

IEEE USA Feedback Panel: *Employment and Career Issues Survey*



October 2005

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About the Feedback Panel

- **454 active, higher-grade members from Regions 1-6 agreed to participate in a series of on-line surveys**
- **The panel excludes life, student and affiliate members**
- **The feedback panel is designed to give IEEE-USA volunteer leaders and staff a tool to gather timely feedback on key issues**



IEEE-USA Feedback Panelist Background: Profile of the 454 participants

- **Demographics:**
 - 93% male
 - Years of Service ranged from 1 to 44 years; mean=15; median=13
 - Age ranged from 21 to 72 years; mean=46; median=46
- **IEEE Characteristics:**

● Associate	6%
● Members	81%
● Senior Members	11%
● Fellows	2%
● IEEE Volunteers:	5%



Survey Methodology and Response

- **Contacted 454 panelists by email**
 - **First announcement sent October 10**
 - **Reminder sent October 20**
- **Respondents were required to answer all questions, except the four essay questions**
- **Web survey had eight questions to gather the member's opinion on the following:**
 - **Important career issues**
 - **Usefulness of IEEE-USA career-related products and services**
 - **New career-related services needed by members**
 - **Preferences on the delivery format of career-related information or assistance**
 - **Comments about IEEE-USA's career-related information and services**
- **Received 173 responses (38% of the panel) at the end of October**
- **±7.4% margin of error at a 95% level of confidence**



Gender

Gender	Frequency	Percent
Female	12	6.9%
Male	160	92.5%
Unknown	1	0.6%
Total	173	100.0%



IEEE Region

IEEE Region	Frequency	Percent
R1	19	11.0%
R2	27	15.6%
R3	21	12.1%
R4	22	12.7%
R5	28	16.2%
R6	56	32.4%
Total	173	100.0%



Current Member Grade

IEEE Grade	Frequency	Percent
Member	131	75.7%
Associate	13	7.5%
Senior member	24	13.9%
Fellow	5	2.9%
Total	173	100.0%



IEEE Volunteer

IEEE Volunteer	Frequency	Percent
No	165	95.4%
Yes	8	4.6%
Total	173	100.0%



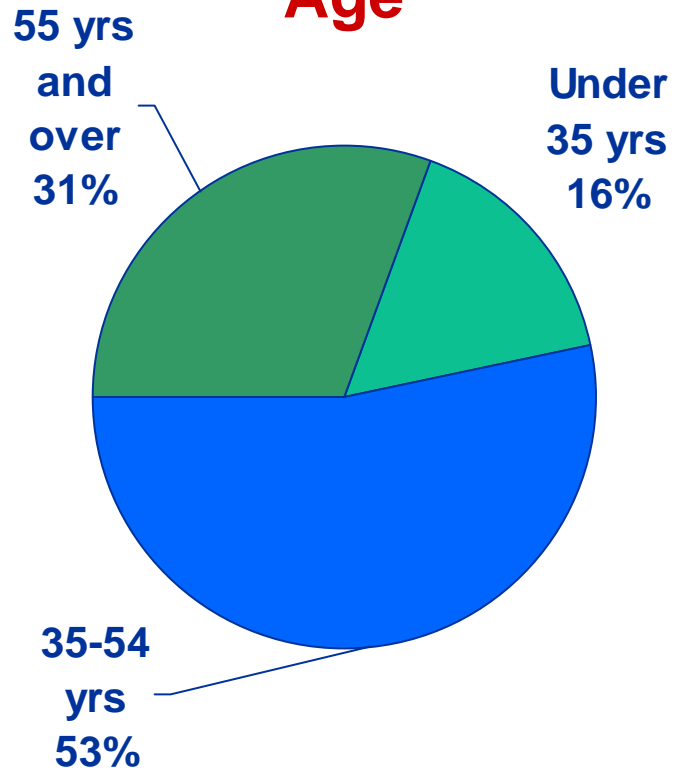
Employment Status

Item	Frequency	Percent
Private industry	111	64.2%
Public/government	11	6.4%
Educational institution (public or private)	16	9.2%
Self-employed	18	10.4%
Retired	7	4.0%
Unemployed	6	3.5%
Other	4	2.4%
Total	173	100.0%



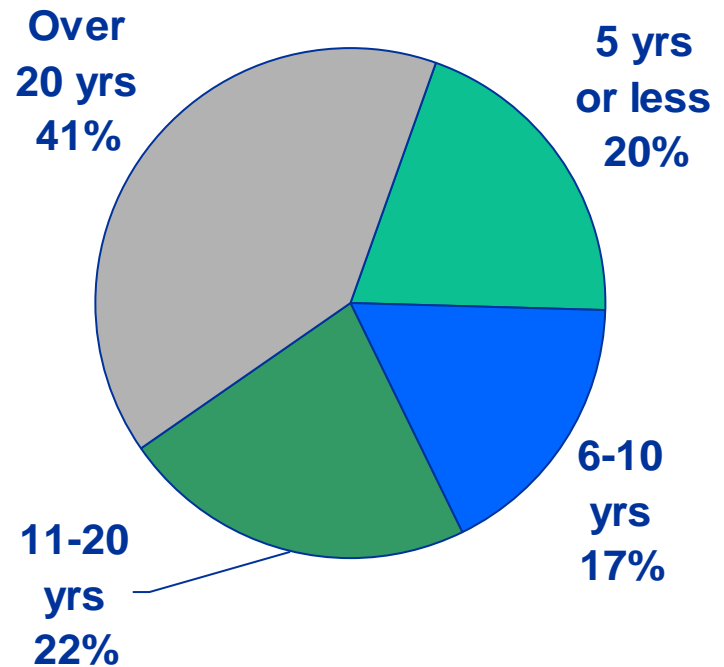
Respondents' Age and Years of Service

Age



Mean = 46, Median = 47,
Min = 23, Max = 68

Years of Service



Mean = 17.1, Median = 15.5,
Min = 1, Max = 44



How important are these career issues for you?

