

THE BIENNIAL AFRICAN SCHOOL OF FUNDAMENTAL PHYSICS AND APPLICATIONS (ASP)



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<http://www.africanschoolofphysics.org/>

Objectives



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- **Increase capacity in fundamental physics and related applications**
 - Organizing a biennial school rotating in different African Countries
 - Networking among African Students and with lecturers
 - Sharing of information on high education opportunities around the world
 - Promote collaboration between African countries in education and research
 - Promote collaboration between African institutes and abroad
- **First edition of the school, ASP2010**
 - August 1-21, 2010 (3 weeks) in Stellenbosch, South Africa. Attended by 65 students from 17 African countries. **125 applications received**
- **Second edition of the school, ASP2012**
 - At the Kwame Nkrumah University of Science and Technology (KNUST), Kumasi Ghana. July 15 – August 8, 2012 (3.5 weeks). Attended by 50 students from 15 African countries. **138 applications**
- **Third edition, ASP2014**
 - At the Cheikh Anta Diop University in Dakar Senegal. 3-23 August 2014. Attended by 56 students from 17 countries. **330 applications received.**
- **4th Edition, ASP2016 1-19 August 2016 in Rwanda**
 - **439 applications received. 80 students selected: 2 non-Africans. Of the selected 80, 32 were females, hence female : male ratio of 32 : 48**
- **School participation is free of charge to the selected students**
 - Full bursaries for selected students
 - The total cost per student for 3 weeks is €3200 (international student) and €2000 (local student).



Organization



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- **International Organizing Committee (IOC)**
 - The IOC is the main organizer of ASP
 - The IOC Members:
 - B. Acharya (ICTP & King's College London)
 - **K. A. Assamagan (BNL)**
 - A. Dabrowski (CERN)
 - C. Darve (ESS)
 - J. Ellis (CERN & King's College London)
 - S. Muanza (CNRS-IN2P3)
 - R. Voss (CERN)
- **Local Organizing Committee (LOC)**
 - Local committee in the host country
- **International Advisory Committee (IAC)**
 - Advises on various aspects of the organization including fund raising

How to contact the IOC: ASP-IOC@CERN.CH





The ASP Scientific Program

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- The school duration is 3 weeks
- In the first week, we concentrate of theoretical foundation of nuclear and particle physics
- In the 2nd week, we concentrate on experimental physics and data analysis
- In the 3 week, we concentrate of applications, high performance grid computing, and topics of interest to the LOC
- A 2-day workshop is organized to train high school physics teachers
- A 3-day outreach event is organized for high school students





ASP2016 - Rwanda

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- August 1-19, 2016
 - At the University of Rwanda
- **Student attendance**
 - 74 from 29 African country, and 1 from the US
 - Ratio female : male students 29 : 46
- **Workshop for high school teacher**
 - 20 high school teachers from Rwanda
- **Outreach to secondary school**
 - 3 different high schools of 50 pupils each
- **Lecturers and support staff**
 - Of the order of 50



