

Question and Answer Session

Have you ever considered an exit- or follow-up survey for Fundamentals of Geology Exam takers?

Context: I have serious concern that undergraduate geoscience education is moving very rapidly away from what might be considered traditional Geology coursework. A single case in point – fewer earth materials classes currently being taught (no emphasis on Mineralogy or Petrology) and a significant increase in course work related to climate change. A follow-up survey could shed light on important questions like --- “Have you completed course work in Mineralogy”, or “What courses in your undergraduate curriculum do you feel you should have taken to be better prepared for the FG Exam?” etc. This type of information could “possibly” be of interest to Geoscience curriculum decision makers. Do you see any utility in this type of approach?

Laurie Racca:

The concern that you raise about undergraduate geoscience education has been raised by many geologists that have attended ASBOG meetings through the years. Clearly, there is a disconnect between what is being taught in some colleges and universities and what geologists are doing in the real world.

Your thoughts about using a follow-up survey are very interesting. We will look at this as a possibility going forward, along with other ways that might be used to capture information from candidates about their undergraduate coursework.

Randy Kath:

Unfortunately, many universities are getting away from the traditional geology courses. However, most state statutes (laws) are very specific on what is required to be called a Professional Geologist. I think that each university should assess their own program and make sure they are training geologists; not environmental scientists. Based on a survey of the top 60 geology programs (based on number of examinations in the ASBOG database), 97% of the programs require Mineralogy, 90% require Igneous/Metamorphic Petrology, and 80% require Sedimentary Petrology, 80% require a field class, and 92% require Structural Geology. These are the “core” upper division classes for a geology program and a traditional geology degree.

Deana Sneyd:

Perhaps geology departments should develop a post exam questionnaire for their students and use this information, combined with their CPAT report, to assess how effective their current curriculum is in preparing students for the workforce and make revisions, where appropriate. For example, just because a department is teaching Mineralogy, it doesn’t mean that it’s being taught well or presenting material that is relevant for employment.

What's the difference between a licensed geologist and a (licensed) professional geologist and are the terms interchangeable?

Laurie Racca:

The terminology used is specific to the state. In California, licensed geologists use the title Professional Geologist. In the case of California, we use Professional Geologist and licensed geologist interchangeable in conversation, but the official legally protected title is Professional Geologist (PG) and only someone who is licensed in this state can use this title in California.

Deana Sneyd:

Other states (e.g. Arizona and Mississippi) use the term Registered Geologist (RG), which is comparable to the term Professional Geologist and is often used interchangeably as well.

What is the percentage distribution of practicing geologists and academicians among SMEs?

Deana Sneyd:

Attendance numbers at the COE Workshops indicate that about 15% to 20% of SMEs participating in the COE Workshops are academicians.

I am trying to get a lot of jobs in the environmental sector. However, a lot of positions require that we have 40-hour Hazardous Waste Operations and Emergency Response (HAZWOPER) training. Is this something a company provides OR are there ways we can get this training prior to applying to positions?

Laurie Racca:

This is a safety training class. You can take this class as an individual by signing up with a training provider. However, it is rather expensive. There are some universities that offer this as a course to students. You would have to contact a specific training provider or university for further information.

Deana Sneyd:

Many employers will pay for this training if it is required for the position.

Might it be difficult to find a licensed PG to work under in the petroleum sector in CA? I am a bit unsure whether I should pursue licensure in this sector.

Laurie Racca:

The work experience must be done legally in the jurisdiction or situation in which the work experience is earned.

In California, there is no exemption from geology licensure for the petroleum sector. If the work you are doing is not "practice" as defined in the law/regulations or falls under an exemption (such as the Federal

Question and Answer Session

exemption for example), then a license would not be required. This non-public work experience or exempt situation work experience is acceptable toward a license application, but there are specific requirements for how to document that work. If you wish to discuss your situation specifically, please contact me directly.

California (and Maine) has an additional state-specific examination. Is this supplementary exam taken when one seeks to earn their GIT (i.e., at the same time as the ASBOG FG exam) or is it taken later in conjunction with the ASBOG PG exam?

Laurie Racca:

The California exam is professional level and you are not eligible to take it until you've satisfied the work experience requirements. For information specific to Maine, I suggest that you contact that state licensure Board.

Deana Sneyd:

Similar to California, the Maine exam is professional level and you are not eligible to take it until after you've met the work experience requirement. Unlike California, in Maine, you must have met the work experience requirement before you can sit for any of the exams, including the ASBOG FG exam.