(Percentage distributions)

■ Little or no importance ■ Somewhat important ■ Important ■ Very important ■ Critical





How important are these career issues for you?

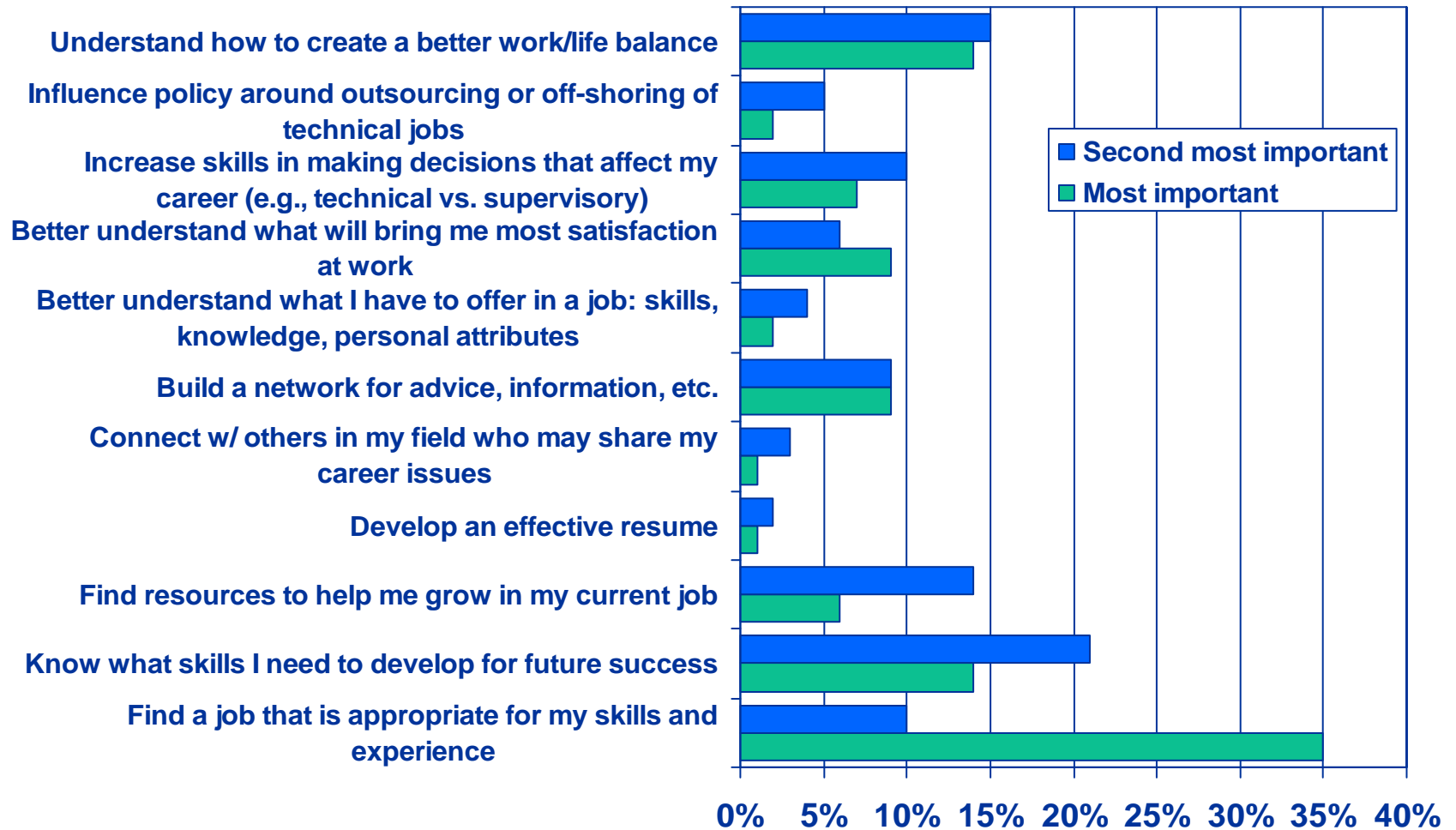
(Number of responses)

Topic	Little or no importance	Somewhat important	Important	Very important	Critical
Find a job that is appropriate for my skills and experience	3	11	27	77	55
Know what skills I need to develop for future success	5	9	50	73	36
Find resources to help me grow in my current job	6	17	53	78	19
Develop an effective resume	20	40	62	42	9
Connect with others in my field who may share my career issues	9	48	73	34	9
Build a network for advice, information, etc.	6	35	60	47	25
Better understand what I have to offer in a job: skills, knowledge, personal attributes	10	25	62	63	13
Better understand what will bring me most satisfaction at work	11	25	60	48	29
Increase skills in making decisions that affect my career (e.g., technical vs. supervisory)	14	17	50	68	24
Influence policy around outsourcing or off-shoring of technical jobs	34	51	48	28	12
Understand how to create a better work/life balance	8	29	56	54	26



Important Career Issues

(Percentage distributions)





