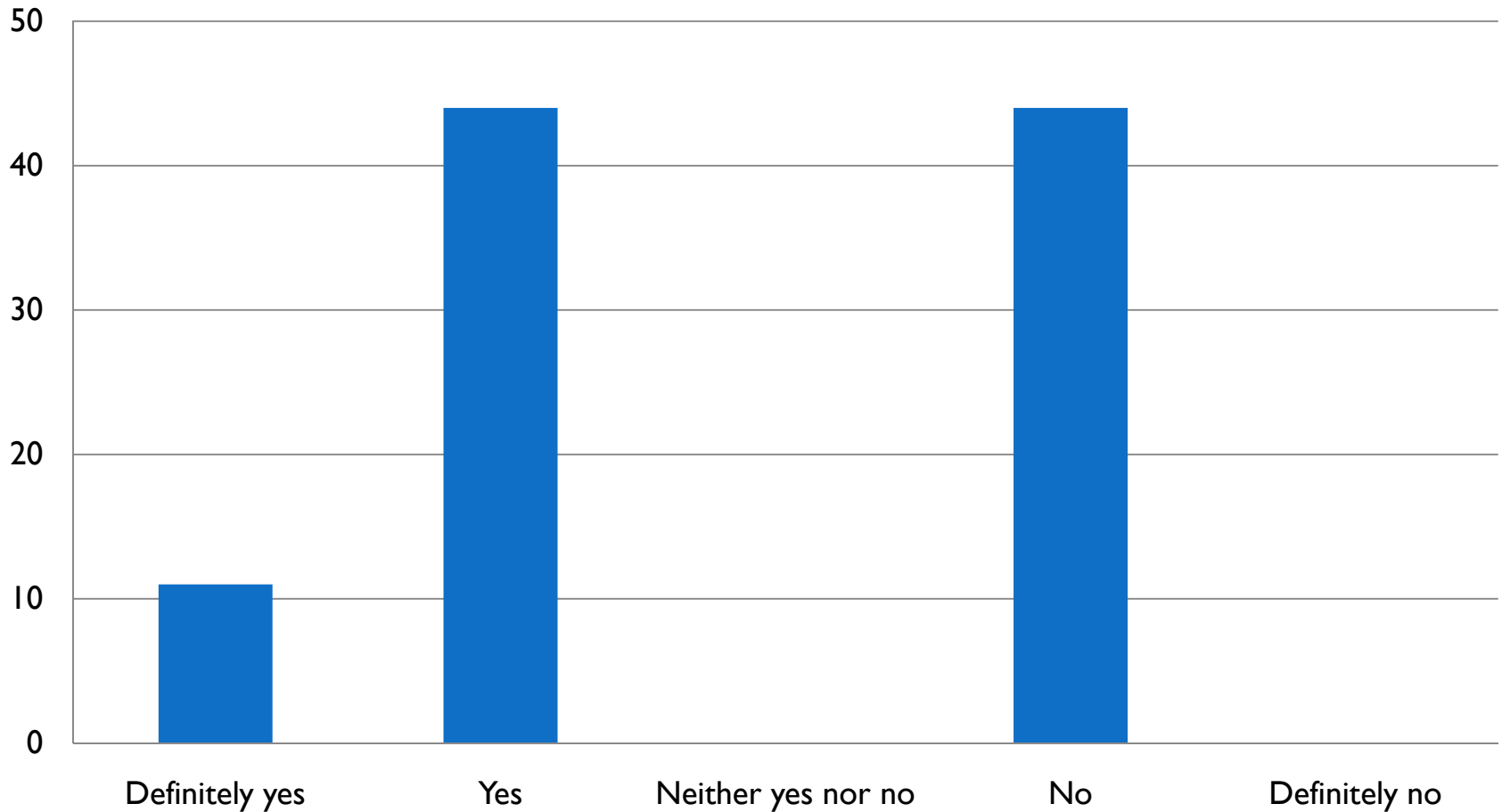
Helped you learn more about the subject?

Medical and Bioinformatics



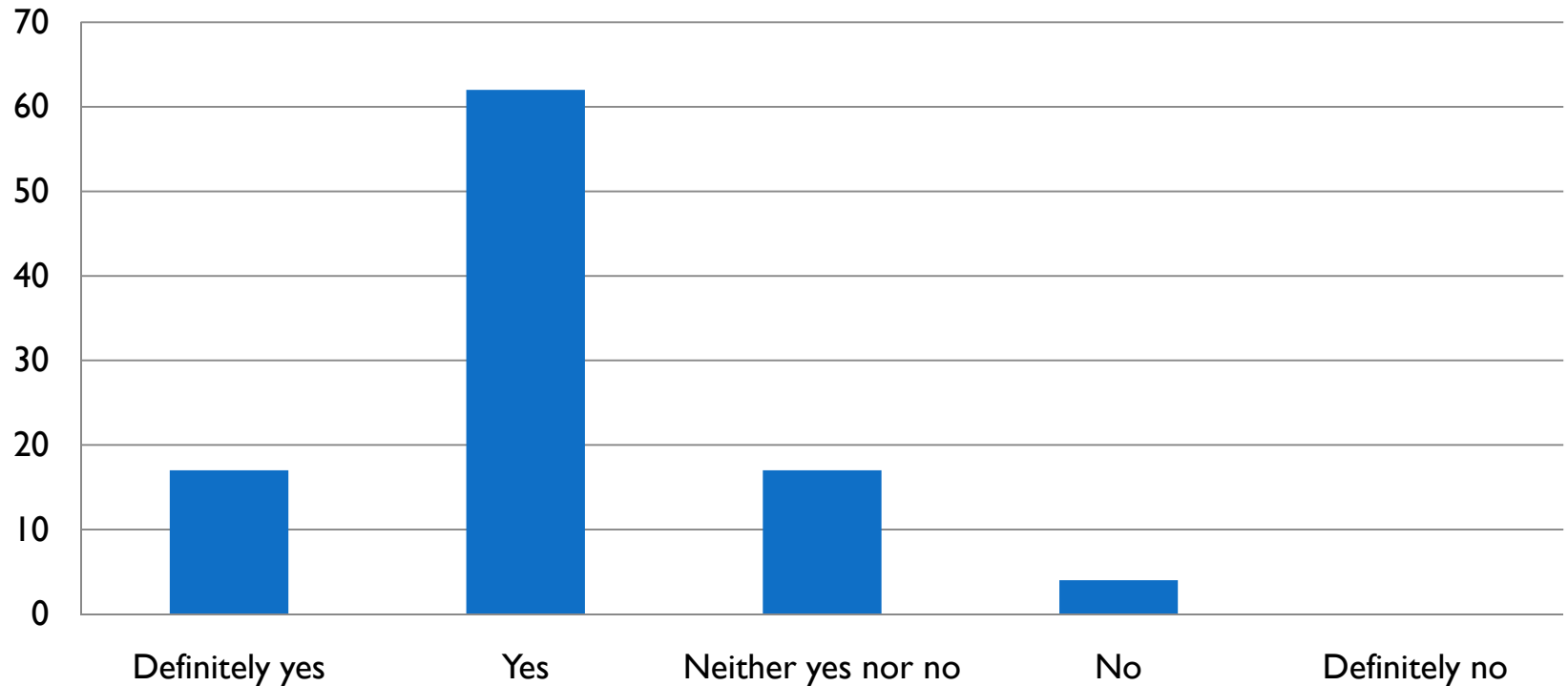
Helped you learn more about the subject?