ASP2016 - Rwanda



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□ Sponsors

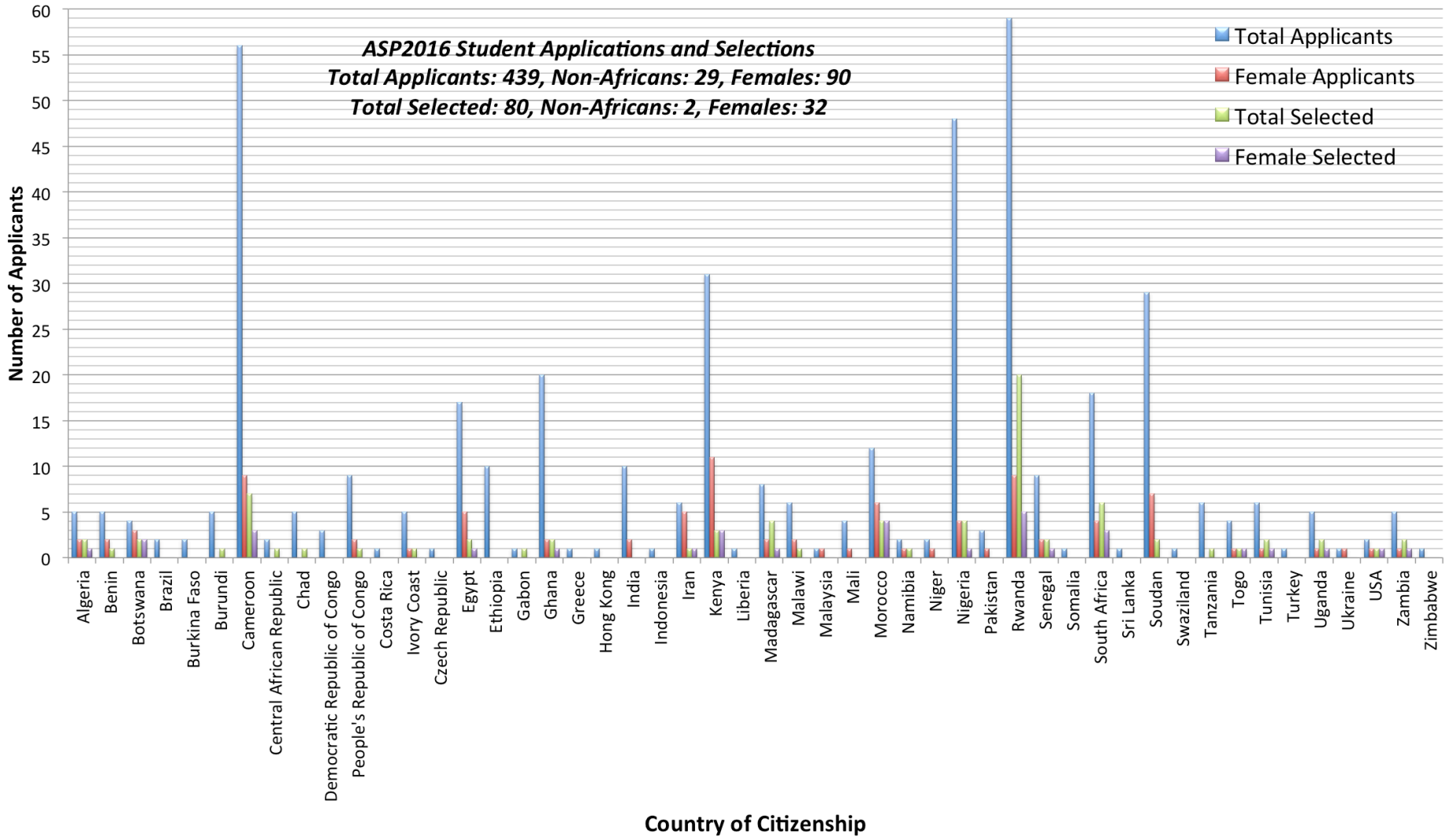
- Logos of institutes that support student participation
- BNL, JLab and JSA supported students but their logos not shown
- A 3rd of the total student budget is from African sources: South Africa and Rwanda



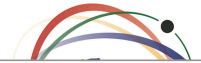


ASP2016 Student Applications and Selections
Total Applicants: 439, Non-Africans: 29, Females: 90
Total Selected: 80, Non-Africans: 2, Females: 32