Most important career issue

Choice	Count	Percentage of Sample Answering	Percentage of Sample Asked	Percentage of Total Sample
Find a job that is appropriate for my skills and experience	61	35.3%	35.3%	35.3%
Know what skills I need to develop for future success	24	13.9%	13.9%	13.9%
Find resources to help me grow in my current job	10	5.8%	5.8%	5.8%
Develop an effective resume	1	0.6%	0.6%	0.6%
Connect with others in my field who may share my career issues	2	1.2%	1.2%	1.2%
Build a network for advice, information, etc.	16	9.2%	9.2%	9.2%
Better understand what I have to offer in a job: skills, knowledge, personal attributes	3	1.7%	1.7%	1.7%
Better understand what will bring me most satisfaction at work	16	9.2%	9.2%	9.2%
Increase skills in making decisions that affect my career (e.g., technical vs. supervisory)	12	6.9%	6.9%	6.9%
Influence policy around outsourcing or off-shoring of technical jobs	4	2.3%	2.3%	2.3%
Understand how to create a better work/life balance	24	13.9%	13.9%	13.9%



Second most important career issue

Choice	Count	Percentage of Sample Answering	Percentage of Sample Asked	Percentage of Total Sample
Find a job that is appropriate for my skills and experience	18	10.4%	10.4%	10.4%
Know what skills I need to develop for future success	37	21.4%	21.4%	21.4%
Find resources to help me grow in my current job	25	14.5%	14.5%	14.5%
Develop an effective resume	3	1.7%	1.7%	1.7%
Connect with others in my field who may share my career issues	5	2.9%	2.9%	2.9%
Build a network for advice, information, etc.	15	8.7%	8.7%	8.7%
Better understand what I have to offer in a job: skills, knowledge, personal attributes	7	4.0%	4.0%	4.0%
Better understand what will bring me most satisfaction at work	11	6.4%	6.4%	6.4%
Increase skills in making decisions that affect my career (e.g., technical vs. supervisory)	18	10.4%	10.4%	10.4%
Influence policy around outsourcing or off-shoring of technical jobs	8	4.6%	4.6%	4.6%
Understand how to create a better work/life balance	26	15.0%	15.0%	15.0%



Please identify any other career issues that you feel IEEE-USA should address.

- Networking
- Available appropriate and extensive "hands on" training at factories and "on site" once the equipment is installed, so to be able to be as independent as possible. (I have often heard that soooooo many companies --- at least in Reno now --- suggest that the "engineer
- Handling age-discrimination issues and false assumptions about how current my skills are. Having to lie about how many years I've been working by cutting them in half in order to avoid perception as senior citizen with limited learning abilities.
- Better access to short courses
- Ability to stay current as the job market evolves from a technical point of view
- work hard to influence improved education from kindergarden through graduate school in the USA
- Moving from a being an engineer into a management position.
- Highlight how involvement in society activities result in career advancement
- Identify industry skills that are projected to be in demand
- The importance of developing and encouraging a professional culture where ethics in engineering and management are seen as equally (or more) important as the "bottom line". The current environment is full of (what I consider) corruption and conflicts of interest. For example, employees are often encouraged to give to their employers' corporate PACs in order to help generate revenue via congressional 'pork' (despite claims otherwise, this has become a commonly accepted practice); this leads to bad decisions in the voting booth and bad legislation which hurts the general public in the long term.



Please identify any other career issues that you feel IEEE-USA should address. (Continued)

- Getting back into field when I have been out of it for awhile.
- help craft job search strategy for localized job market
- Appreciation of other roles within organizations.
- re-education of engineers for alternative careers (e.g., law, medical, etc.) that would still utilize their engineering education & skills
- Address and provide services which can better prepare engineer members to evaluate business versus engineering issues. Most Engineers, during the majority portion of their careers, overemphasize technical issues without appreciating how it affects business and operational economics. IEEE has a direct hand in developing such pure engineering culture among engineers, and seeing them as limiting their successes when compared to other academic disciplines that prosper in the business world on a much wider scale. Engineers also must learn the economics and business values of their job related activities and act to achieve such values consistently during their career spans in order to accomplish and succeed at higher levels.
- An on-line archive of tutorials to help us remember all the stuff we forgot from grad school would be great.
- Understanding issues surrounding retirement planning



Please identify any other career issues that you feel IEEE-USA should address. (Continued)

- I would like IEEE to create a blog on their website where engineers could post technical questions, and receive help or advice from others in the same field. The blog should be segregated by topics (such as power, electronics, computers, etc) and subtopics for users to navigate directly into the area of their specialty.
- How to get along and deal with coworkers and a supervisor
- what do you do when you've been searching for a job for a long time (months or even years) and can't seem to be getting any interest. is it your resume, your interviewing skills, your desired salary, your location flexibility? what do you focus on when you think you're an attractive employee but you don't have a job?
- management effectiveness. using change. dynamical career evolution.
- Continuing education throughout one's career as an absolute requirement to remain in engineering
- Voluntary retiree opportunities.
- Influence policy around outsourcing or off-shoring of technical jobs -- We are not yet seeking an equilibrium between governmental imports & exports of jobs vs tariffs and governmental supports for job protection or retraining... this a very complex issue.....