Biostats



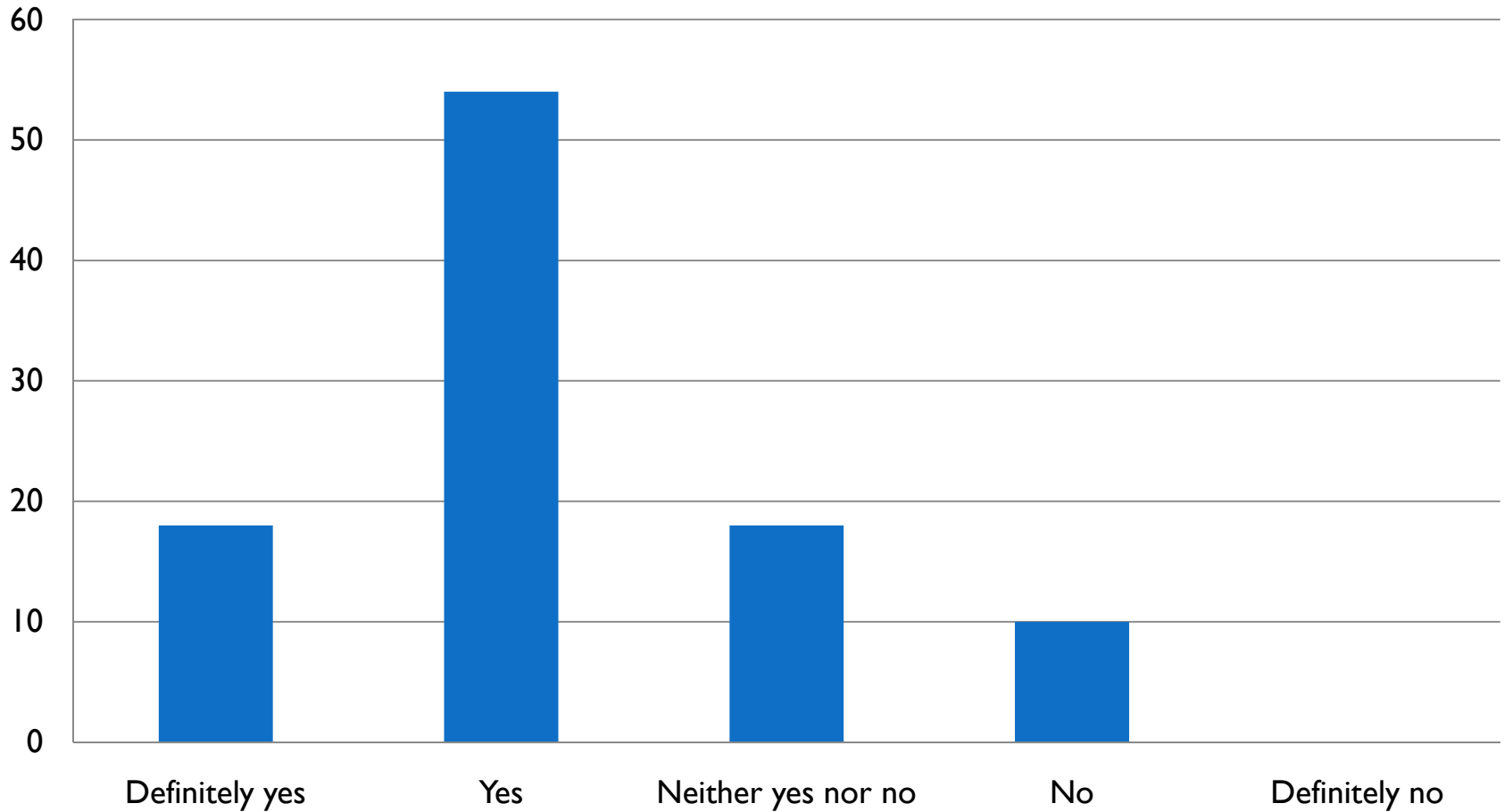
Helped you learn more about the subject?

2nd year PSM



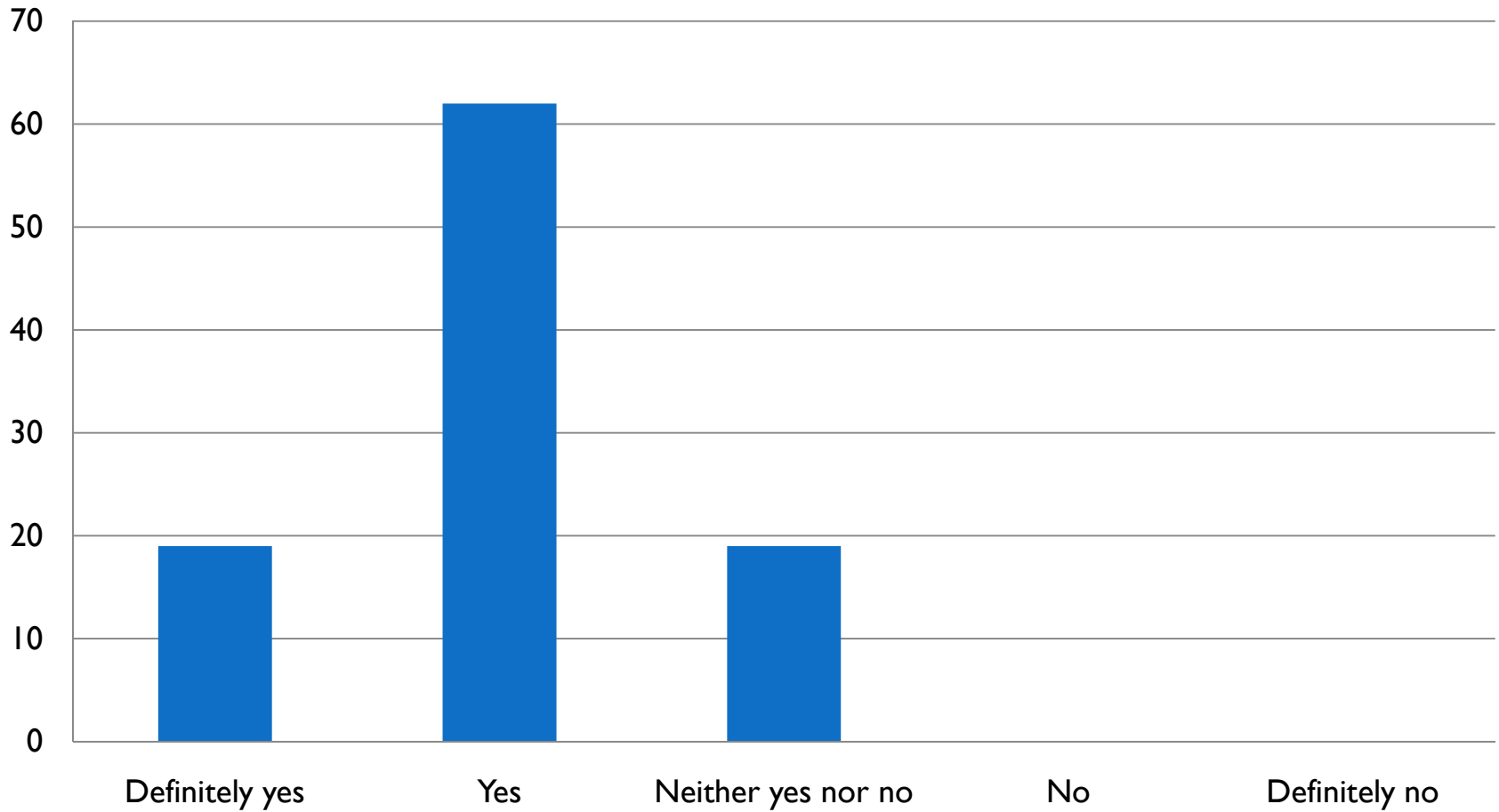
Promoted “peer teaching?”

All PSM Students



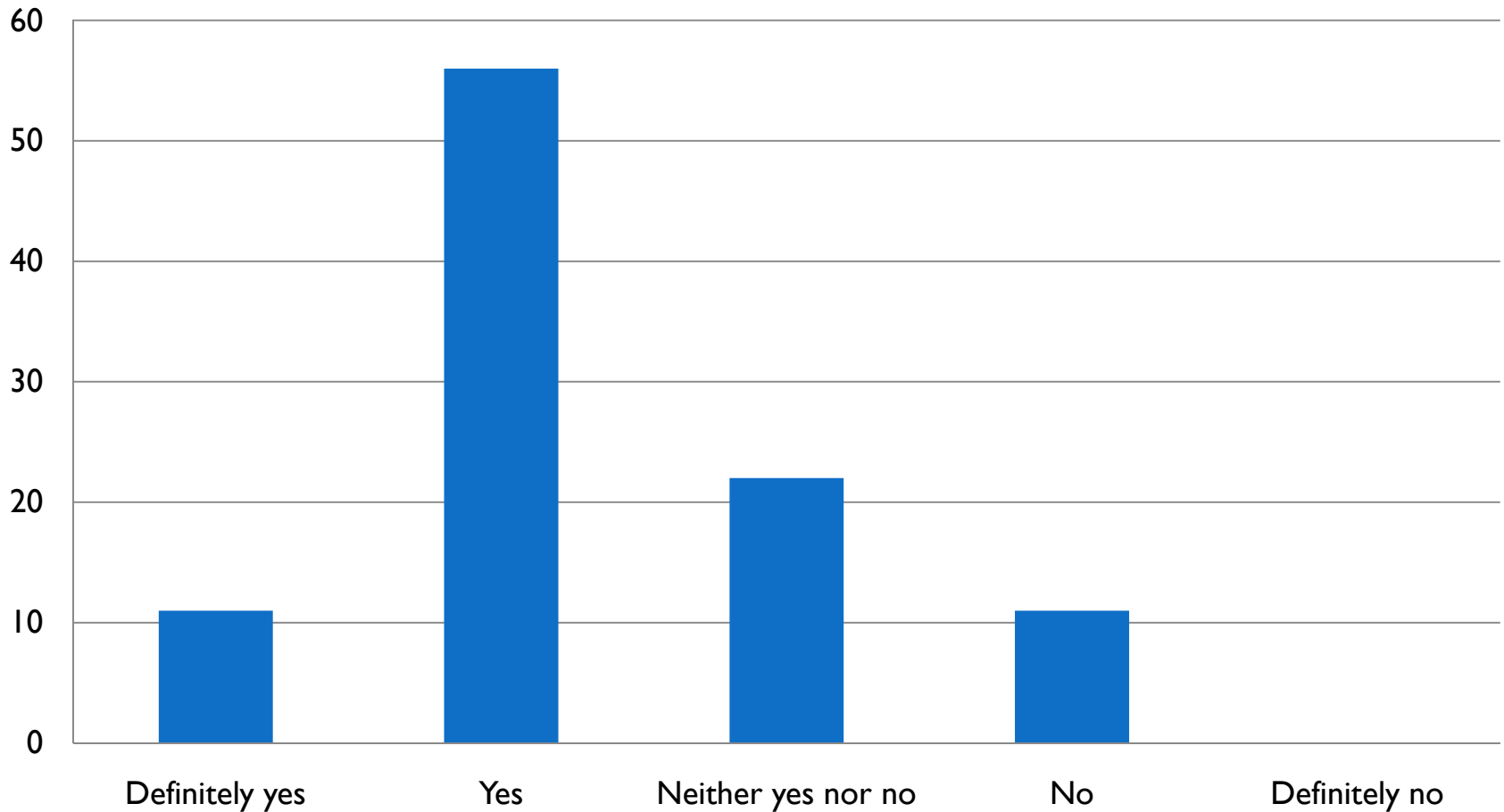
Promoted “peer teaching?”