- Total Applicants
- Female Applicants
- Total Selected
- Female Selected



Selected Students by Country of Citizenship

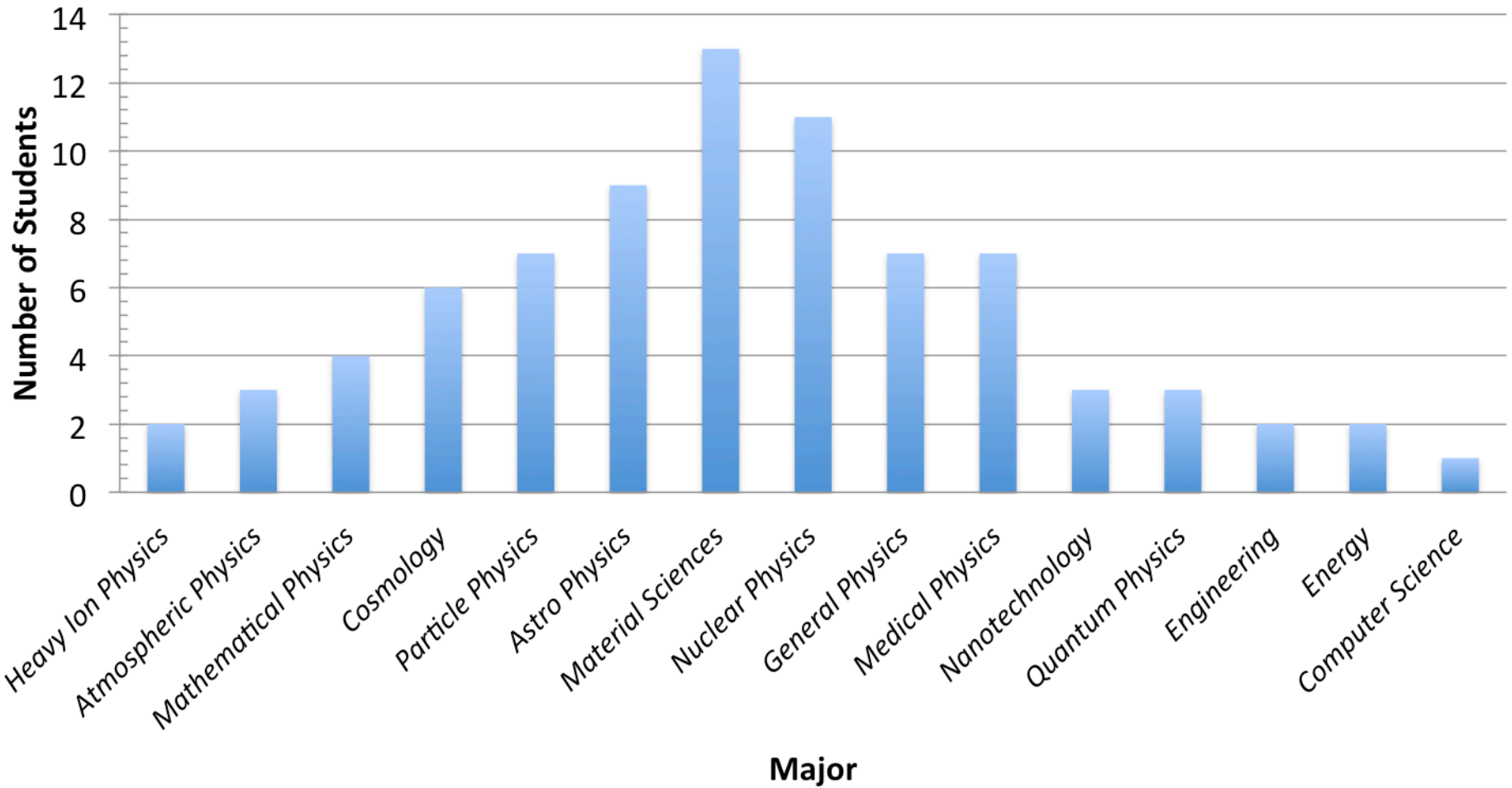


- Algeria (1)
- Benin (2)
- Burundi (1)
- Cameroon (7)
- Central African Republic (1)
- Chad (1)
- People's Republic of Congo (1)
- Ivory Coast (1)
- Egypt (2)
- Gabon (1)
- Ghana (2)
- Kenya (3)
- Madagascar (3)
- Malawi (1)
- Morocco (4)
- Namibia (1)
- Nigeria (3)
- Rwanda (20)
- Senegal (2)
- South Africa (6)
- Soudan (2)
- Tanzania (1)
- Togo (1)
- Tunisia (2)
- Uganda (2)
- USA (1)
- Zambia (2)



