PSYCHOLOGY 100 - General Psychology Syllabus Section M, Item 5415, Fall, 2014 TTh - 5:30-7:40 pm, Room A138

Instructor: Michael M. Brislawn, MS, LMHC, Affiliate Psychology Instructor

E-mail: mbrislaw@bellevuecollege.edu

(Please always use email for contacts with the instructor, rather than Canvas) Phone: (425) 564-2640 (It is much more efficient to contact me via email)

Office Location: D200B

Office Hours: TTh - 2:30-3:30 pm by Appointment

Course Information

Course Outcomes

Psychology 100 is an introductory survey course intended to introduce students to the major concepts, theories, and research findings in the field of psychology. Learning outcomes in Psychology 100 include:

A. Specific outcomes related to psychology as a discipline

- 1. Describe the purpose, comprehensive scope, and areas of application in the discipline of psychology
- 2. Demonstrate knowledge of the scientific process by applying, comparing, or critiquing various research methods used by psychologists
- 3. Recognize, compare, and contrast major theoretical perspectives used to explain human nature, and to guide psychological research and applications
 - 4. Identify historical and present-day contributions of major psychologists
 - 5. Define important psychological terms, concepts, processes, and principles
 - 6. Apply critical thinking to assumptions, claims, and 'common sense' ideas.
 - 7. Demonstrate the application of psychological principles and findings to one's own life.
- B. In terms of general education outcomes, students will be able to:
- 1. Creative and Critical Thinking: The ability to utilize a range of thought processes to evaluate information and opinions, generate new ideas, and identify creative and successful outcomes.
- 2. Communication: The ability to communicate effectively using written, oral, visual, and/or electronic means, as appropriate to a given situation.
- 3. Connections: The ability to identify and explore connections, themes, and patterns in the social and natural world, and to see commonalities within dissimilar circumstances.

How Outcomes will be met

Exams

There will be five multiple-choice unit exams, held at the end of each unit described in the Study Objectives. Please bring a scantron sheet and a #2 pencil to each exam. The tentative schedule for exams will be posted on Canvas in the Announcements.

Make-up Exams

In the event of an absence, please contact me <u>prior</u> to the regularly scheduled exam time to schedule a time for the makeup exam.

Homework

The instructor will distribute on Canvas a set of five (5) Critical Thinking Homework Exercises drawn from the chapters in the textbook. Over the course of the quarter, students must complete <u>four</u> (4) of these five (5) Critical Thinking Homework Exercises in order to receive a passing grade for the course. Each of these four Critical Thinking Homework Exercises will be worth 25 points, and will be due on the dates corresponding with the days of the same unit exams. Students may collaborate on these Homework Exercises, in groups of up to five students. One Insurance Point may be earned per week, up to three points per Exercise, for turning in an Exercise early. Note: It is not possible to earn more than the maximum 25 points for any Exercise using Insurance Points. Conversely, penalty points will be subtracted for each day late an Exercise is turned in (2 points per day). Note: This means an assignment turned in two weeks late would be worth <u>no</u> points. Homework Exercises must be typewritten.

Optional Extra Credit Paper

Students wishing to insure a better grade may choose to do a paper on a <u>pre-approved</u> topic within the field of psychology. In order to foster creativity, a student must develop his/her own topic, and then get it approved by the instructor, prior to beginning the paper. Extra Credit Papers are due by December 2nd. Such papers should consist of a title page, a blank page for comments, <u>3,000-4,000</u> word count of typewritten content, and a works cited page. Papers shorter than the <u>3,000</u> word count or longer than a <u>5,000</u> word count will <u>not</u> be accepted. The Optional Extra Credit Paper will be worth 40 points. One (1) Insurance Point may be earned per week, up to three (3) points, for turning in the Paper early. Note: It is not possible to earn more than the maximum 40 points for the Paper using Insurance Points. Conversely, penalty points will be subtracted for each day late an Exercise is turned in (4 points per day). Note: This means an assignment turned in on Friday of Finals week would be worth <u>no</u> points.

Course Evaluation Extra Credit

Later in the quarter (dates will be posted on Canvas), students may earn five (5) extra credit points in the class by completing the course evaluation at the following web site: https://bellevuecollege.edu/ClassEval/default.aspx

After completing the evaluation, each student will need to submit a JPG or PNG file of the screen that the evaluation has been completed, in order to obtain the extra credit points. The JPG/PNG file must be submitted attached to an email message using the BC student email system. If 90% of the active students in the class complete the course evaluation, an additional five (5) extra credit points will be earned by each student that has completed the evaluation.

Grading

Each of the Exams will contain 25 items and be worth 50 points. The lowest score for each person among the first four Exams will be thrown out, and <u>not</u> used in computing your final grade for the course. The remaining four Exams (the three of the first four, plus the last one) will account for two thirds of your course grade. The Homework Exercises are worth 25 points each and will count as the remaining one third of your course grade. A student must complete the four required Exams <u>and</u> the four required Homework Exercises in order to receive a passing grade for the course. Any points earned from the Optional Extra Credit Paper will be added to the final point total for that student after end of the quarter grade curves have been calculated.

Please be aware: There are <u>NO</u> non-passing grades at BC, other than a Failing grade, which will result in 5 credits of 0.0 being factored into your cumulative grade point average. It is the student's responsibility to keep track of their grade for the class, and to Withdraw before the deadline of Friday, November 7th, if s/he feels his/her performance is unsatisfactory.