Biotech



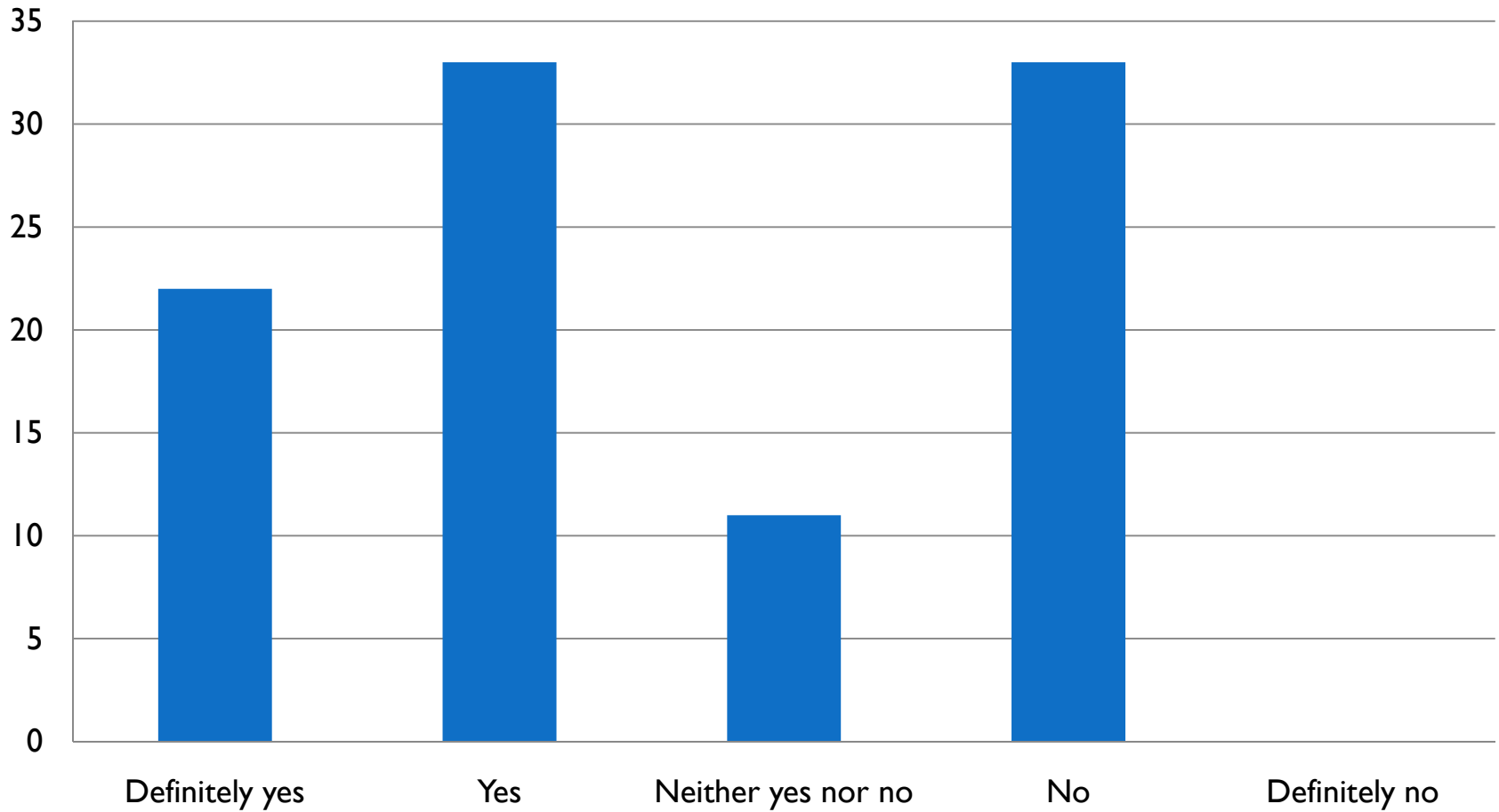
Promoted “peer teaching?”

Medical and Bioinformatics



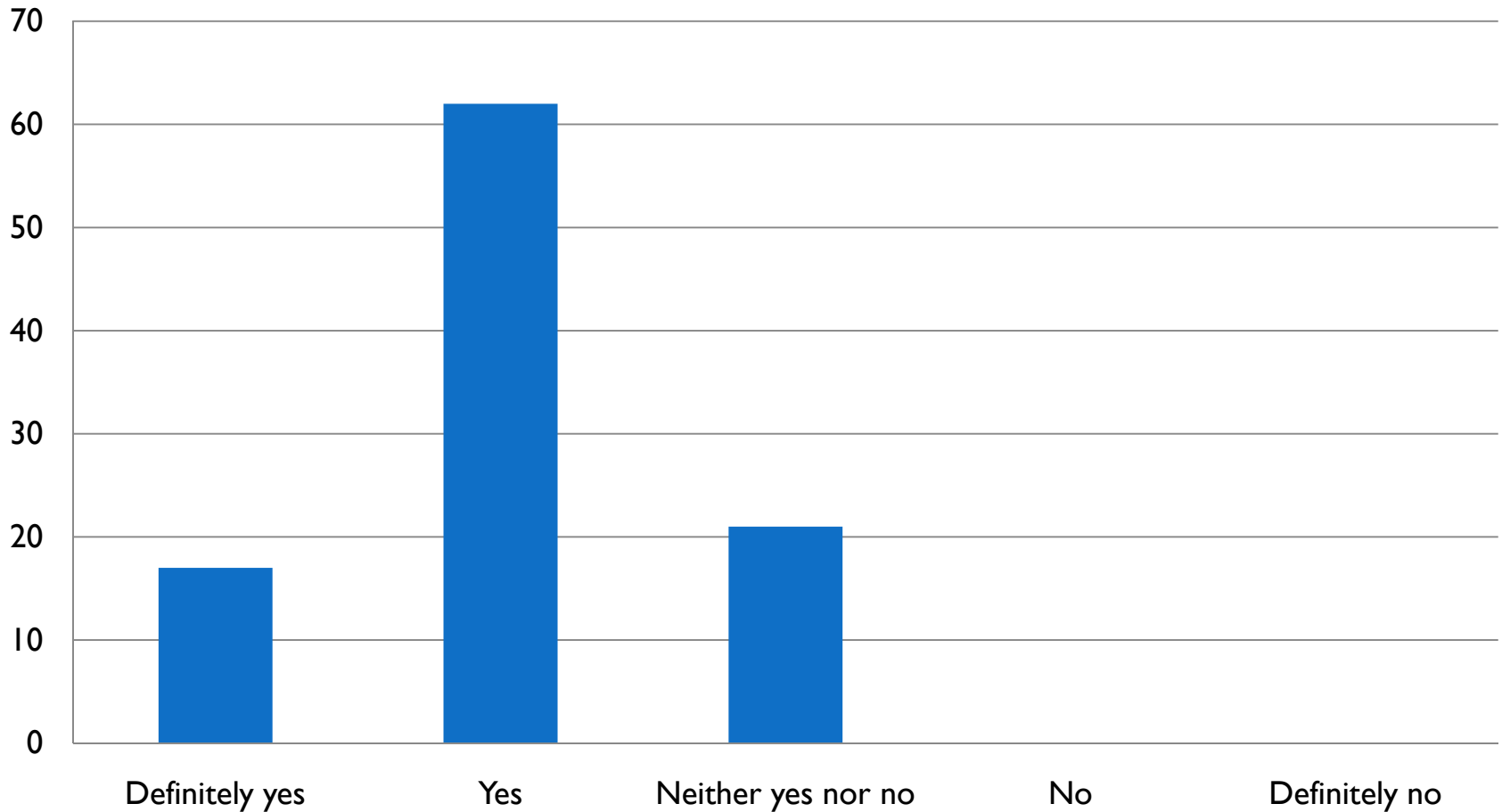
Promoted “peer teaching?”