How would the work experience requirement for the PG License can be fulfilled if not working directly in a geology position but one that may somehow overlap? In my case, I found employment in env conservation (air emissions). I may stay in this field of work for a couple of years or longer due to job security and/or while completing graduate school. Would this experience still meet the requirements even if it is not directly geology but have the long-term intention to eventually get employment in a geology-application position? Regarding the pathways for the license, I am taking the FG this year.

Laurie Racca:

For California, if you are not doing work that meets the definition of geology, then it does not count towards your geology license application. My understanding is that this is true for the other license states, however, you should always contact your state license Board for the specifics of the requirements in your location.

Randy Kath:

In Georgia, as long as you are working in the field of geology, as defined in our statute, then the work will count toward your experience, even if you were not working under a PG or PE. This is fairly common for individuals working under an exemption in the statute, including academia, petroleum geology and in some cases mining.

Question and Answer Session

If you are working toward an advanced degree (M.S. and/or Ph.D.) at the same time as you are working in your profession, you cannot count both toward your experience. For example, Georgia allows for up to 2 years “experience” for advanced degrees. If you have a M.S. or Ph.D., then you only need 3 years of work experience to qualify to take the PG examination. If you are working and going to school at the same time, then you can’t count both toward your experience.

Where do I obtain study materials for FG and PG?

Randy Kath:

There are commercial study sets and applications for the iOS or Android environment. Because the organization has not conducted formal reviews, ASBOG does not endorse any of the for-purchase study materials currently available. I would highly recommend that you download the Candidate Handbook from the ASBOG web site and look at the Task Statements and test blueprints. Also, there are some example test questions in the handbook for both the FG and PG exams that have been developed by the same subject matter experts who develop the ASBOG exam questions.

In my opinion, the best way to study for the FG examination is to read a Physical Geology textbook and pay attention to the bold works and concepts.

For a more specific information of the Hydrogeology and Engineering domains, I would suggest downloading the USGS WRI Report 2220 by Heath (<https://pubs.usgs.gov/wsp/2220/report.pdf>) and the Bureau of Reclamation Engineering Geology Field Manual (<https://www.usbr.gov/tsc/techreferences/mands/geologyfieldmanual-vol1/GeolMan-v1-all.pdf>), Volume I is best), respectively. Both are free. For more candidate study resources, please go the ASBOG's web site or click on the following link <https://www.asbog.org/candidates/candidates.html>

Does a GIT certificate have an "expiration date" before you have to retake the Fundamentals of Geology Exam to reactive it?

Laurie Racca:

In California, there is no expiration date because it is not a license. It is a certificate of achievement recognizing that you have passed the ASBOG Fundamentals of Geology Exam. There is no expiration date or renewal fees.

Deana Sneyd:

Other states, such as Wyoming, have a formal Geologist-in-Training program, and they require that candidates maintain their GIT certification (and fees) until they become fully licensed. If the GIT is not maintained, candidates must remit payment on lapsed fees before being allowed to sit for the ASBOG PG exam. Candidates who successfully complete the FG exam will not be required to retake it as these results never expire.

What should be done for people in states that do not have professional geologist licensure, such as New Jersey?

Laurie Racca:

You should comply with whatever requirements are in place in New Jersey. If you wish to obtain a PG license in a nearby state, you should contact that state licensure Board for their requirements.

How does one take the exams if your state does not offer them?

Randy Kath:

If your state does not have professional licensure, we suggest that you apply to take the exams through a nearby state that has a geology board requiring licensure for professional practice of geology.

I teach at a university in New Mexico, where there is no state licensing requirement. How can our students achieve the GIT certificate?

Laurie Racca:

I would suggest contacting ASBOG and/or Randy to evaluate options for the University administering the Fundamentals of Geology exam. To obtain the certificate, the students would have to apply for the GIT in a state that offers the certificate. If they passed the exam, that information can be transmitted to a state license Board as part of the GIT application.

What FG review guide would you suggest getting?

Randy Kath:

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Question and Answer Session

You mentioned that typically the education requirement is met by a bachelor's degree. What if one has a master's in geology (with a different undergraduate degree) - would that be allowed?