Please identify any other career issues that you feel IEEE-USA should address. (Continued)

- Nothing else comes to mind.
- Understanding the difference between technical vs management career tracks
- Operating in a world with global engineering teams. Not special and new for big companies but now small companies must face this and it is new for many.
- Networking of Professionals so as to make it easier to connect with companies/people that are looking for people with my particular interests and skills.
- Help IEEE members develop skills needed for the future. Coordinate skill direction with industry.
- A career is not a job and a job is not a career. The best trained person is oftentimes the "jack of all trades" and not the "specialist of a trade", since the "jack" will be able to understand and put together global systems and projects in a better and more efficient manner than many "jacks" together.
- Salary
- none
- Salaries and reward are just not keeping up. It seems that Engineering at large is just not valued as it was in the past.
- na



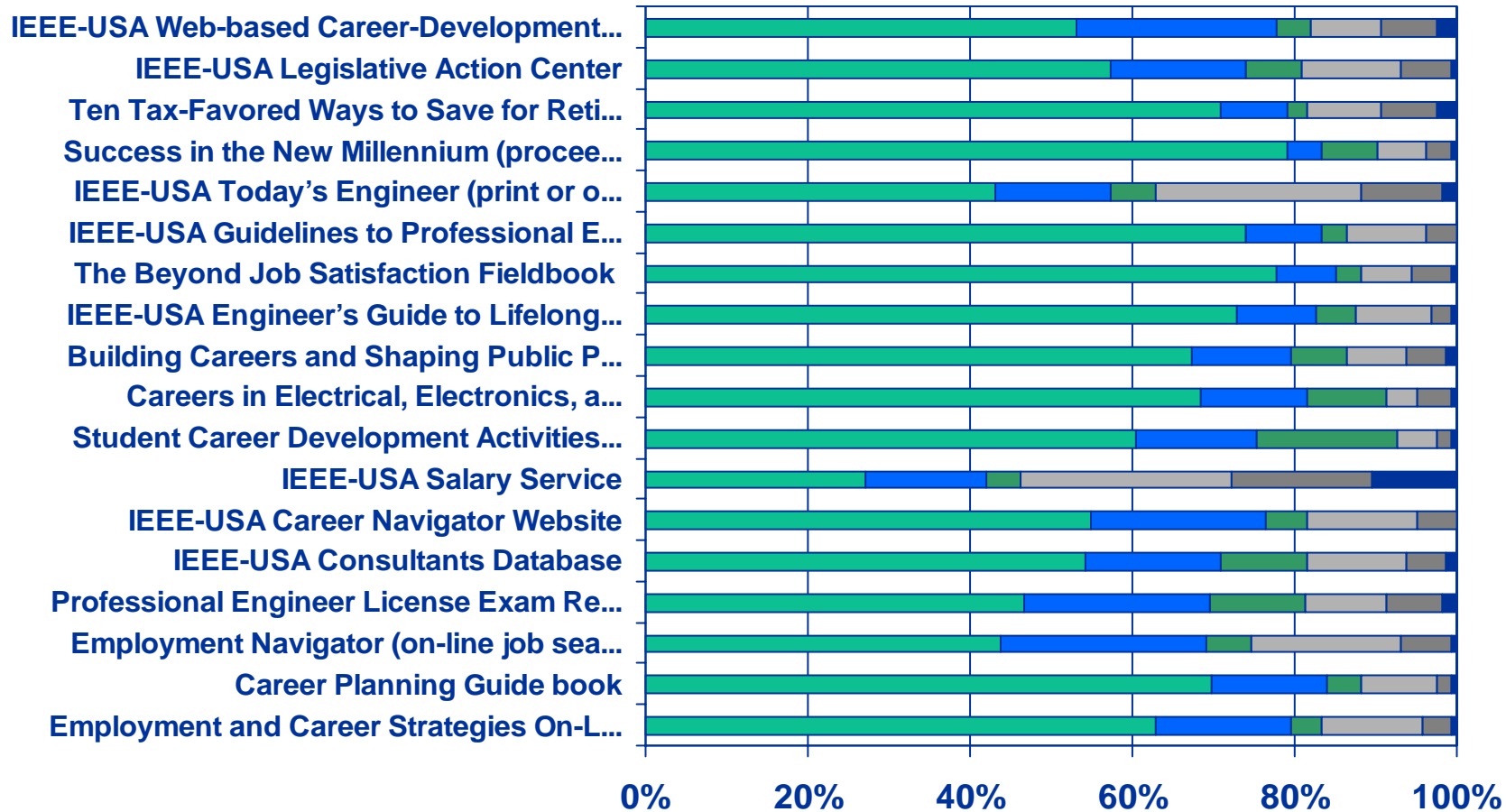
Please identify any other career issues that you feel IEEE-USA should address. (Continued)

- **Encourage young people to network with experienced members, to the mutual benefit of both.**
- **I think one of the issues IEEE-USA should address is the availability of technical jobs in the country. I am not referring to off-shoring. I am referring more to the creation of technical arenas, similar to those created, for example, with the space program of a few decades ago, that would fuel opportunities and job growth in the country.**
- **Help me to be more successful at a small business/consulting.**
- **I expect to retire in the next 12 months and focus on activities outside work.**
- **Develop leadership skills**
- **Simple transfer of PE from state to state.**



How useful to you are these career products and services offered by IEEE-USA? (Percentage distributions)

■ Not aware ■ Aware of, but no opinion ■ Not useful at all ■ Somewhat useful ■ Useful ■ Very useful





How useful to you are these career products and services offered by IEEE-USA? (Number of responses)