Biostats



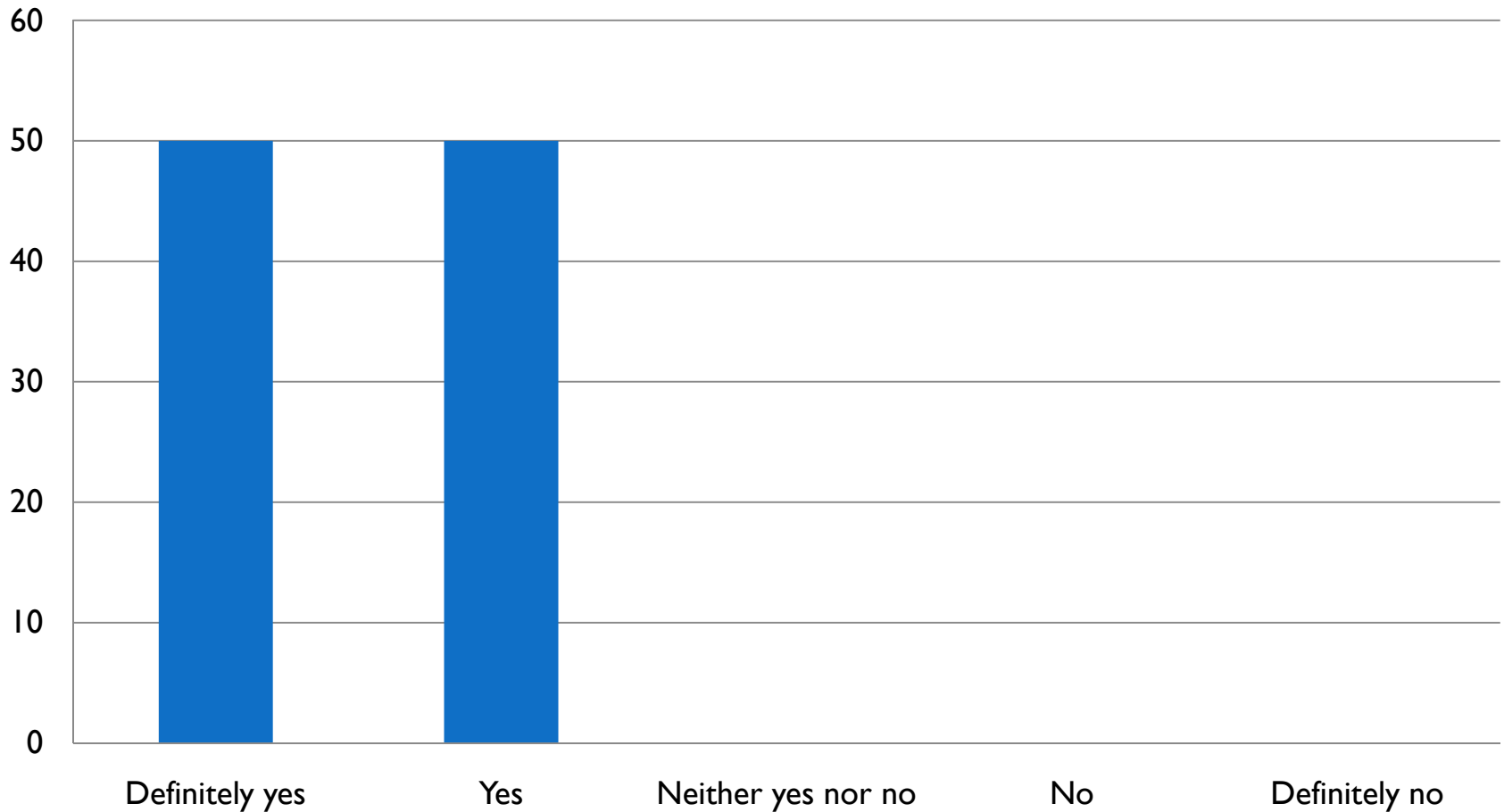
Promoted “peer teaching?”

2nd year PSM



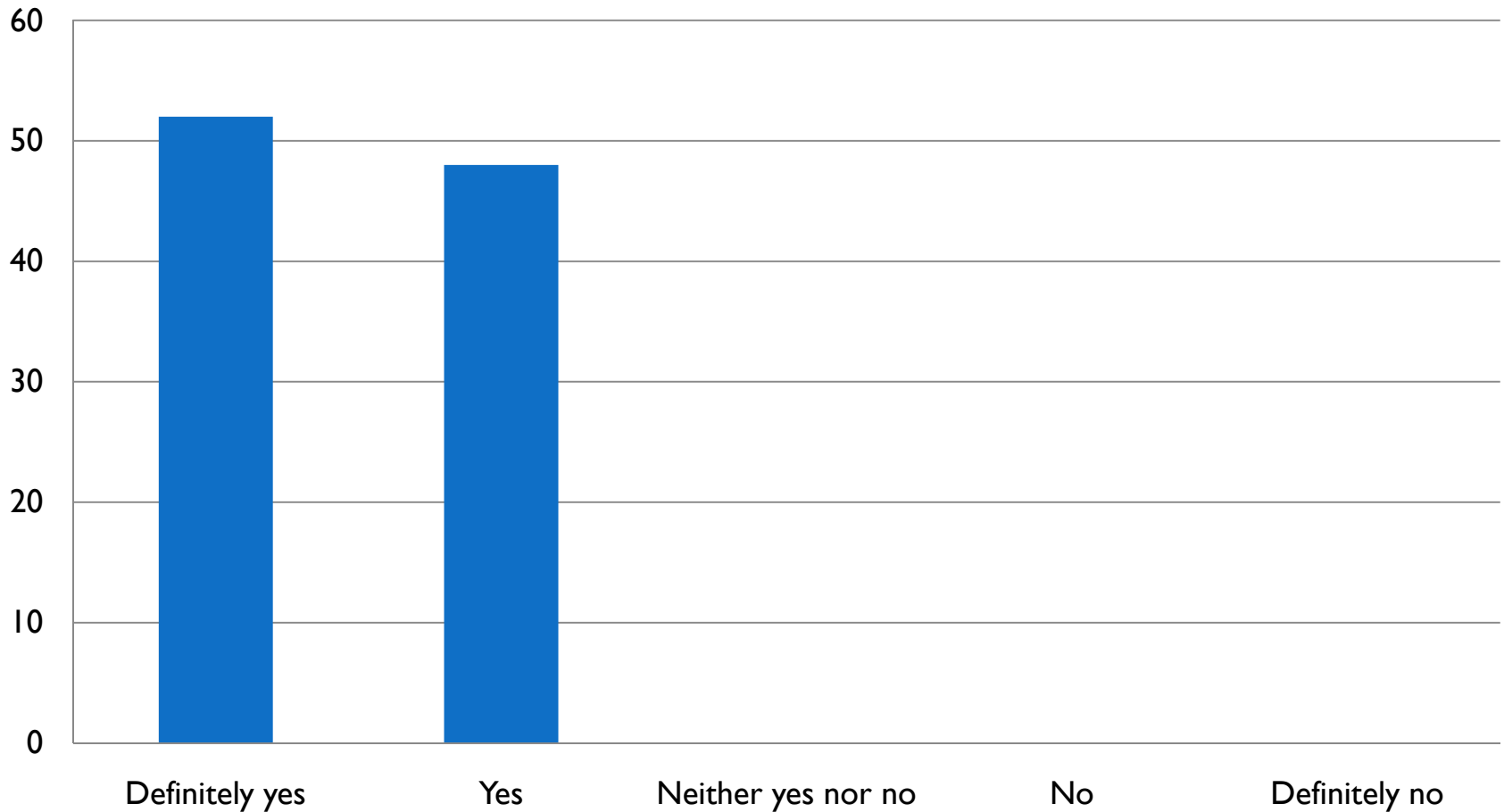
Do you think that jobs in industry require work in interdisciplinary groups?