Laurie Racca:

You should contact the state in which you are considering applying. In California, the requirements are in the law and can be summarized as a degree or 30 semester units of geological sciences coursework/24 of which must be upper division or graduate level. California is in the process of developing a regulation that will require specific courses as part of that 30 semester unit option. If you are considering applying in California, you should contact me directly for additional information.

Randy Kath:

In Georgia our statute says “have graduated from an accredited college or university which has been approved by the board with a major in either geology, engineering geology, or geological engineering; or have completed 45 quarter hours or the equivalent in geological science courses leading to a major in geology, of which at least 36 quarter hours or the equivalent were taken in the third or fourth year or in graduate courses;” The statute does not specify that the degree is a BS or MS or PhD. So, if you have a MS degree in geology you meet the educational requirements of the law to take the examinations.

Would someone with a geology degree that does not quite meet qualifications for the FG be able to take additional courses to make up deficits (such as mathematics or physics)? Or is this state specific?

Laurie Racca:

This is state specific. In California, yes you can always take additional coursework to meet the education requirements. However, you should note that in California your work experience does not count until you've met the minimum education requirement.

Randy Kath:

For most, if not all states, if you have a degree in geology you meet the requirements to sit for the FG examination; therefore, there is no additional coursework necessary. See the response for question 14.

Do you ever have to retake the FG exam to maintain licensure? Are both ASBOG exams transferable between states? Do either of the ASBOG exams expire?

Randy Kath:

A candidate needs only successfully complete the FG and PG examinations one time as long as licensure is maintained; the scores do not expire. Given that the exams are national, all 32 state geology boards honor the ASBOG exam scores, regardless of where the candidate took the exams. Consequently, the exam scores can be transferred to any of the “green” states on the ASBOG licensure map. See https://asbog.org/state_boards.html

My CA license is marked RG. Should I now use PG as designation?

Laurie Racca:

The protected title in the law is Professional Geologist and has been since before the Board merger. The old title was not grandfathered or preserved by the old geology Board when the law changed. I recommend that you consider switching to the more updated title and updated stamp design.

What kind of jobs in the geology field require a license?

Laurie Racca:

In California, a license is required whenever a person practices or offers to practice geology or geophysics (except as specifically exempted in the statute). There is a specific exemption for subordinates working under the responsible charge of a licensee, an exemption for Federal employees for their Federal work, and a limited exemption for civil and petroleum engineers.

Deana Sneyd:

ASBOG has developed a matrix that includes a list of practice areas that require licensure for each state. This information can be found on ASBOG's website through this link:
<https://asbog.org/matrix/MatrixJuly2018.pdf>

Any information on why NJ does not offer a PG?

Laurie Racca:

This would be a question for the NJ state government. It is up to the state to decide if geology licensure is necessary in their state.

Can foreigners or those who are not from the US become PGs? What steps would an international student take to obtain a practicing license?

Laurie Racca:

In California, anyone can obtain a license if they meet the requirements in the law. Since licensure is a state function, you would have to contact the Board in other states to determine if they have any citizenship or residency requirements.

Do you know if there is a web-based resource that indicates which states provide reciprocity to which other states?

Laurie Racca:

I am not aware of any such resource. Your best option is to contact the state license Board where you are considering applying for a license.

Question and Answer Session

Deana Sneyd:

Information provided by the state geology boards regarding cooperative licensure agreements can be found on ASBOG's website through this link: https://asbog.org/state_boards.html

State status sheets can be accessed by clicking on the state of interest. Information on cooperative licensure (if offered by the state) is located near the bottom of the sheet.

I understand that to obtain a PG one must occur the three E (education experience, exams). Are these requirements the same for the FG? That being said can I take the FG year prior to my PG?

Laurie Racca:

The Fundamentals of Geology (FG) is an exam. In states that offer the GIT, if you apply for a geologist in training certificate, you must take and pass the FG exam. In California, the FG exam is the only exam you can take before getting your work experience. In California, you can apply for the GIT and if approved, take the FG exam as soon as you meet the minimum education requirements as defined in California law and regulations. It is an optional step on the path to a geology license in California. If you have specific questions regarding applying for a GIT and taking the FG, you should contact your state license Board. In California, you can contact me directly.

Deana Sneyd:

Some states, such as Maine and Illinois, require candidates to have all educational and experience requirements fulfilled before sitting for either the FG or PG exams.

As someone who attended a university that did not offer a degree in geology, what are some courses you think are necessary for the GIT/PG exams?