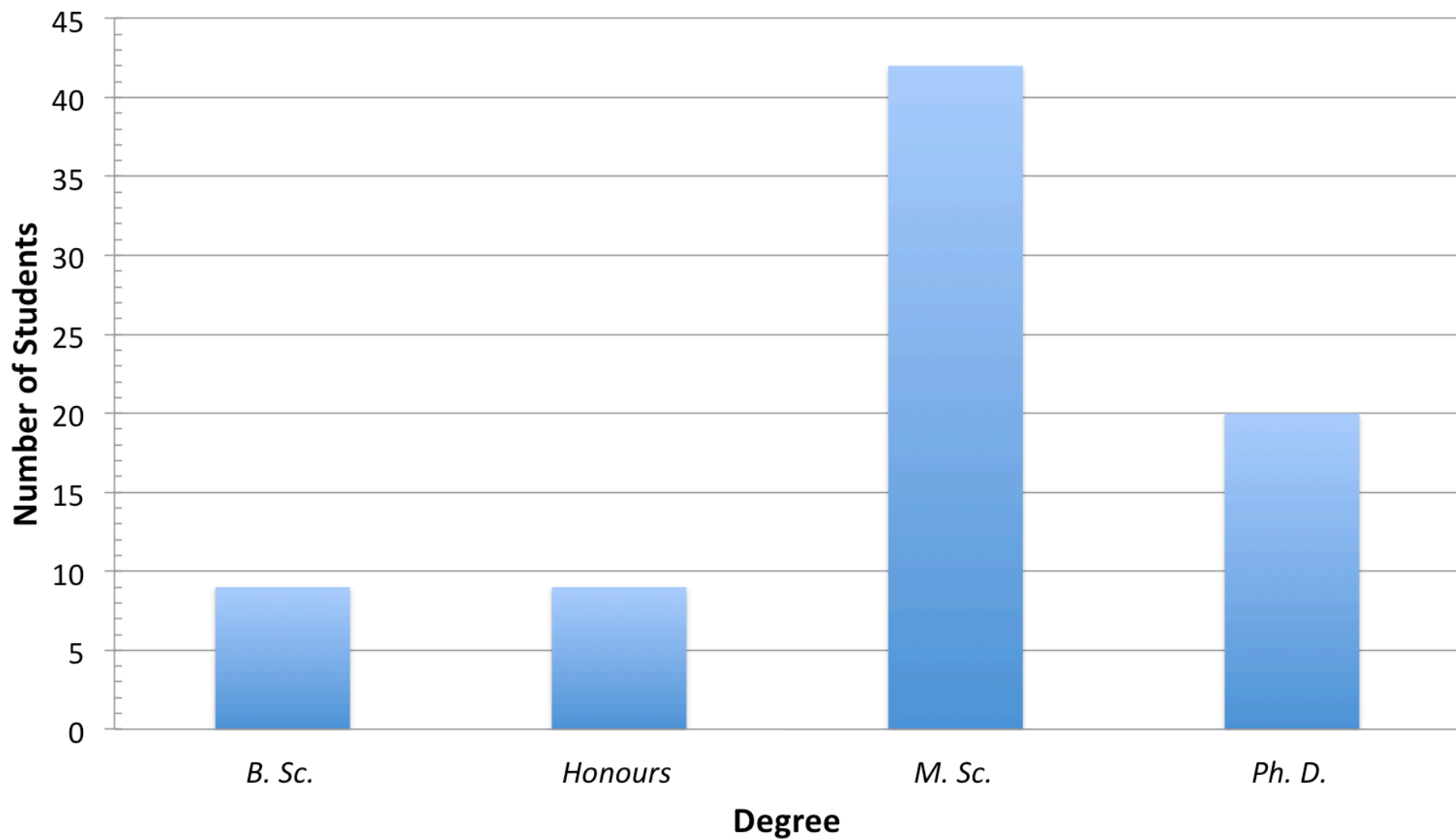


ASP2016 Student Majors



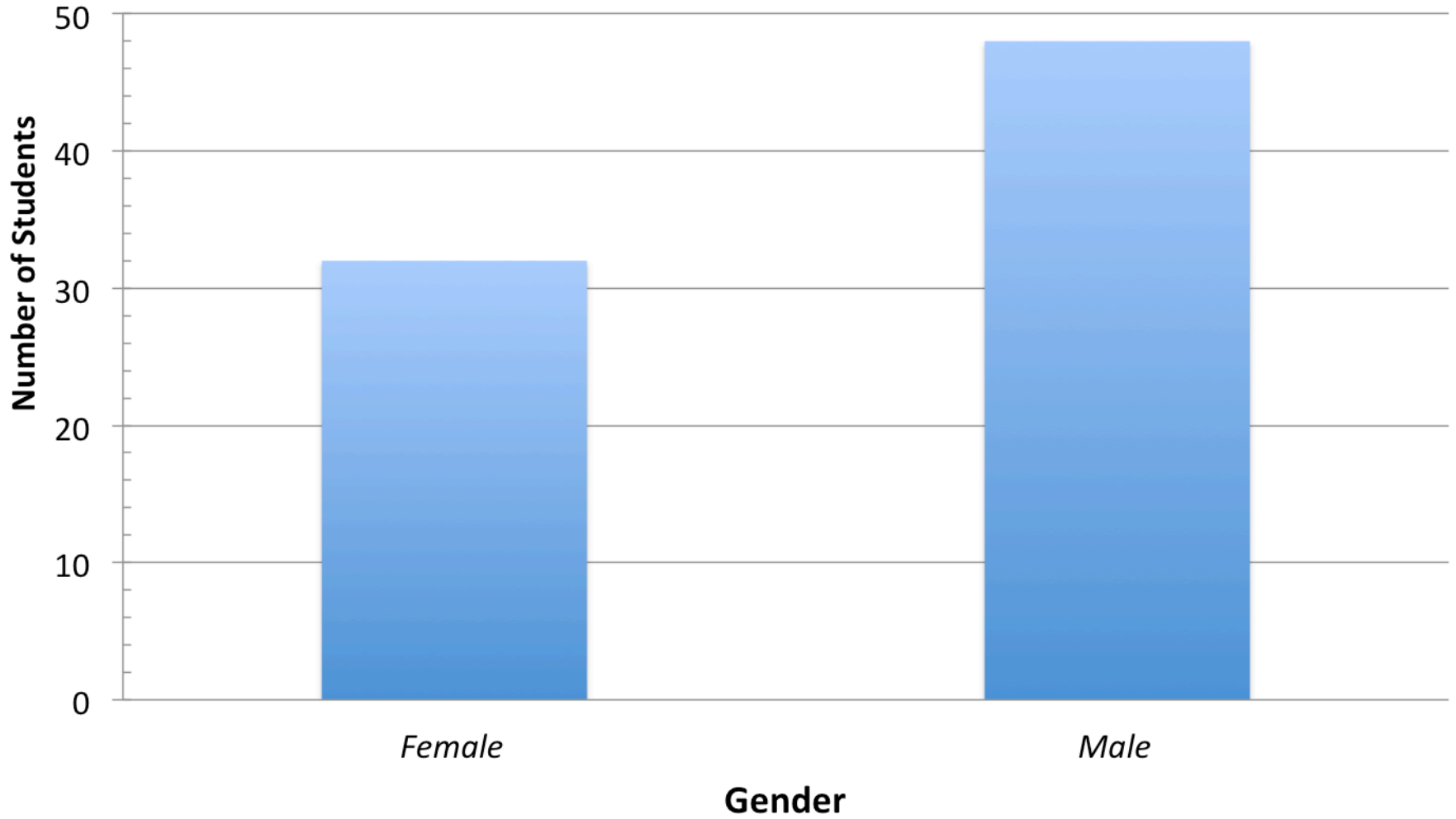