All PSM Students



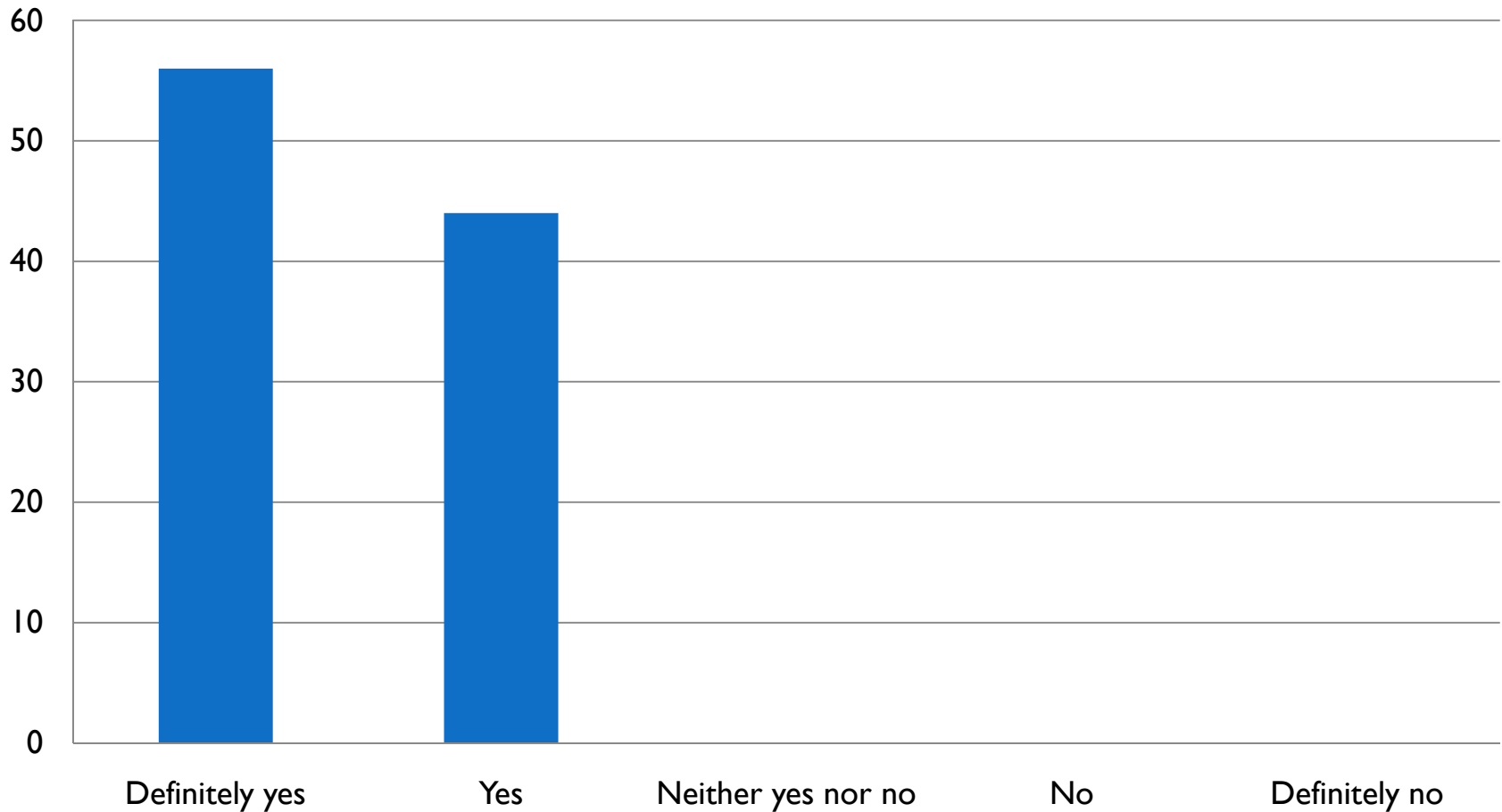
Do you think that jobs in industry require work in interdisciplinary groups?

Biotech



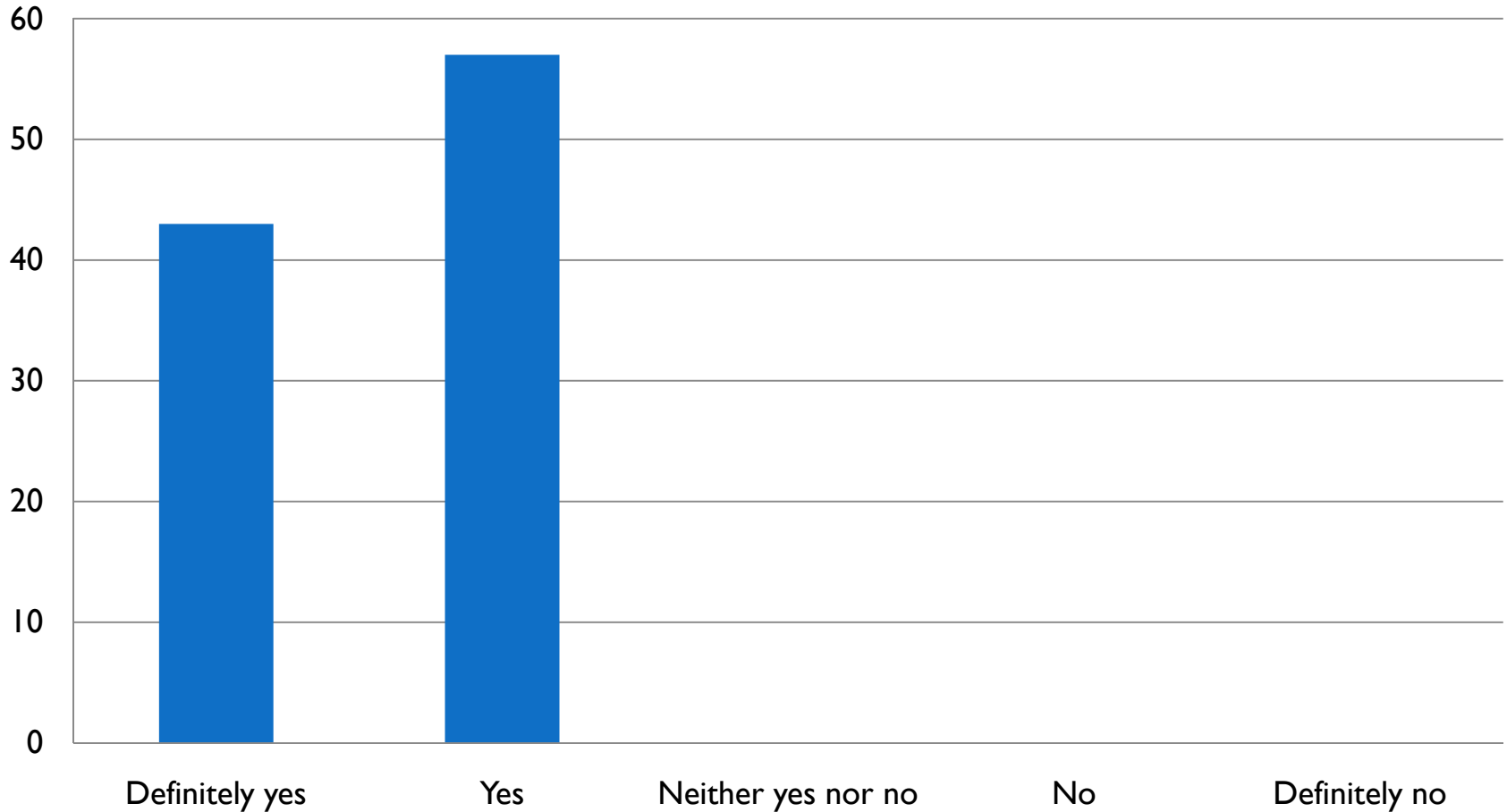
Do you think that jobs in industry require work in interdisciplinary groups?