Laurie Racca:

You should contact your state license Board for specifics of what is required in your state. Another option is to review the courses listed in the ASBOG model law https://asbog.org/documents/ModelLawWithRevisions_10-15-17.pdf or contact your local university geology department. However, the requirements in the law and regulations of the state where you are applying for a license will be the determining factor on whether your application for the GIT certificate or PG license is approved.

You stated that California has a state specific exam. Is this an extra exam that has to be taken or does this mean that the FG and PG exams themselves are California specific?

Laurie Racca:

It is an additional exam that you must take to become licensed in California.

Question and Answer Session

Deana Sneyd:

Maine is the only other state that requires successful completion of a state-specific exam as well as the two ASBOG exams.

What are the fees associated with starting licensure in a new state?

Laurie Racca:

This would be state specific. If you are interested in getting a geology licensure law passed in your state, I suggest contacting a member of your state legislature for information on the process and costs associated with advancing legislation.

Do I have to work with a certain amount of PG's for the necessary 3-5 years of experience needed to get the PG license?

Laurie Racca:

You should contact your state license board for the specifics in your state as it will depend on how their law and regulations are written.

Do you see differences between the "profession" of geology versus the "occupation" of geology? Many states are focusing on limiting occupational licensure...

Laurie Racca:

I don't think that the states that are trying to limit occupational or professional licensure are concerned about the nuances in the two definitions. I personally think that the target is licensure in general. My understanding is that an occupation is an activity you do to earn a living. A profession requires specialized training, knowledge and skills, and can be your occupation in that your profession is your livelihood.

I live in Nevada, which does not have a program for geologist licensure. How could I reconcile the need for licensure with state residency and work experience under another licensee?

Laurie Racca:

Professional geologic work experience earned legally in the jurisdiction and situation in which it is earned is valid towards a license in California. There are many Nevada residents who earn work experience in Nevada and subsequently use that experience toward a geology license in California. For questions specific to your situation, you should contact me directly.

If you take the first half of the exam in one state - and move can you still just take the second portion of the ASBOG after a few years of experience?

Randy Kath:

Yes, you can transfer your FG scores to any of the ASBOG licensure states and take the second examination (Practice of Geology) in another ASBOG state upon fulfillment of that states experience requirements.

I have 30 years of professional geology experience, have passed the practical, but have not taken the fundamentals ASBOG, I am a CPG and have been designated as a certified professional in MI and can sign off on professional reports in OH. I can practice under Federal projects. My question is why can't that experience and education be counted in states where licensure is required?

Laurie Racca:

You can apply professional geologic experience earned legally in another jurisdiction to your license application in California (and likely in many other states).

Deana Sneyd:

Some states, such as Texas, will exempt some candidates for the requirement to take the FG exam.

Laurie Racca:

Licensing is a state specific requirement and you must comply with the laws and regulations in each individual state in which you wish to practice.

Why are CE's not required in order to renew your license. Just pay the renewal fee and off you go?

Laurie Racca:

Because the legislature and the Governor of the State of California have not included a continuing education requirement in the licensure law of this state. We can't require something that is not authorized in our laws and regulations.

Deana Sneyd:

Eleven states currently require continuing education to maintain licensure; three additional states are considering implementation of this requirement. ASBOG has developed a matrix that indicates which states require continuing education. This information can be found on ASBOG's website through this link: <https://asbog.org/matrix/MatrixJuly2018.pdf>

Question and Answer Session

I am on the ASBOG website, looking into when I could take these exams you talked about. The state of Colorado does not have a representative to contact in order to take the exam. So, if the state of Colorado does not have a representative, does that mean we don't need a certification?

Randy Kath:

The State of Colorado does not have professional licensure; however, they do have a statutory definition of a geologist. The practice of geology in Colorado is self-regulating and they do recognize certification through AIPG's CPG program.

If I already have a job in Ohio, can I take the fundamentals exam in Michigan where I attend school? Will it still count?

Randy Kath:

Yes, it will still count. The application process and requirements at CMU are equal to other ASBOG states. Central Michigan University is administering the FG examination. Please look at CMU's web site for more information.

If working in firm that doesn't offer services to public, do you need a license; as mineral or oil exploration?

Laurie Racca:

You must check with your state license Board for the laws and regulations specific to the state you are working in.

What is the process to renew a license and is it different depending on the state? Do you have to retake the entire exam?

Laurie Racca:

Each state will have their own requirements. In California, you do not have to take the exams again unless your license is cancelled.

