How Undergraduate Research Fits You?

Learning Outcomes

- Review content of past module (What is Undergraduate Research)
- Assess personal skills and development interests
- Opportunity for personal reflection and better understanding of how Undergraduate Research aligns with personal interests.

NEXT

Pre-Assessment

If you have already participated in the post-assessment from the previous module, you may skip this activity.
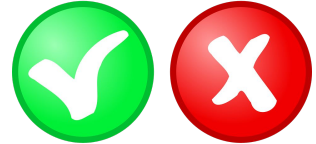
Undergraduate research can only be done in fourth year,
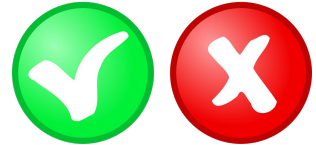
Undergraduate research can only be done in the sciences.

Undergraduate research has no impact on your career.

If the content of this quiz did not make sense to you, please go back and visit module 1, to help you gain extra understanding of what undergraduate research is.

Skill Inventory

    The next screen is an exercise that will help you better understand your capabilities. The "Brain Activity" will require you to click and drag labels from the box on to the appropriate model brain.

There are no right answers! You decide how to organize your skills.

    You will either identify the following skills as one you have or one you wish to develop. If you do not understand what the skill label means, hover your cursor over the label and a definition will be given on the other side.

Information Literacy

This is the ability to know when information is needed and being able to efficiently locate, evaluate, effectively use, and clearly communicate information

NEXT

Brain Activity– Skill Inventory

Knowledge Dissemination

Organization

Tolerance for Obstacles

Teamwork

Independent Work

Collaboration Skills

Self Confidence

Discipline

Critical Thinking

Sense Of Ethics

Creativity

People Management

Data Analysis

Written Communication

Technology Skills

Information Literacy

Leadership

Interpersonal Communication

Oral Communication

Sense Of Place

Skills Always Worth Improving

Discipline

Leadership

Critical Thinking

Skills I Have

Self Confidence

Written Communication

Creativity

Skills I Want To Develop

Collaboration Skills

Oral Communication

Tolerance for Obstacles

NEXT

Creating a Personal Profile

How does an undergraduate research experience fit your goals?

Select the box that best fits your interest

I am looking for a career after finishing my degree.

NEXT

I am undecided on my academic career path.

NEXT

I am interested in going to graduate school

NEXT

**I am looking for a career after finishing my degree.**

What skills do employers look for?

Studies that use surveys as a method of collecting information have found that there are specific skills employers want applicants to have. Highly ranked skills are listed in the following box.

Valued Applicant Skills

- Ethics
- Intercultural Skills
- Ability To Make Decisions
- Communicate Verbally
- Knowledge Of Technology
- People Management

NEXT
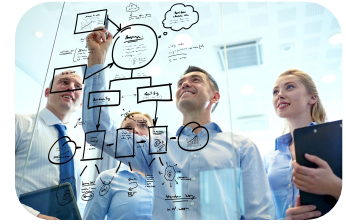
Employers indicated what they believe higher education institutions should put emphasis on in curriculum to help produce graduates who are better suited for jobs after graduation:
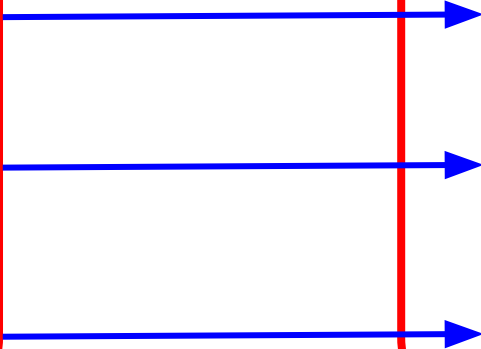
- Complete a project that demonstrates knowledge and skills

- Conduct collaborative research

- Engage in hands-on experiences

NEXT

So how can an undergraduate research experience fill job applicant skill gaps?

- Complete a project that demonstrates knowledge and skills

- Conduct collaborative research

- Engage in hands-on experiences

Complete a project that demonstrates knowledge and skills

Conduct collaborative research

Engage in hands-on experiences

NEXT

Using the knowledge you already have of undergraduate research, fill out the right-hand box in the table. What experiences in research help develop the skills that employers want to see in applicants.

Employer Perspective *This is what employers want from applicants…*	UGR Opportunity *These are some ways I think UGR develop these skills...*
- Ethics - Intercultural skills - Ability to make decisions - Communicate verbally - Knowledge of technology - People management	Record your answers in this box...

Would you like to choose another path?

I am looking for a career after finishing my degree.

NEXT

I am undecided on my academic career path.

NEXT

I am interested in going to graduate school

NEXT

I am happy with the path I selected...