ASP2016 Student Levels

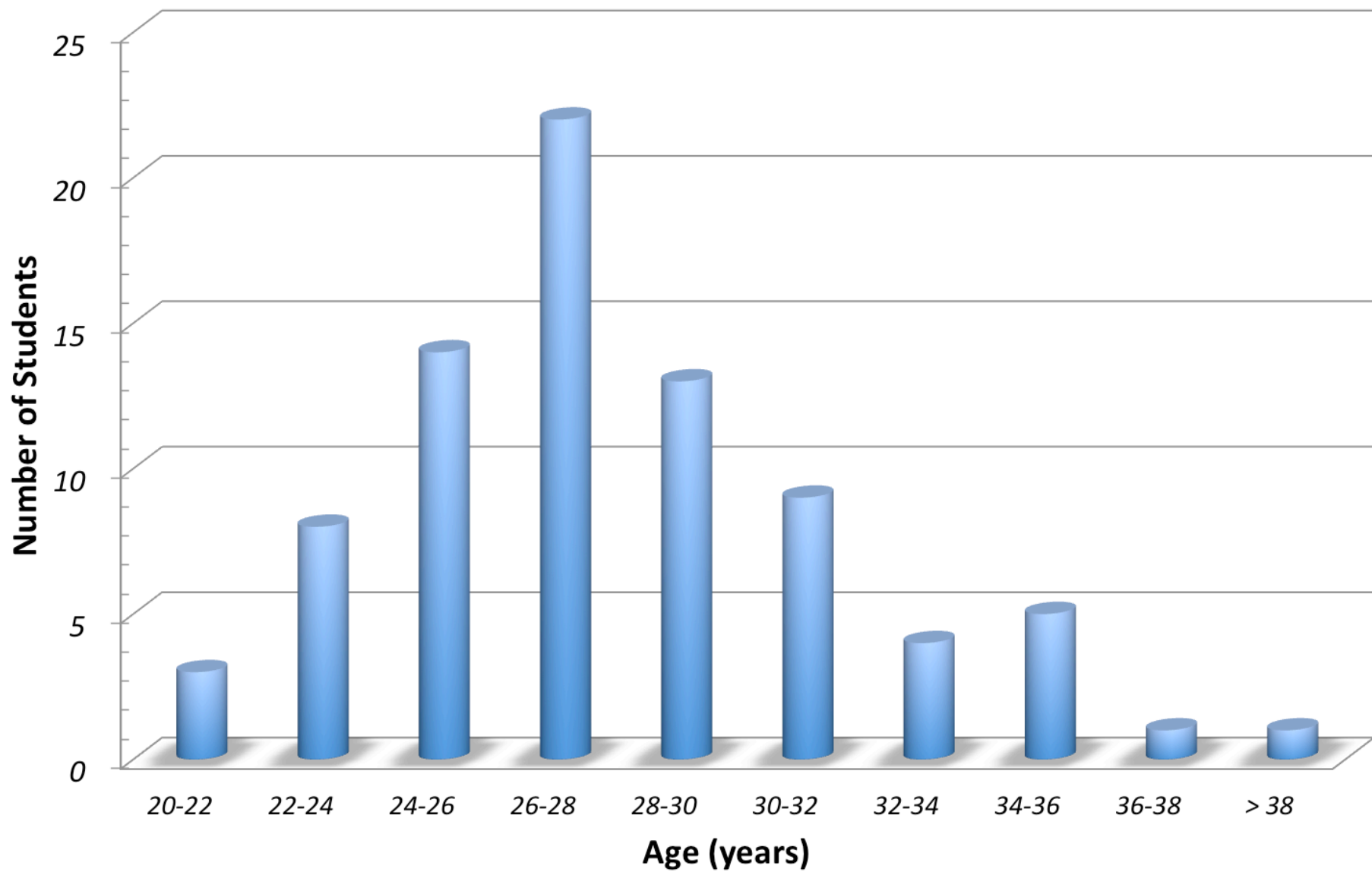




ASP2016 Student Gender

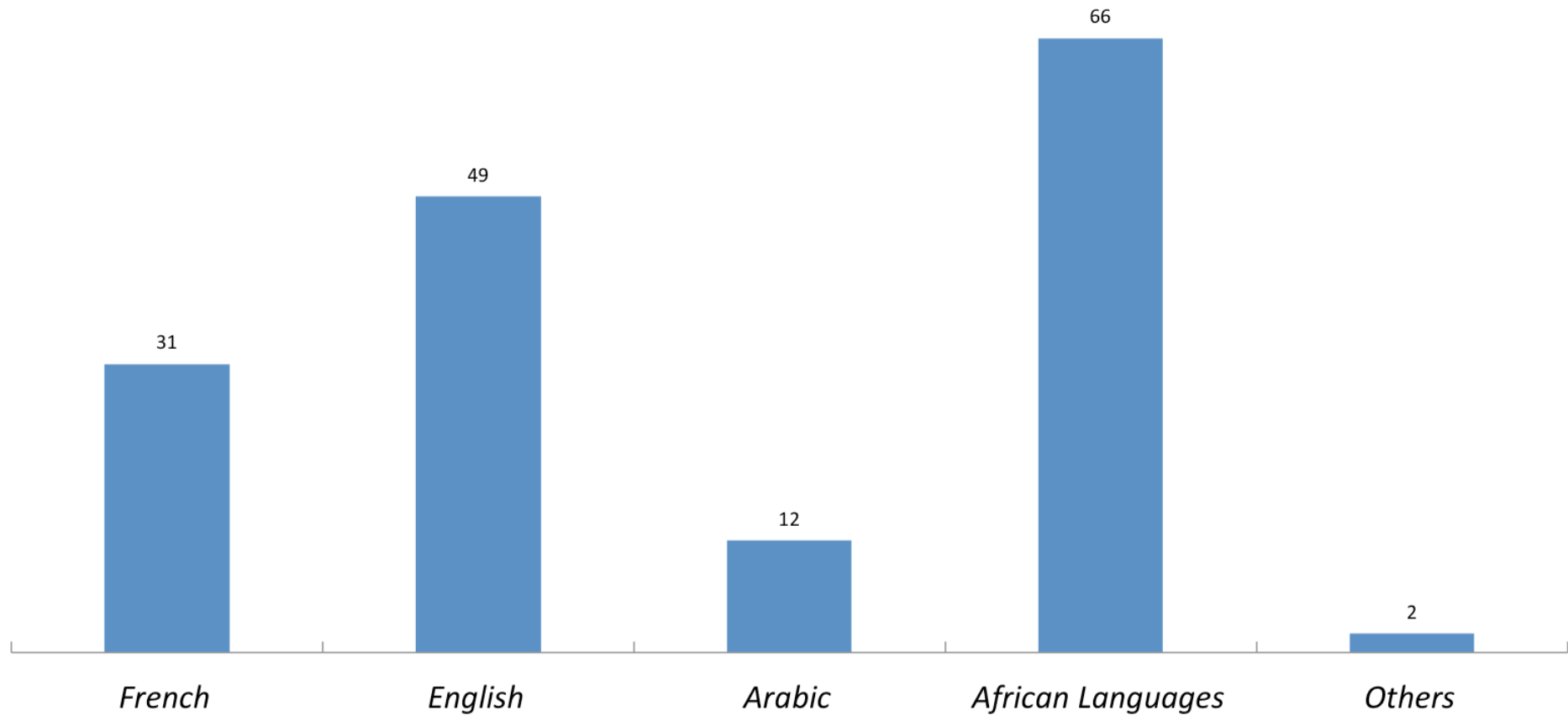