What can you sign off for with a PG?

Laurie Racca:

In California, you must have a license to practice or offer to practice geology. A PG allows you to do that. The required signature and seal is an indication that you are the licensed professional in responsible charge of the geologic work done. Your PG applies to your geologic work.

One of the issues I have always had is the fact that even though Engineers are commonly paid more than Geologists, why are the exam and application fees for Geologists significantly higher than the fees for Engineers? ex. PE (\$125) vs PG (\$250)

Jack Warner:

The cost of the NCEES PE Examinations is currently \$350 for their pencil-and-paper examinations which is more than the PG Examination.

Are there specific courses that are required in California to qualify to take the exam, or are the exact courses that qualify as "geology related" open to interpretation?

Laurie Racca:

California is in the process of developing a regulation with a specific list of classes. Under the law and regulation, courses are compared to the definition of geology in the law to determine if they meet the requirements. If an application is denied based on education, the applicant can appeal the decision before a judge in a court of law. If that happens, the Board has to demonstrate how they came to the decision including how the coursework was evaluated.

If it has been a number of years since you graduated undergrad and you have been working in a related field, but not one directly under a licensed PG, are there brush up courses or study topic lists for us to review to make sure that our 'specializing' in our career path hasn't hurt us in our ability to pass the exams?

Laurie Racca:

There are courses available, however, the state of California and ASBOG does not recommend or endorse specific courses or providers.

I'm transitioning from petroleum, where licensing is rare, to environmental, where it's all but required. As a result, it's hard to find references that are licensed as required for the PG despite having over a decade of experience. This may be state-specific. Do you think this restriction is valuable, given the differing views of licensing between the two career paths?

Laurie Racca:

I think you are misunderstanding the requirements. The work experience must be earned legally in the jurisdiction or situation in which the experience is earned. So if you are doing geologic work that doesn't require licensure under California law, you can use references to document your qualifying geologic work that aren't licensed. There is a process for this and you should contact me directly to discuss the specifics of your situation. I am not sure whether I understand the comments about value and views on licensure. The law requires a license to practice geology in California with specific exemptions. It is a legal requirement that doesn't change based on views and opinions.

Is the ASBOG GIT designation a legal one, or just an informal moniker indicating progress only, and is it recognized from state to state?

Randy Kath:

Not all licensure states administer a GIT program. For the states that do have a GIT program, it is not transferred from state to state. Basically, a GIT is a geologist that has passed the FG examination and is in the process of gaining work experience necessary to take the PG examination.

Would the board ever move to something more like the professional engineering exams and make the exams more frequent and accessible? Two times a year is a inconvenience.

Randy Kath:

Currently ASBOG is working on the transition to computer-based testing (CBT) similar to the engineers. However, ASBOG anticipates still only administering the examinations twice a year, not on demand.

I graduated with a BSc Geology in 1997. My memory is not THAT good. I've been in mining geology for the last 38 years. Is passing the ASBOG FG exam even possible?

Laurie Racca:

Yes. I've seen many folks in similar situations do it.

I work as a Geologist under a licensed Engineer. My goal is to become a dual licensed professional in NY. Will my supervisor be able to approve my experience as a geologist?

Laurie Racca:

You should contact the NY license Board to discuss your situation as I am not familiar with the laws and regulations of the state of NY.

I work as a remote sensing geologist for the federal government. Do you think it's valuable to get licensed in this profession?

Laurie Racca:

If for some reason your employment situation changes, a license will give you more employment options. Whether or not having these options is valuable to you is a decision that only you can make for yourself.

Is the GIT and FG a one-time test or is it every 2 years like the PG? (Do you have to retake it every 2 years to maintain licensure?)

Randy Kath:

The FG and PG examinations are administered twice a year, March and October. Once you are licensed, you will renew your license with your state licensing board every one or two years. You will not have to retake the examinations to maintain your license as long as you renew it on the state's renewal cycle.

I don't understand why Canada is included in the task analysis survey. I thought that none of the Canadian provinces would accept an ASBOG exam as equivalent to taking an exam in Canada.

Laurie Racca:

There is a province in Canada that uses the FG. Gathering the data for Canada is useful to evaluate whether the practice of geology is similar to the US. Given the geographic proximity of the two countries, the ASBOG member States feel it is worth obtaining the information. It is up to the Canadian provinces to determine whether the ASBOG exams suit their needs. Please note that many other countries do license geologists (Philippines, Nigeria etc.) and it is up to each jurisdiction to determine how to evaluate the qualifications of a geologist for licensure including whether to require one or both of the ASBOG exams.