Topic	Not aware	Aware of, but no opinion	Not useful at all	Somewhat useful	Useful	Very useful
Employment and Career Strategies On-Line Community	102	27	6	20	6	1
Career Planning Guide book	113	23	7	15	3	1
Employment Navigator (on-line job search tool)	71	41	9	30	10	1
Professional Engineer License Exam Reviews (CD - ROM)	75	37	19	16	11	3
IEEE-USA Consultants Database	88	27	17	20	8	2
IEEE-USA Career Navigator Website	89	35	8	22	8	0
IEEE-USA Salary Service	44	24	7	42	28	17
Student Career Development Activities Brochure	98	24	28	8	3	1
Careers in Electrical, Electronics, and Computer Engineering Brochure	111	21	16	6	7	1
Building Careers and Shaping Public Policy	109	20	11	12	8	2
IEEE-USA Engineer's Guide to Lifelong Employment book	118	16	8	15	4	1
The Beyond Job Satisfaction Fieldbook	126	12	5	10	8	1
IEEE-USA Guidelines to Professional Employment	120	15	5	16	6	0
IEEE-USA Today's Engineer (print or on-line publication)	70	23	9	41	16	3
Success in the New Millennium (proceedings from Professional Development Conference)	128	7	11	10	5	1
Ten Tax-Favored Ways to Save for Retirement (booklet)	115	13	4	15	11	4
IEEE-USA Legislative Action Center	93	27	11	20	10	1
IEEE-USA Web-based Career-Development Courses	86	40	7	14	11	4



What is one career-related service that you would like to see offered by IEEE-USA?

- Networking and Mentoring
- Companies that are known to treat their engineers with dignity.
- Financial and insurance planning and advice for self-employed consultants.
- Projections of high-future-wage fields, less emphasis on current "commodity" jobs.
- Ethics training
- free or very low cost web access to all IEEE technical publications and other related publications
- Employment and career strategies ON-Line community.
- Online professional life coaching - see <http://www.innertalent.com>
- No opinion at this time
- Provide inside connections to hiring folks at companies
- Continued increase in online (ideally free w/ IEEE membership) training. I feel IEEE has greatly improved in this area in the past few years and I hope that trend continues.
- Lot more Web-based Career-Development Courses geared toward professional certifications.
- Broker job opportunities and candidates
- How to do a career switch from one engineering field to another - communication to bio-sciences, for example.



What is one career-related service that you would like to see offered by IEEE-USA? (Continued)

- improved job searches
- Better job search tool.
- No Opinion.
- I did not know you offered any.
- On-line courses that can be used as continuing education credits required by state licensing boards.
- Linking outstanding business leaders in each industry with young engineers of that industry - for mentoring and training
- Lobbying for legislation that would diminish outsourcing of labor, by whatever means necessary.
- discounts for O'Reilly Safari access
- Job listings
- Matching alternative faculty/research positions to current faculty interested in career advancement through change of positions
- More job listings for junior or mid-level engineers as opposed to university faculty positions.
- no idea



What is one career-related service that you would like to see offered by IEEE-USA? (Continued)

- I have a career and am not looking to switch jobs, so I don't use that service.
- offer the salary service to everyone, regardless of whether they participate in the survey.
- Some form of mentoring in scheduling and program management.
- More focus on industry - my impression is that the IEEE is largely driven by academics. Workers in industry need continual prodding and support to convince them that each year they forget more and the field advances more. Without a continual focus on continuing education, engineers quickly become marginalized. We need the IEEE to drive this point of view and work for industry funded continuing education.
- not sure.
- Guidelines for future technologies to learn.
- More information on the PE Exam and Study Guides.
- In general I do not use IEEE-USA career related services. Overall, I find the site difficult to navigate and hard to use.
- web-based career development courses
- how to prepare for the PE exam and what to bring.



What is one career-related service that you would like to see offered by IEEE-USA? (Continued)

- Career-Development Courses
- unknown
- More usable job board.
- Resume/cover letter writing assistance
- Career Counseling
- Since careers are the same or similar in most countries and the fact that jobs and careers cross borders in all corporations with any international activity (or without), there should be some activity in trying to tie together the careers in such a way that the salary gaps and other problems, due to location, religion and other things found around the World, are minimized or eradicated. It is a bit difficult to explain exactly what has to be done in this, which is the first task to solve. Education levels need to be reviewed as well as other things.
- One-on-one career counseling
- A very effective job search ability.
- None
- From the list above, I need to go do some research on the site, I am apparently missing a lot of resources now.