ASP2016 Selected Student Age





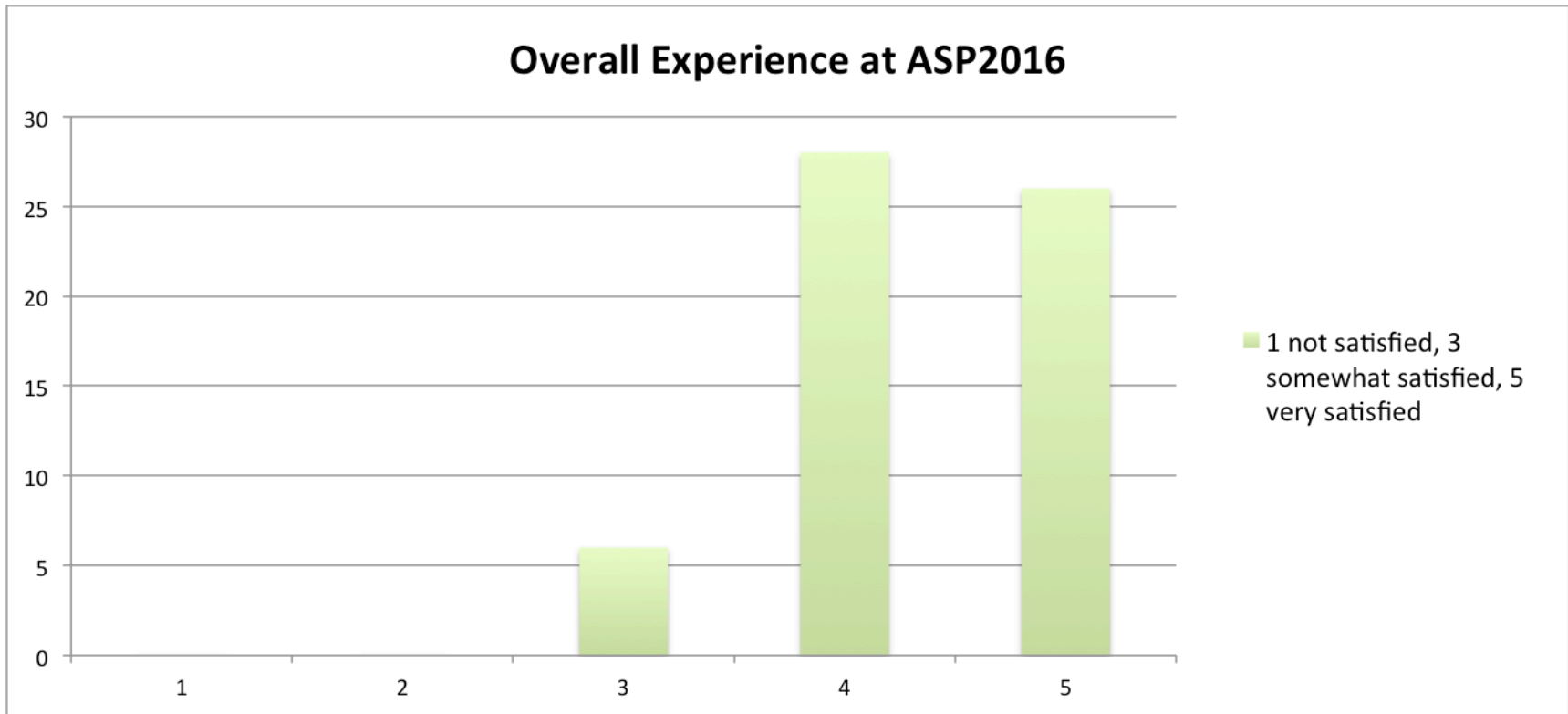
ASP2016 Student Language Proficiency