Medical and Bioinformatics



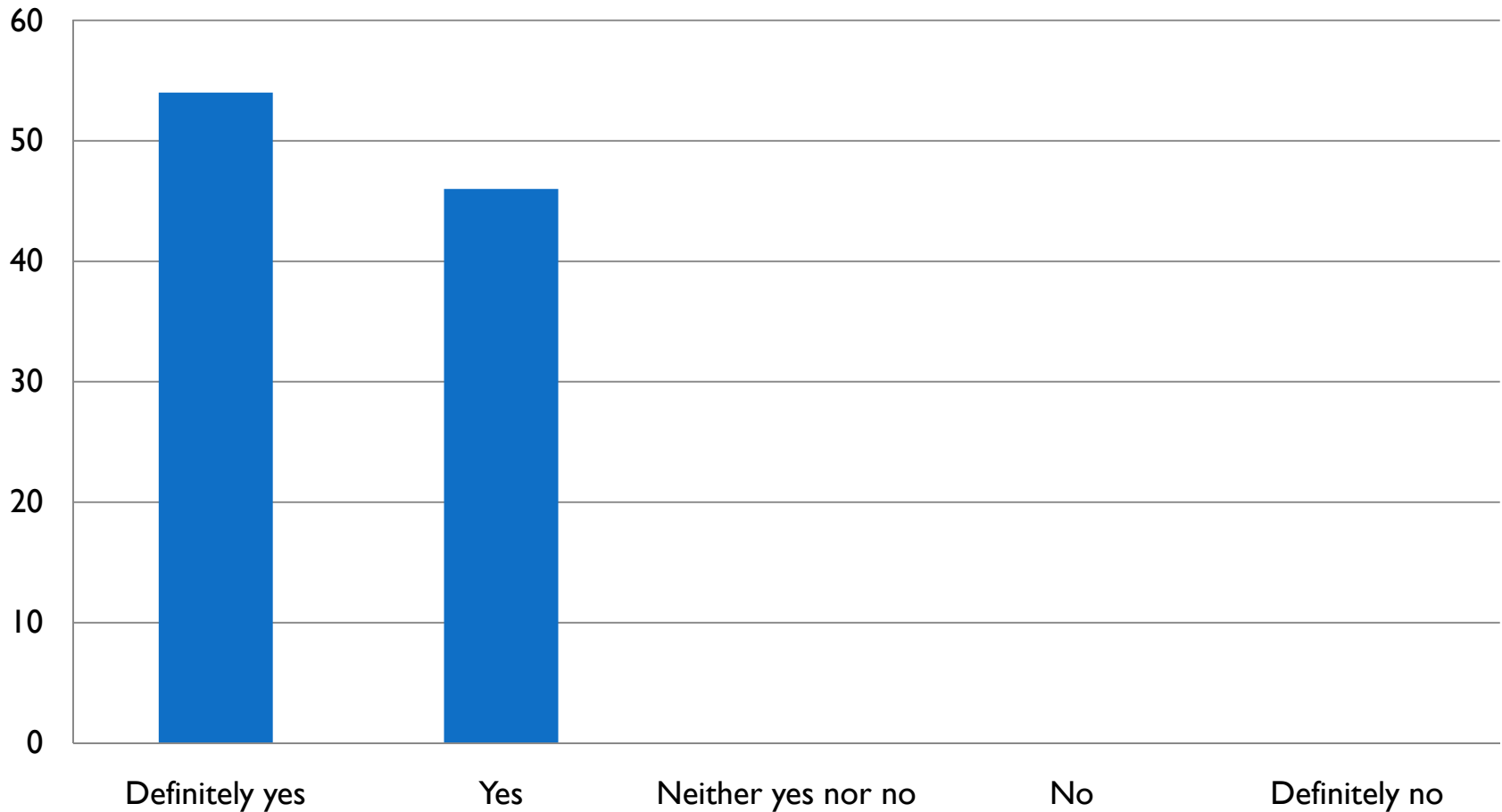
Do you think that jobs in industry require work in interdisciplinary groups?

Biostats



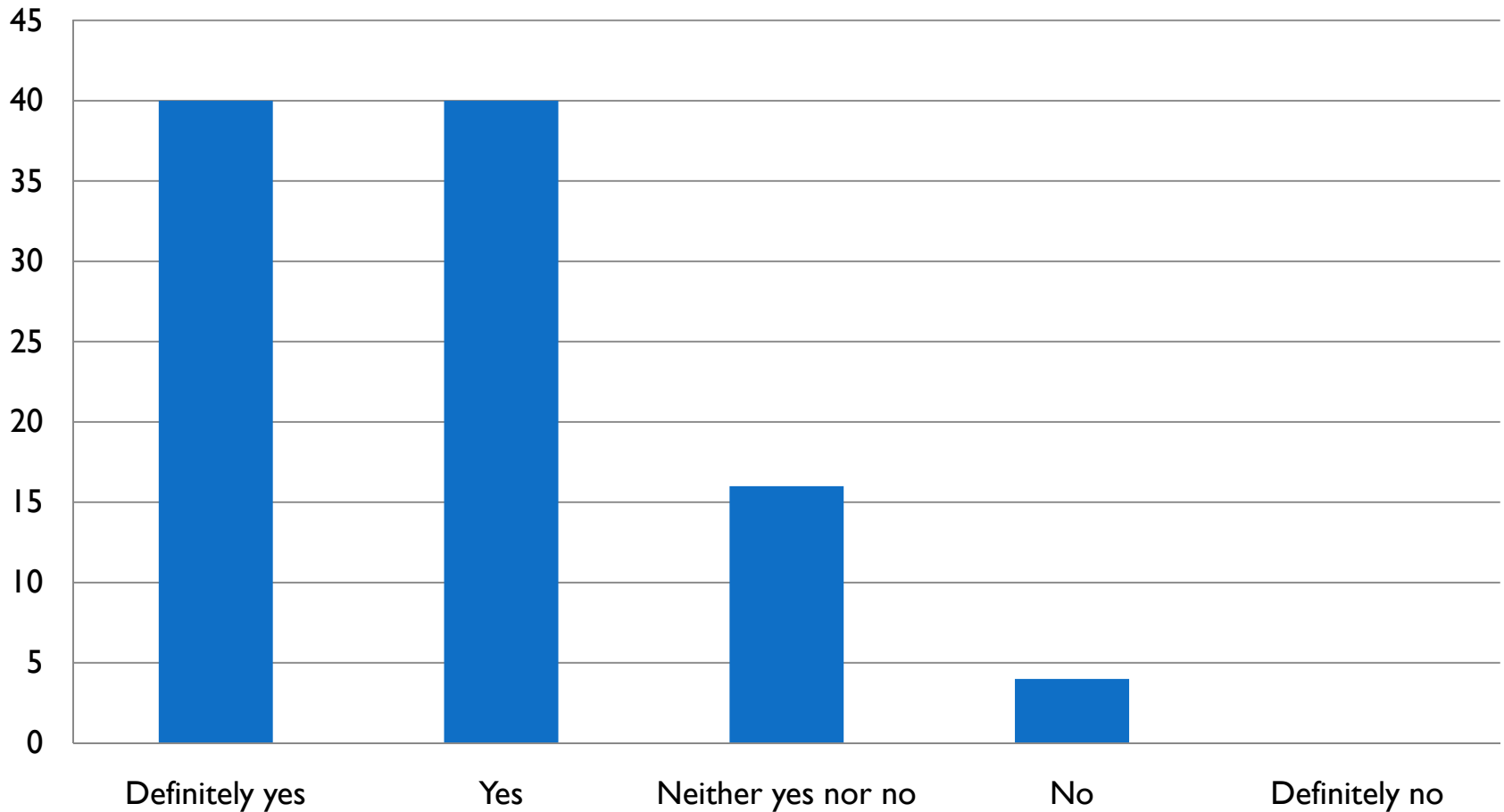
Do you think that jobs in industry require work in interdisciplinary groups?

2nd year PSM



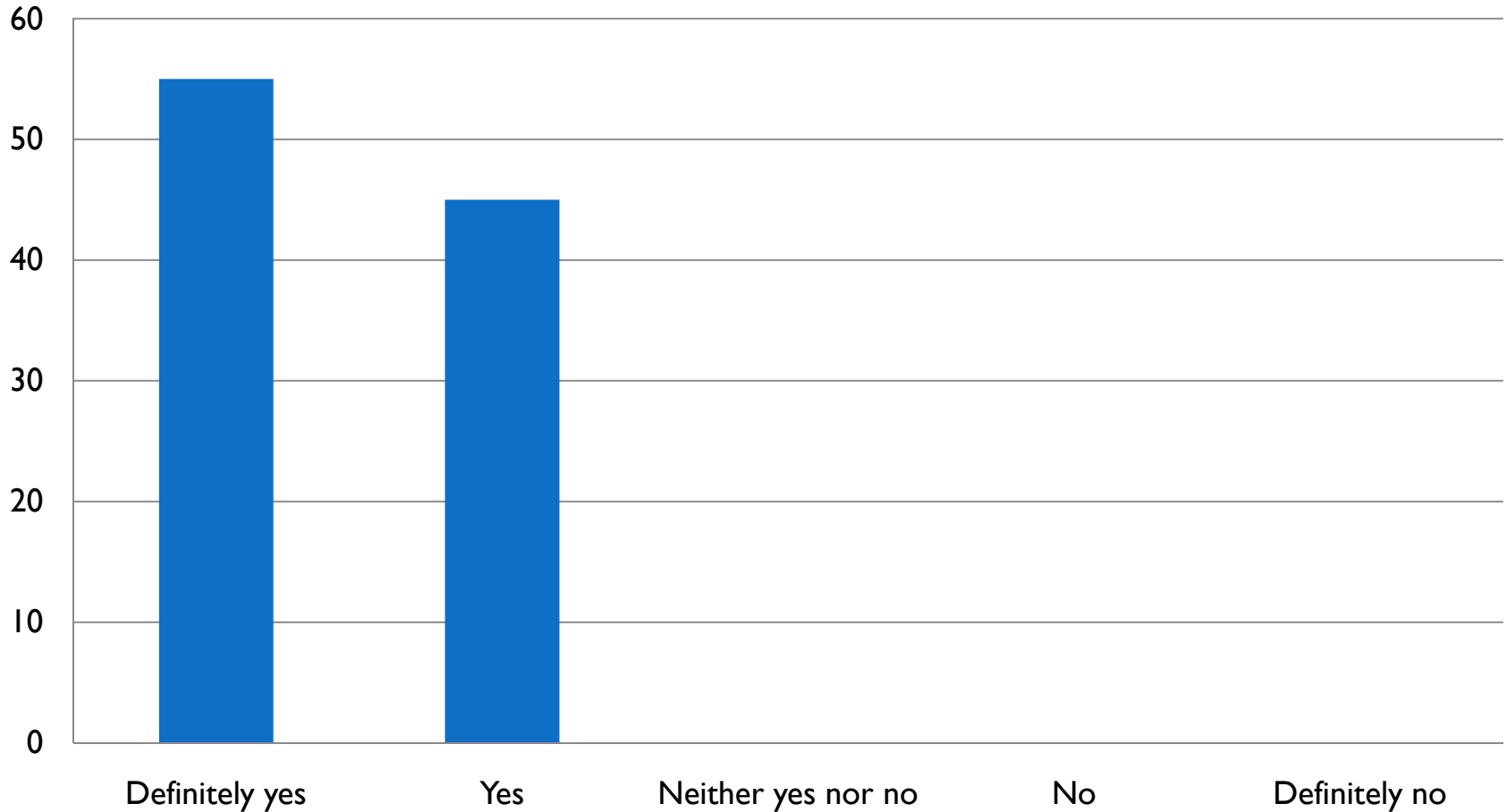
Will it be beneficial to your education to work in interdisciplinary groups?