Click the button below to move onto the next activity in the module.

NEXT

I am undecided on my academic career path.

Engaging in undergraduate research (UGR) can help students determine what they want to do in the future. The majority of alumni from a range of institutions reported that participating in UGR said it helped them find academic direction. Life skills can be acquired and developed through these experiences.

The next activity is meant for you to rank the personal importance of the following skills. Pick an *interest lens*, this could be a job path, academic path, or hobby you think you might be interested in. You can do this activity several times depending on what *interest lens* you apply…

NEXT

Interest Lens: Raft guide **Identified Learning Outcomes**	Personal Importance Rating (1-5)
Listening skills	4
Writing skills	3
Appreciation of other cultures	5
Knowledge of rights and responsibilities of citizenship	
Ability to work with others	
Leadership skills	5
Self-esteem/ self-confidence	
Sense of responsibility	
Capacity to evaluate methods and materials	4
Skill in using techniques, methods, materials, tools and/ or technology	
Ability to apply classroom knowledge to problems and situations (experience)	
Ability to think creatively	
Problem-solving an analytic skills	

To fill this example chart, the *interest lens* of Raft guide was applied. A '1' is the least important and '5' is the most important. Hover your cursor over the "Identified Learning Outcomes" for further definition.

*You may fill out this chart several times. Click the button below to save your chart and

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NEXT

Reflection:

1. How many of the identified skills that are developed through UGR did you identify as personally important?

2. Did the ratings change depending on the _interest lens_ you applied?

3. Does this better demonstrate how undergraduate research experience could prepare you for a variety of future paths?

Fill in the reflection box to the right.

Write your reflection here. For reference, click the images to the right to enlarge the charts you have completed...

Interest Lens:_____ Identified Learning Outcomes	Personal Importance Rating (1-5)
Listening skills	
Writing skills	
Appreciation of other cultures	
Knowledge of rights and responsibilities of citizenship	
Ability to work with others	
Leadership skills	
Self-esteem/ self-confidence	
Sense of responsibility	
Capacity to evaluate methods and materials	
Skill in using techniques, methods, materials, tools and/ or technology	
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Problem-solving an analytic skills	

NEXT

Would you like to choose another path?

I am looking for a career after finishing my degree.

NEXT

I am undecided on my academic career path.

NEXT

I am interested in going to graduate school

NEXT

I am happy with the path I selected...

Click the button below to move onto the next activity in the module.

NEXT

I am interested in going to graduate school

What does academia want from undergraduate students?

Studies that use surveys as a method of collecting data have found that there are specific skills academic institutions want graduate applicants to have. **Highly valued skills** are listed in the following box:

- creativity
- critical thinking
- collaboration
- communication
- information literacy
- citizenship
- life skills
- research experience

NEXT

Remember the Brain Inventory activity at the beginning of this module?

The skills that were listed are often identified as skills that are developed through an undergraduate research experience. Using the table below, categories the skills from the Skill Inventory column into the section of the Desired Graduate Student Skills column that you believe the phrase or word best fits.

This is what to activity will look like on the next screen.

Desired Graduate Student Skills	Skill Inventory
Creativity	• Tolerance For Obstacles
	• Independent Work
	• Self Confidence
Critical Thinking	• Knowledge Dissemination
	• Critical Thinking
	• Creativity
Collaboration	• Teamwork
	• Organization
	• Sense Of Place
Communication	• Strong Sense Of Ethics
	• Data Analysis
Information Literacy	• Technology Skills
	• Leadership
	• Collaboration Skills
Citizenship	• People Management
	• Written Communication
	• Oral Communication
	• Interpersonal Communication
Life-skills	• Information Literacy

NEXT

Desired Graduate Student Skills	Skill Inventory
Creativity	• Tolerance For Obstacles
	• Independent Work
	• Self Confidence
Critical Thinking	• Knowledge Dissemination
Data Analysis	• Informed decision making
	• Creative thinking
Collaboration	• Teamwork
Teamwork	• Organization
	• Sense Of Place
Communication	• Strong Sense Of Ethics
Interpersonal Communication	• Data Analysis
	• Technology Skills
Information Literacy	• Leadership
	• Collaboration Skills
	• People Management
Citizenship	• Written Communication
	• Oral Communication
	• Interpersonal Communication
Life-skills	• Creative solution
Technology Skills	

Note:
Some skills will fit perfectly into categories or even be the same. Others will be more difficult to classify. You may repeat a skill into several categories if you desire.

Click the button to see an animation of how to use the chart

▶

NEXT ➤

Reflection

Look at the table you have created.

1. Do you see much overlap between the skills graduate students might need to have and the undergraduate research "skill inventory"?

2. Does this better depict how undergraduate research may benefit you academically?

Fill in the reflection box to the right.