ASP2016 – Student Feedback



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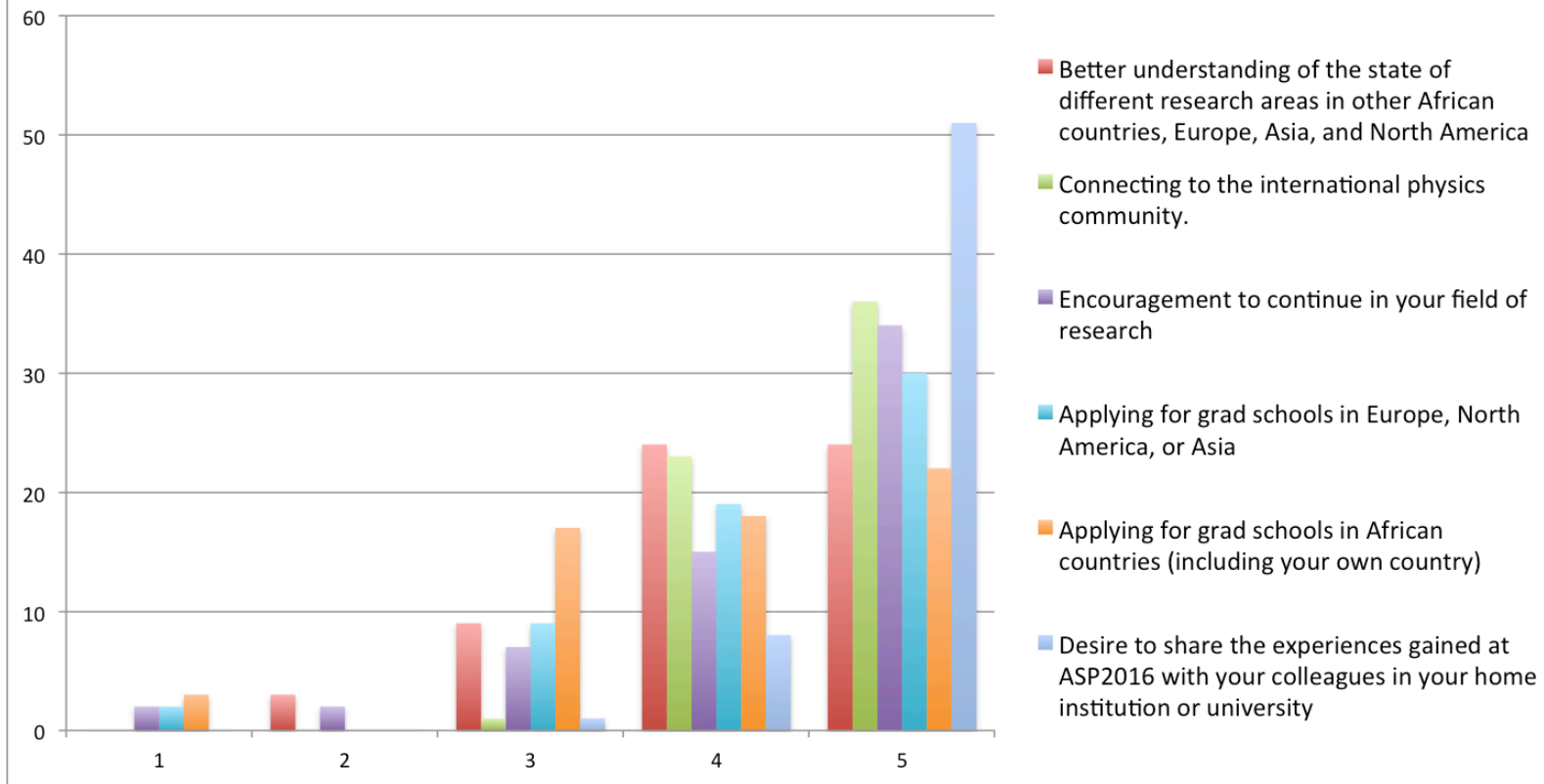