AI PSM Students



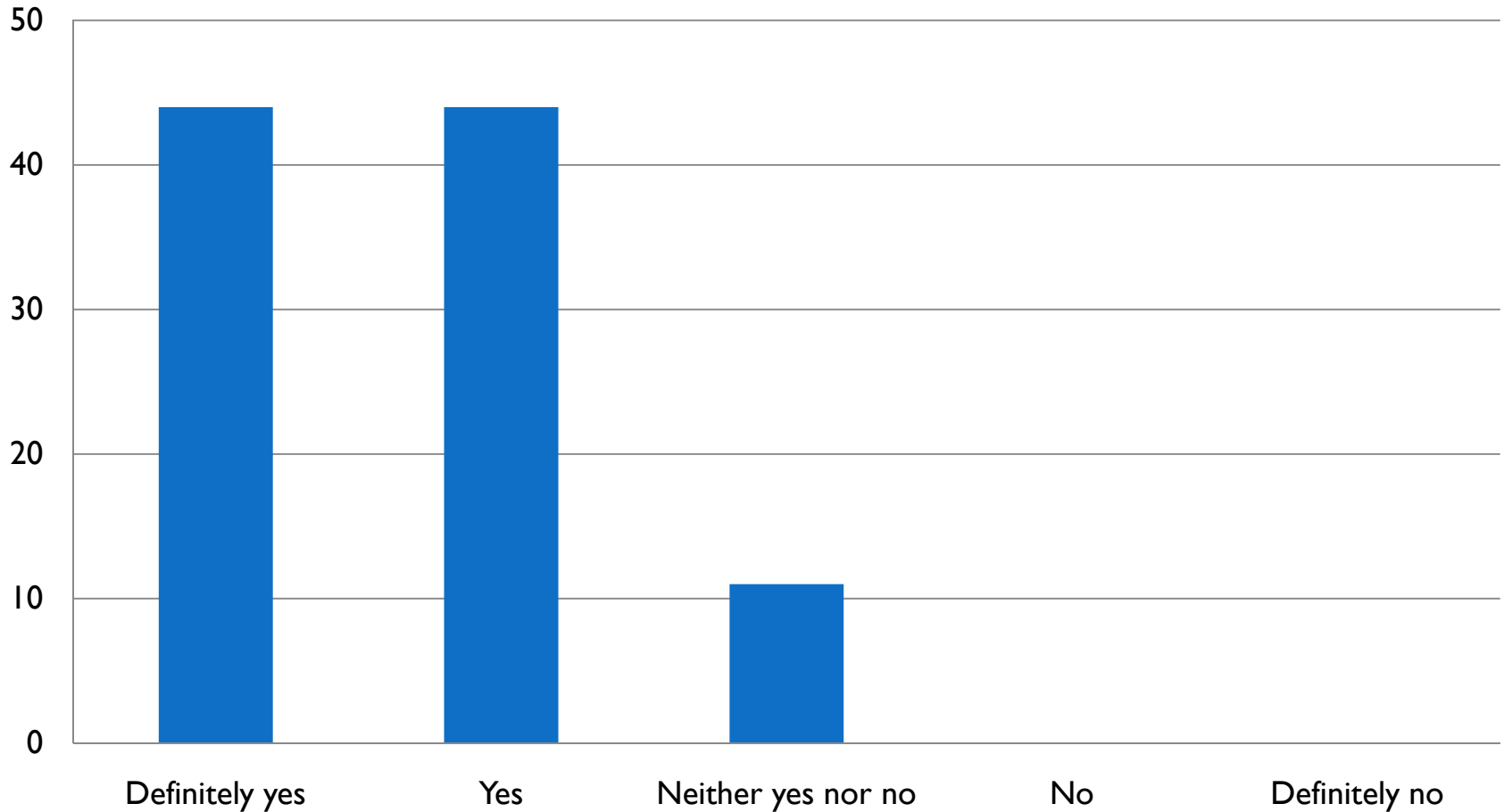
Will it be beneficial to your education to work in interdisciplinary groups?

Biotech



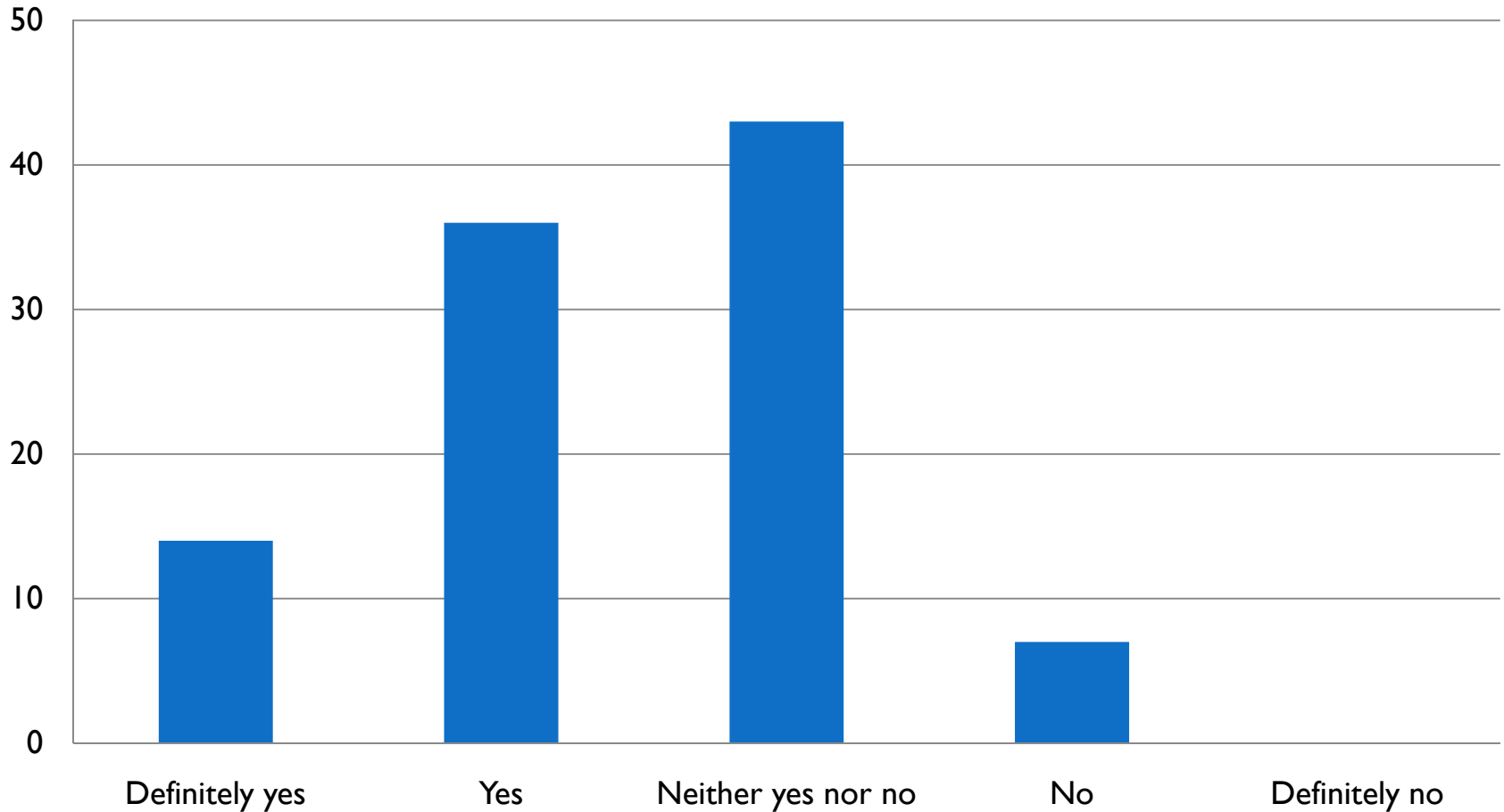
Will it be beneficial to your education to work in interdisciplinary groups?