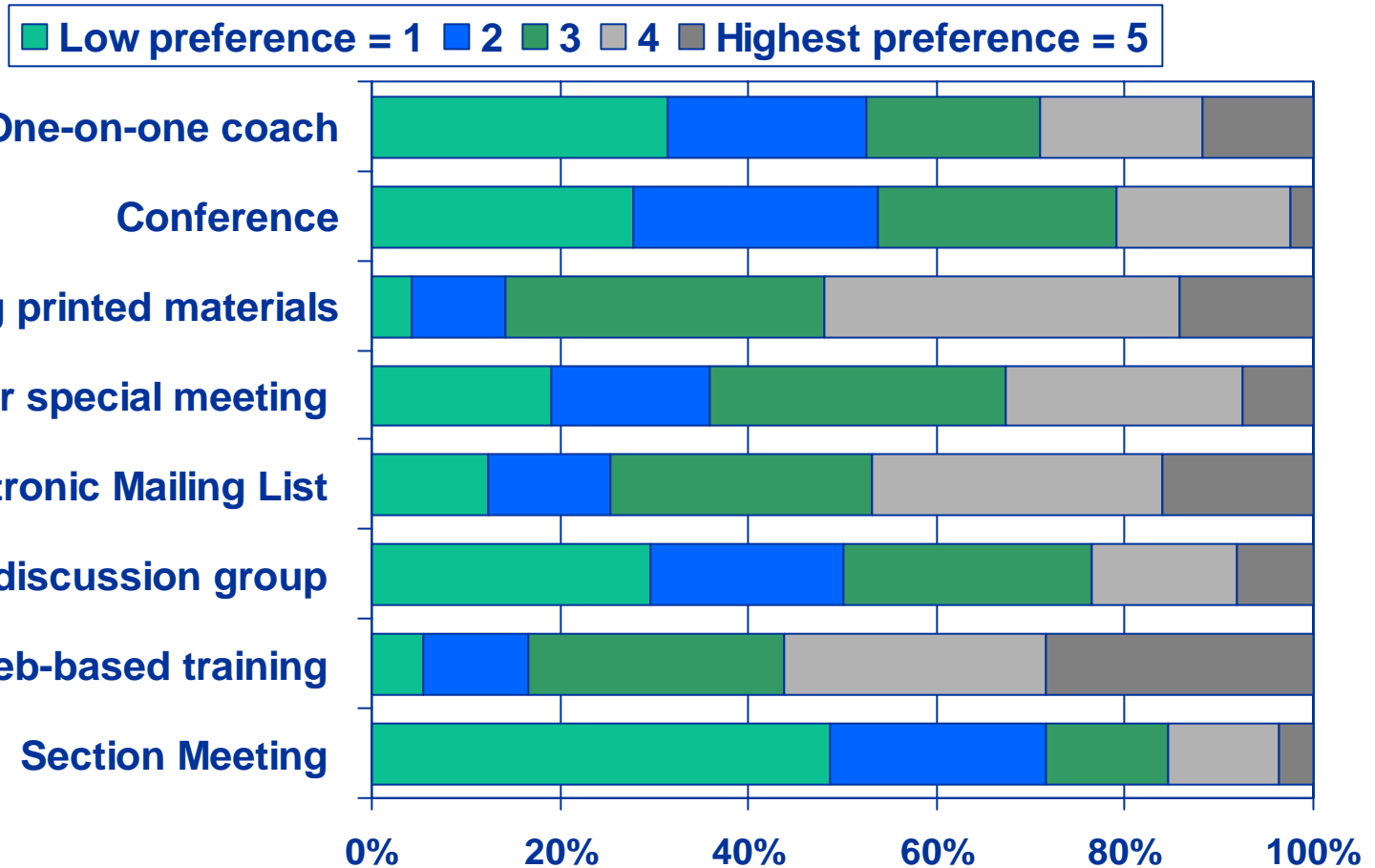
What is one career-related service that you would like to see offered by IEEE-USA? (Continued)

- What to do when it's over - planning for activities for the retired years.
- NA
- Outreach to other professional societies, to share jobs databases.
- Good surveys of salaries
- Consultant development and marketing assistance.
- See item # 3
- Actually, it sounds like you have a lot of good stuff already, but I was unaware of most of it.
- Less expensive and better utilized consultants database. From your salary survey results from last year, it didn't seem that much new work was generated via the service.



How do you prefer to receive career related information or assistance? Please rate on a scale from one to five with 1= low preference to 5 = highest preference.

(Percentage distributions)





How do you prefer to receive career related information or assistance? Please rate on a scale from one to five with 1= low preference to 5 = highest preference.

(Number of responses)

Topic	Low preference 1	2	3	4	Highest preference 5
Section Meeting	79	37	21	19	6
Web-based training	9	18	44	45	46
On-line discussion group	48	33	43	25	13
Electronic Mailing List	20	21	45	50	26
Workshop or special meeting	31	27	51	41	12
Reading printed materials	7	16	55	61	23
Conference	45	42	41	30	4
One-on-one coach	51	34	30	28	19



Do you have any other delivery methods you would like IEEE-USA to use for its career related information and assistance?

- E-mail, Instant Messaging Networking
- Not at this time.
- No
- Enhance your web pages for those having low vision and color blind
- no
- Maybe a CD-ROM format or even mp3 format that could be downloaded.
- Online professional life coaching - see <http://www.innertalent.com>
- Not at this time
- web-based
- No
- No
- Mentoring program, sort of the one-on-one coach
- No
- Organize a Toast Masters like forums among engineers of similar industries to discuss successes and failures
- No
- Not at the moment
- N/A
- CDs or Video
- None
- NA



Do you have any other delivery methods you would like IEEE-USA to use for its career related information and assistance? (Continued)

- No
- No
- no
- I think a weblog would work well for this.
- IEEE needs to work on VP level EEs from industry to convince them to fight for continuing education for their workers. Pay the course costs, but not for paid time to attend or prepare.
- paper documents via US Mail. Currently overloaded on email info.
- advise by e-mail and let download---like a PDF file
- Web based when you can dial in at your own time and convenience.
- Podcasts specific to jobs would be useful
- no
- List of available speakers with ratings from past presentations.
- No
- No
- A comprehensive guide that details all the choices of what IEEE provides, like the financial summary brochure.
- recorded web conferences
- No
- audio tapes/podcast (for car)



Do you have any comments you would like to make about IEEE-USA's career-related information and services ?

- I have been retired for five years and I am out of the loop on career training.
- Not at this time.
- This survey has made me aware of some info and services I had forgotten or not known about.
- I am finishing my career with modest goals. My services are in plenty of demand. I am well known to my clients. I am not a good fit for this survey. Sorry.
- Very little awareness of the availability of this information
- Mostly I need to become more aware of the resources out there and try to use them
- careers start at grade one - get heavily involved
- I am not an engineer, therefore did not answer the big section about services.
- Not at the present moment
- I was unaware of them.
- Consider supplementing your online resources with a professional life coaching online site - see <http://www.innertalent.com>
- Not at this time
- I was truly unaware of all of the offerings you have. I admit that I do not aggressively go and search out information like this. It just seems like life is too busy with work and family to find additional time in the day to do self enrichment types of activities.