ASP2016 – Student Feedback



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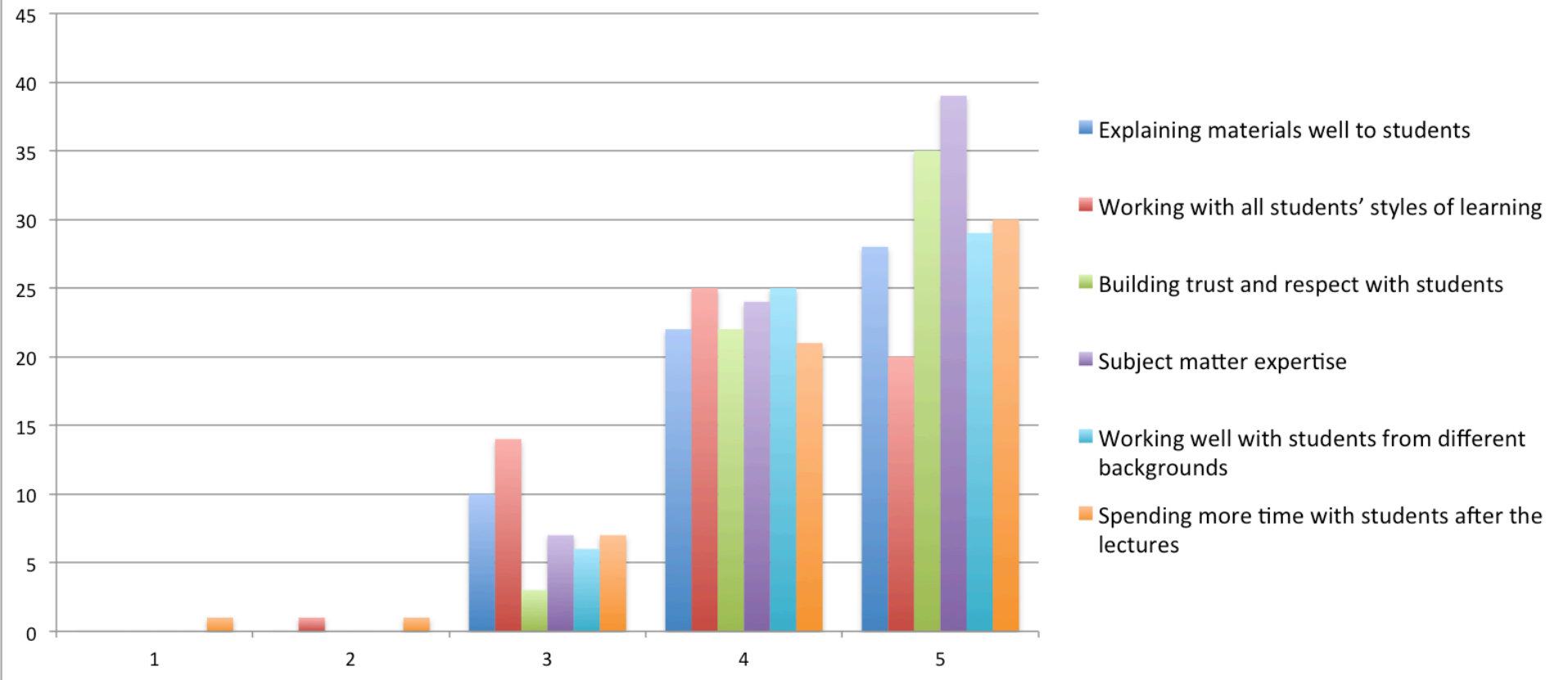
Participation in ASP2016: 1 has no impact, 3 has somewhat of an impact, 5 has much impact



ASP2016 – Student Feedback



Lecturer ability: 1 is terrible, 3 is good, 5 is great





ASP – Maintaining contact with students

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- After the school. Networking with student continues through
 - ▣ Exchanges of information on high education opportunities
 - ▣ Placing students in Masters and Ph.D. programs
 - ▣ Student coaching and mentorship program
 - ▣ Survey of ASP alumni to gauge the impact of ASP



ASP2018 – 5th Edition



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□ **ASP2018**

- In January 2016, Namibia was selected to host ASP2018
- The dates of the school (in 2018) will be decided upon soon
 - It will be in July 2018: either first 3 weeks or the last 3 weeks
- IOC to make a site visit to Namibia in 2017



ASP2020



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- We need to identify the host country for ASP2020 by December 2017
- Once the host is identified, it will be invited to join the organization of ASP2018
- So far, the following countries have expressed interest
 - ▣ Cameroon, Morocco, Sudan, Tunisia and Zambia
- The requirement for the selection of the host are described here
 - ▣ <https://ketevi.web.cern.ch/ketevi/ASP/ASP-Venue-Selection.pdf>