Medical and Bioinformatics



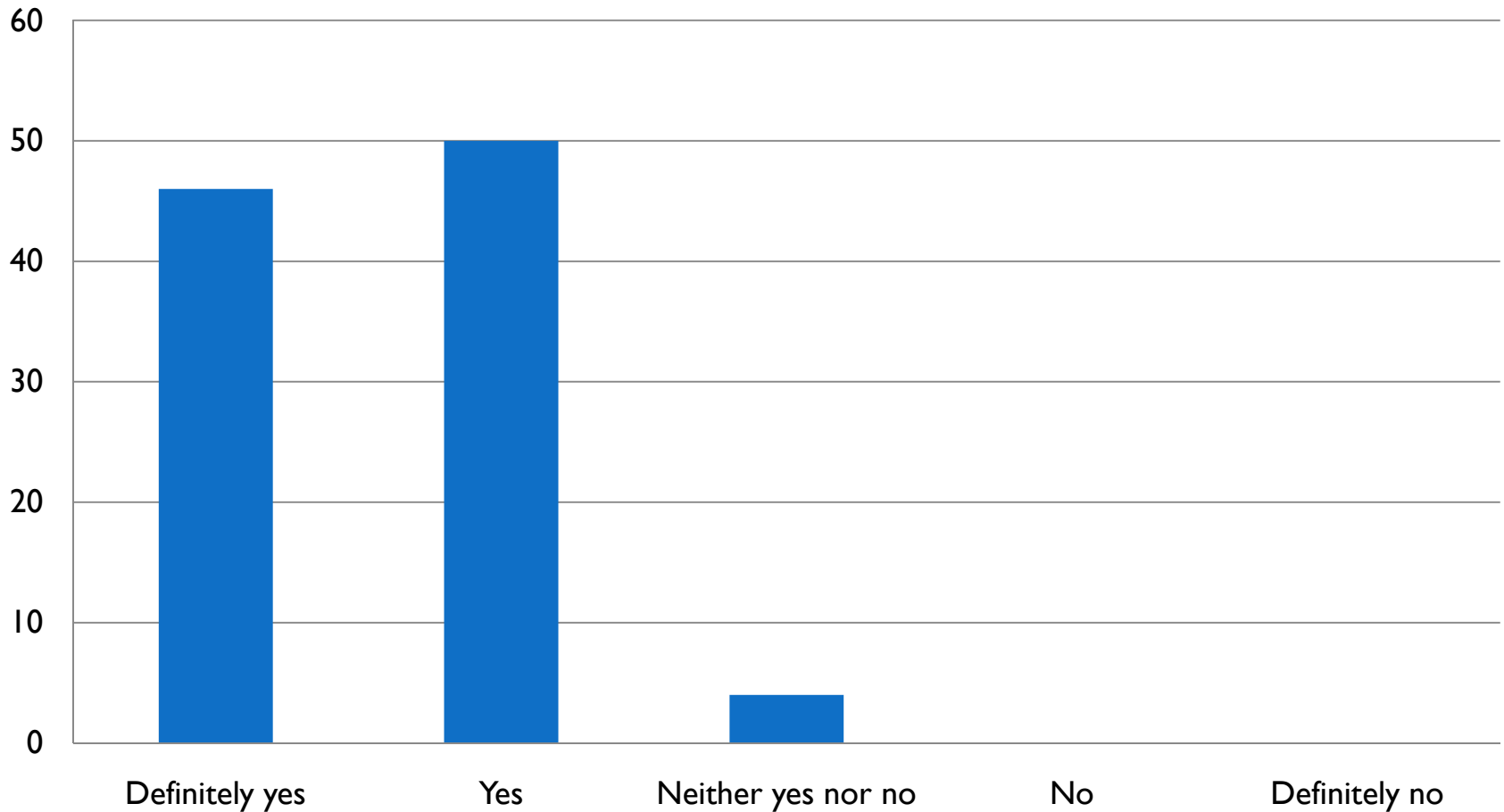
Will it be beneficial to your education to work in interdisciplinary groups?

Biostats



Will it be beneficial to your education to work in interdisciplinary groups?

2nd year PSM



So, what's up with the biostatistics students?

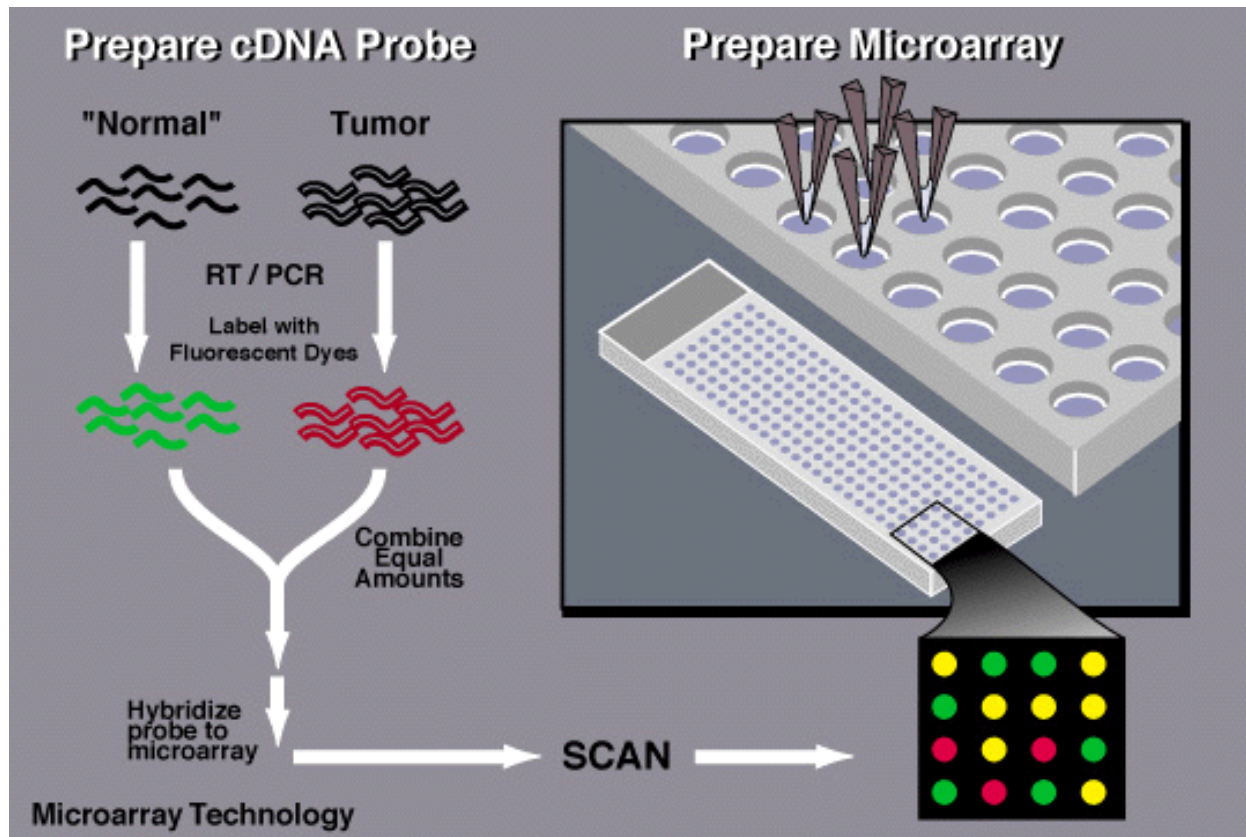
- ▶ Many are employed full-time – it is hard to find time to get together with students to work on projects.
- ▶ They do not come from a culture of group projects.
- ▶ Most are local students....



Some thoughts:

- ▶ Interdisciplinary groups work well
 - ▶ **If** the task can benefit from a combination of areas of expertise
- ▶ Successful groups will need to take into account extracurricular obligations of the students (work, family, etc.)
- ▶ Completing internships earlier may be useful, but there is always a tension between getting to the internship quickly and having acquired the skills to complete a successful internship





plantandsoil.unl.edu/croptechology2005/UserF...



Questions or Comments?