Do you have any comments you would like to make about IEEE-USA's career-related information and services ? (Continued)

- None
- Better communication about such information. I did not know you offered any.
- Thanks for the survey as I'm now aware that I need to use IEEE job search resources.
- No
- There must be a better way to highlight the already existing services
- Have never used them.
- Please continue to provide training resources (discounted access to books, web-based training, etc.)
- No
- No
- no
- I haven't had a need to use any of them yet, so my survey answers may be a bit skewed.
- I'm unfamiliar with most of the offerings, and have not considered that IEEE might have information or services available that would be relevant or helpful.
- Unaware of them.



Do you have any comments you would like to make about IEEE-USA's career-related information and services ? (Continued)

- I am retiring soon and my working career is soon to be over. My next opportunity will be to volunteer my services as a PE with industrial control design and industrial/utility construction experience. As a retiree, it is a take it or leave it proposition for me & for my prospective employer. Most of this questionnaire does not apply to me.
- I wish I had more time to review it all ---
- was not really aware of these services
- Need more information on what is available.
- As I take this survey I realize I am not aware of the majority of services offered. I am a fairly new member to the IEEE and perhaps have just overlooked these services, some of which are really of interest to me. What about sending out a yearly email (maybe you already do) with a list of links and short descriptions for each of these valuable services?
- Have not used them to their fullest.
- no
- No
- Hard to find the information even when you know where to look.
- Good Offering - need to focus more on taking advantage of it (Personally)



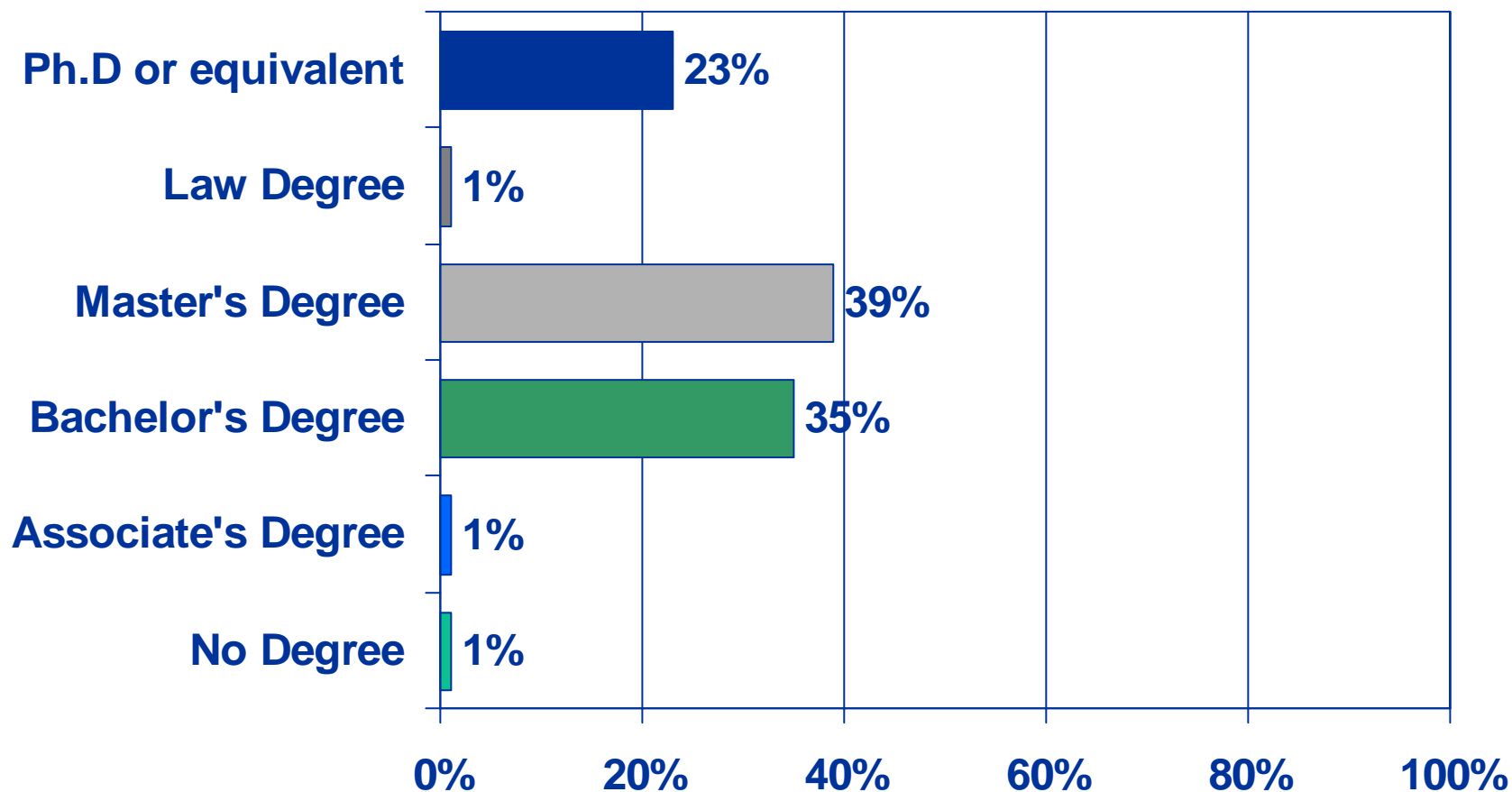
Do you have any comments you would like to make about IEEE-USA's career-related information and services ? (Continued)

- Not at the moment
- N/A
- There are quite a few products and services listed above that I was not aware of. There should be a way to advertise them better so that more people can take advantage.
- None
- No, have not used them.
- NA
- Need more publicity, and a single point that brings it all together (I was unaware of many of the resources).
- I have had a steady job for 17 years and have not had to look at my career much. Hence, I have not investigated many of the products and programs offered.
- please focus more on small and medium sized businesses (SMBs)
- I believe that IEEE services are very useful to young members and those who are actively changing jobs.