Write your reflection here. For reference, click the images to the right to enlarge the charts you have completed...

Desired Graduate Student Skills	Skill Inventory
Creativity	• Tolerance For Obstacles
	• Independent Work
	• Self Confidence
Critical Thinking	• Knowledge Dissemination
	• Informed decision making
Collaboration	• Creative thinking
	• Teamwork
	• Organization
Communication	• Sense Of Place
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Citizenship	• People Management
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	• Oral Communication
Life-skills	• Interpersonal Communication
	• Creative solution

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	• Written Communication
	• Oral Communication
Life-skills	• Interpersonal Communication
	• Creative solution

NEXT

Would you like to choose another path?

I am looking for a career after finishing my degree.

NEXT

I am undecided on my academic career path.

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NEXT

I am happy with the path I selected...

Click the button below to move onto the next activity in the module.

NEXT

Remember the learning outcomes? The purpose of this model is to create a better understanding of academics and how it can benefit you. The opportunity for reflection will hopefully benefit you and create a better understanding of the possibilities undergraduate research can bring to you. These benefits are presented in the form of testimonials from alumni of Undergraduate Research.

How Undergraduate Research Can Provide Opportunities

Schmitz, H. J., & Havholm, K. (2015). Undergraduate Research and Alumni: Perspectives on Learning Gains and Post-graduation Benefits. *Council on Undergraduate Research Quarterly*, 35(3), 15. Retrieved from https://ezproxy.tru.ca/login?url=https://search.ebscohost.com/login.aspx?direct=true&db=edo&AN=101544156&site=edo-live

Mock Personal Profile

Created by, and for Mixon Madland

Personal Profile Disclaimer

Here is an example of a personal profile but there are some things that you should know first. This profile is intended to be a starting point for you to use to see what kinds of research you may be good at or may want to pursue. It is not intended to be a model of how the rest of your studies will go. Undergraduate research is a fairly big process and you are going to learn a lot, not just about the discipline you're in, but about yourself, your academic goals, and your career goals. And these goals are probably going to change by the time you're done.

Skill Inventory

Here is a quick review of the skills that you said you already have and the skills you said you'd like to work on

Skills I Have	Skills I want to develop
Tolerance for obstacles	Independent work
Self confidence	Knowledge Dissemination
Critical Thinking	Creativity
Teamwork	Organization
Sense of place	Strong sense of ethics
Data analysis	Technology skills
Leadership	Collaboration skills
People management	Written communication
Oral communication	Interpersonal communication
Information Literacy	

NEXT

Personal Profile

Employer Perspective *This is what employers want from applicants…*	UGR Opportunity *These are some ways I think UGR develop these skills...*
- ethics - intercultural skills - ability to make decisions - communicate verbally - knowledge of technology - people management	Undergraduate Research increases my ability to make decisions because most of the work is done on my own and so I get very hands on experience. It gives me a good sense of ethics as I have to learn what types of experiments might be ethical or not. Since this research requires so much communication with a supervisor, it also helps me develop my verbal communication skills.

Post Assessment

Remember the learning outcomes? The purpose of this model was to create a better understanding of academics and how it can benefit you.
Now that you've successfully completed this module, take this opportunity to reflect on how you could benefit from undergraduate research and why you would want to partake in this experience.

Feel free to jot down some thoughts from your reflection here:

NEXT

Summary

Following Your Research Path, Where To Go From Here

With the knowledge you've gained from this module, along with your personalized profile as a researcher, you might have a few questions. what the next steps? Where do I go from here? How do I start doing the research that keeps getting talked about? For the answers to all of those questions, follow the link below to the next module, where you will learn about formulating your research question and specific ways to begin your research, like how to get involved with the undergraduate research community or how to start directed studies.

NEXT

Looking for More info?

- Check out the third module! It's aim is to develop your understanding of how to get involved with undergraduate research
- You can always chat with your professors about your interest in research and how to get started
- With any questions or for more information you can contact the research department here at TRU:

    Email: research@tru.ca
    Phone: 250-371-5586
    Room CT225

- For additional information you can also check out the research page on the TRU website at www.tru.ca/research

References

Schmitz, H. J., & Havholm, K. (2015). Undergraduate Research and Alumni: Perspectives on Learning Gains and
        Post-graduation Benefits. *Council on Undergraduate Research Quarterly*, 35(3), 15. Retrieved from
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        &site=eds-live

Moore, S. E., Hvenegaard, G. T., & Wesselius, J. C. (n.d.). The efficacy of directed studies courses as a form of
        undergraduate research experience: a comparison of instructor and student perspectives on course
        dynamics. HIGHER EDUCATION, 76(5), 771–788. https://doi.org/10.1007/s10734-018-0240-7