What is the order of magnitude of the scaling factor between raw scores (# correct/# questions) and the scaled results? 1% 10%?

Jack Warner:

Raw scores (# of correct answers) are converted to scaled scores using two linear transformations (one for adjusting raw passing scores to scaled scores; another for adjusting raw failing scores to scaled scores). For all candidates that pass the examinations, the minimum raw scores required to pass the examinations are adjusted to scaled scores of 70 while perfect scores are adjusted to 100. For all candidates that fail the examinations, the highest failing raw scores are adjusted to scaled scores of 69 and raw scores of 0 are equal to scaled scores of 0.

Do we have information about the number of times taken related to the number of years since training/college?

Jack Warner:

ASBOG has not looked at the number of times taking the exam as it relates to years since college, but thank you for suggesting this analysis.

Question and Answer Session

Is there a breakdown in the task analysis survey statistics outlining what field the practicing geologists (who participated in the survey) practices in...? If so, is that taken into account when weighing the ratio of domain questions on the exam?

Jack Warner:

Yes, the TAS 2015 included a question that asked, "What is your primary area of practice?" (see table). However, the practice areas in the table were not taken into account when developing the test blueprints (i.e., the number of questions in each content domain).

<i>TAS 2015 - What is your primary area of practice?</i>					
<i>Practicing Geologists (USA)</i>		<i>Frequency</i>	<i>Percent</i>	<i>Valid Percent</i>	<i>Cumulative Percent</i>
	<i>Economic Geology</i>	81	3.5	3.6	3.6
	<i>Engineering Geology</i>	240	10.3	10.5	14.1
	<i>Environmental Geology</i>	1000	42.9	43.8	57.9
	<i>Field Geology</i>	27	1.2	1.2	59.1
	<i>Forensic Geology</i>	1	0.0	0.0	59.1
	<i>General Geology</i>	36	1.5	1.6	60.7
	<i>Geochemistry</i>	9	0.4	0.4	61.1
	<i>Geomorphology</i>	27	1.2	1.2	62.3
	<i>Geophysics</i>	24	1.0	1.1	63.3
	<i>Hydrogeology</i>	563	24.1	24.7	88.0
	<i>Mineralogy/Petrology</i>	9	0.4	0.4	88.4
	<i>Mining Geology</i>	65	2.8	2.8	91.3
	<i>Paleontology</i>	3	0.1	0.1	91.4
	<i>Petroleum Geology</i>	112	4.8	4.9	96.3
	<i>Sedimentology/Stratigraphy</i>	23	1.0	1.0	97.3
	<i>Structural Geology</i>	11	0.5	0.5	97.8
	<i>Other</i>	50	2.1	2.2	100.0
	<i>Total</i>	2281	97.8	100.0	
<i>Missing</i>	<i>System</i>	51	2.2		
<i>Total</i>		2332	100.0		

Do your data indicate what typically prevents an applicant from passing the ASBOG exam?

Jack Warner:

While there are a variety of factors that prevent an applicant from passing the FG examination (e.g., insufficient coursework related to what is being examined, insufficient study time, test anxiety, etc.), waiting too long after receiving a BA/BS degree to take the FG Examination can lessen your chances of success on the exam.

Question and Answer Session

As a recent graduate with honors, I did not pass the GIT on my first attempt. I noticed a huge disconnect between the curriculum I was taught and the expectations on the exam. Has the board ever considered accrediting schools similar to ABET?

Laurie Racca:

Two organizations currently offer program level accreditation for geoscience programs: ABET and the Geological Society of London. ASBOG is not an accrediting organization. ASBOG and the state licensure Boards do reach out to colleges and universities to inform them of the requirements for licensure and the skills needed for professional geology licensure. It is up to the college or university to determine what they do with that information. I suggest providing feedback to your university on your experience.

The survey finds consistency in the areas of specialization believed to be most critical to public safety, which makes sense. However, how does the examination address the fact that a Geologist may only work in one sub-area, and will probably not have the same depth of knowledge or experience across all domains?

Laurie Racca:

Most candidates taking the PG Examination do not have in-depth knowledge or experience across all domains that are covered in the examination. Success on the PG Examination does not require in-depth knowledge in all areas because the questions are not intended to test in-depth knowledge in any domain (e.g., advanced concepts in a specialized field of study). All questions are written for the purpose of measuring entry-level, minimum competency to practice the profession.