What is your highest degree earned?

(Percentage Distribution)





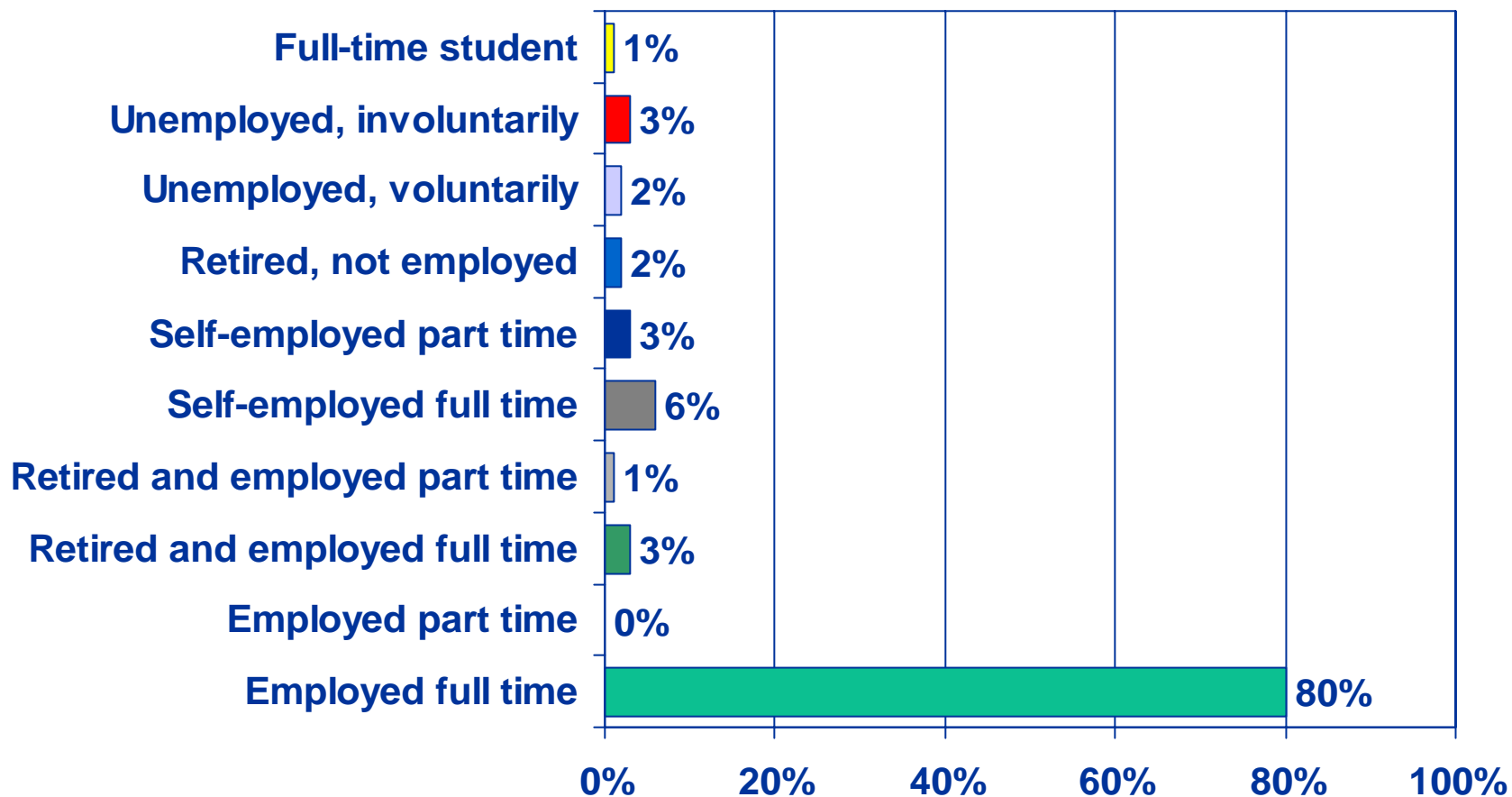
What is your highest degree earned? (Select one.)

Choice	Count	Percentage of Sample Answering	Percentage of Sample Asked	Percentage of Total Sample
No Degree	2	1.3%	1.3%	1.2%
Associate's Degree	2	1.3%	1.3%	1.2%
Bachelor's Degree	55	34.8%	34.8%	31.8%
Master's Degree	62	39.2%	39.2%	35.8%
Law Degree	1	0.6%	0.6%	0.6%
Ph.D or equivalent	36	22.8%	22.8%	20.8%



What is your employment status?

(Percentage Distribution)





What is your employment status? (Select one.)

Choice	Count	Percentage of Sample Answering	Percentage of Sample Asked	Percentage of Total Sample
Employed full time	126	79.7%	79.7%	72.8%
Employed part time	0	0.0%	0.0%	0.0%
Retired and employed full time	4	2.5%	2.5%	2.3%
Retired and employed part time	2	1.3%	1.3%	1.2%
Self-employed full time	9	5.7%	5.7%	5.2%
Self-employed part time	5	3.2%	3.2%	2.9%
Retired, not employed	3	1.9%	1.9%	1.7%
Unemployed, voluntarily	3	1.9%	1.9%	1.7%
Unemployed, involuntarily	4	2.5%	2.5%	2.3%
Full-time student	2	1.3%	1.3%	1.2%