The response of the 8 domains were rated as I would expect, except for geomorphology, fluvial geomorphology, etc. which is surprising since it has very applied implications, and more and more attention has been paid to restoring streams, removing dams, post wildfire slope analysis. Any thoughts as to why both academics and practitioners rate this domain relatively low?

Randy Kath:

I am not sure why this domain is rated rather low. My guess is that most practicing geologists work in the traditional "working" domains (Hydrogeology, Engineering Geology, and/or Economic Geology), thus the other domains are ranked lower than these working domains.

If you are applying for eligibility for admission to both examinations, do you take both exams in one day, or do you have to pass the FG first, then take the PG at the next testing date?

Deana Sneyd:

You should check with your state geology board for their requirements. Most Boards allow candidates to sit for the FG examination upon fulfilling their educational requirements. A few states, however, require that all education AND experience requirements be fulfilled before sitting for either the FG or PG

Question and Answer Session

exams. If a candidate qualifies to sit for both exams, most states allow them to take both during the same day if they choose to do so.

Do you have a report on the performance between scores and states as per domain?

Jack Warner:

ASBOG has not looked at domain scores by state, but thank you for suggesting this analysis.

What's the difference between licensed geologist and professional geologist and are the terms interchangeable? What's the distribution of SMEs from professionals and academia?

Laurie Racca:

A licensed geologist holds a professional license issued by a state government. Each state may decide to designate a legally protected title to denote that someone is licensed. In California, (and many other states) the legally protected title is Professional Geologist.

ASBOG SMEs are all licensed geologists, some of which currently hold academic positions.

Deana Sneyd:

Attendance numbers at the COE Workshops indicate that about 15% to 20% of SMEs participating in the COE Workshops are academicians.

This seems to be seriously tilted toward recent graduates. How about those of us that have been in the business of geology....in my case petroleum geology....who are decades away from the educational process....even with a Master's Degree in Geology.

Laurie Racca:

The FG is designed to test bachelor's level knowledge. The PG and the California Specific Exam test professional level knowledge including petroleum geology.

Is it possible that the FG/PG exam may ultimately evolve to give an option for exams with a specific focus similar to the PE exam equivalents? For example, a candidate taking a 'consulting geology FG exam' may have more questions devoted to field geology and hydrogeology as opposed to a 'natural resource geologist FG exam,' which may have more questions devoted to economic geology and structural geology.

Laurie Racca:

In my opinion, this is unlikely for several reasons. The biggest factor is the numbers of examinees. California licenses more geologists than any other state. Even in California geology licenses are only

Question and Answer Session

approximately 5% of our license population. There are roughly 5100 active licensed geologists in California and over 100,000 active licensed engineers. Developing the exams costs money, and time. There just aren't sufficient numbers of geologists to justify this effort. The next biggest reason is that there isn't any evidence that such specialization of geology license exams would provide additional protection to the public in order to justify the change in the law and regulation.

It would be helpful for Laurie to explain the difference between a licensed profession in a state where a practice law is enacted that protects the practice vs. requiring an "occupational" or certification type license that does not represent a protected profession.

Laurie Racca:

A practice authority license restricts the practice of geology to those who demonstrate to the state that they qualify. Regulation under a practice authority involves legally enforceable consequences for negligence and incompetence that include various legally enforceable penalties.

The question asks about certification type licenses. If I am understanding the question correctly, this person is referring to professional society certifications that are accepted by some states that do not have practice act licensure. These professional society certifications are not true licenses as there is no ability for a similar level of governmental enforcement to ensure competency.

With the introduction of the examination at CMU in Michigan, do you expect that licensure requirements by the State of Michigan are soon to follow?

Randy Kath:

Not necessarily. To get licensure in Michigan, there needs to be a strong advocate of licensure and a strong legislative lobby to get a bill introduced to the state legislature.

Can someone speak to the specifics of 'grandfathering' associated with new state licensure for those of us who have significant experience?

Randy Kath:

This is state specific. Most grandfathering is limited to 1 to 2 years after a licensure act is passed by the state.

Is there a difference in the passing rate for BA vs BS degrees for the FG exam?

Jack Warner:

The BA and BS degrees are not differentiated on the demographic data collected on the answer sheet, and consequently, no passing rate data are available.