Exam and course grades will be assigned through curve grading scores, and then converting these scores into letter grade ranges, as follows:

				+.9s	3.4		1s	2.4		-1.1s	1.4
			B+	+.8s	3.3	C+	2s	2.3	D+	-1.2s	1.3
				+.7s	3.2		3s	2.2		-1.3s	1.2
				+.6s	3.1		4s	2.1		-1.4s	1.1
A	+1.5s	4.0	В	+.5s	3.0	C	5s	2.0	D	-1.5s	1.0
	+1.4s	3.9		+.4s	2.9		6s	1.9		-1.6s	0.9
	+1.3s	3.8		+.3s	2.8		7s	1.8		-1.7s	0.8
	+1.2s	3.7		+.2s	2.7		8s	1.7		-1.8s	0.7
A-	+1.1s	3.6	B-	+.1s	2.6	C-	9s	1.6	D-	-1.9s	0.6
	+1.0s	3.5		X	2.5		-1.0s	1.5		-2.0s	0.5

Curve grading will be discussed during the first weeks of class, as part of the discussion of probability distributions and normal curves from chapter one of our textbook.

In order for a student to request being given an Incomplete as a temporary grade for the quarter, the following conditions must first be met:

The student has completed a minimum of three (3) of the four (4) required exams for the course, with a passing grade, <u>and</u>

The student has completed a minimum of three (3) of the four (4) required homework exercises for the course, with a passing grade.

A student who qualifies for an Incomplete grade must submit a request in writing, preferably via email message. The instructor will print a PDF copy of the contract for his records, and will send a copy of the contract to the student.

The link to the College Grading Policy is located on the web at: http://bellevuecollege.edu/policies/3/3000_grading.asp.

Books and Materials Required

Textbook

Psychology, 10th Edition, by Myers

Book Companion Website: http://bcs.worthpublishers.com/myers10e/#t 746145 (four underscores)

Study Objectives

A list of objectives will be distributed on Canvas, identifying areas that will be covered on each of the exams. This list of objectives will be used for unit exams, and should be saved.

Instructor's Expectation

Attendance/Participation

Anything covered in the classroom presentations should be considered as testable information, unless otherwise specified. Some information that will be presented is <u>not</u> covered in your textbook. It is each student's responsibility to arrange with classmate(s) to get notes for presentations from which s/he has been absent. Participation is encouraged but not mandatory during classroom discussions. Actual class attendance and participation will <u>not</u> be used as factors in grading.

Classroom Learning Atmosphere

Most class sessions will be a combination of instructor presentations and in-context class discussions. Discussions should be based from a scientific perspective, and information should be related to valid and reliable findings gathered from reputable scientific sources.

Affirmation of Inclusion

Bellevue College is committed to maintaining an environment in which every member of the campus community feels welcome to participate in the life of the college, free from harassment and discrimination.

We value our different backgrounds at Bellevue College, and students, faculty, staff members, and administrators are to treat one another with dignity and respect. http://bellevuecollege.edu/about/goals/inclusion.asp

Student Code

"Cheating, stealing and plagiarizing (using the ideas or words of another as one's own without crediting the source) and inappropriate/disruptive classroom behavior are violations of the Student Code of Conduct at Bellevue College. Examples of unacceptable behavior include, but are not limited to: talking out of turn, arriving late or leaving early without a valid reason, allowing cell phones/pagers to ring, and inappropriate behavior toward the instructor or classmates. The instructor can refer any violation of the Student Code of Conduct to the Vice President of Student Services for possible probation or suspension from Bellevue College. Specific student rights, responsibilities and appeal procedures are listed in the Student Code of Conduct, available in the office of the Vice President of Student Services." The Student Code, Policy 2050, in its entirety is located at:

http://bellevuecollege.edu/policies/2/2050_Student_Code.asp

Student Conduct

Student conduct expectations will be in compliance with policies described in the BC student handbook. Of particular note: Abusive and/or harassing language will <u>not</u> be tolerated towards other students, guests, or the instructor in the class. Also, cell phones and pagers should always be turned <u>off</u> prior to entering class.

If a student is found to be cheating on an exam, that exam score will automatically be graded at zero points, and will be counted as one of the four required grades during the grading process. Subsequent cheating on a second exam will prevent the student from completing four required exams, and will result in a Failing grade in the class.

If a student is found to be plagiarizing information on a homework exercise, that homework exercise score will automatically be graded at zero points, and will be counted as one of the four required grades during the grading process. Subsequent plagiarizing on a second homework exercise will prevent the student from completing four required homework exercises, and will result in a Failing grade in the class.

If a student is found to be plagiarizing information on the optional extra credit paper, that extra credit paper score will automatically be graded at zero points.

Bellevue College E-mail and access to Canvas

All students registered for classes at Bellevue College are entitled to a network and e-mail account. Your student network account can be used to access your student e-mail, log in to computers in labs and classrooms, connect to the BC wireless network and log in to Canvas. To create your account, go to:

https://www.bellevuecollege.edu/netid/

Please, always use the BC student email system (rather than Canvas) for all contacts with the instructor, and please remember to always sign your email messages with your full name.

BC offers a wide variety of computer and learning labs to enhance learning and student success. Find current campus locations for all student labs by visiting the Computing Services website.

Disability Resource Center (DRC)

The Disability Resource Center serves students with a wide array of learning challenges and disabilities. If you are a student who has a disability or learning challenge for which you have documentation or have seen someone for treatment and if you feel you may need accommodations in order to be successful in college, please contact us as soon as possible. If you are a student with a documented autism spectrum disorder, there is a program of support available to you.

If you are a person who requires assistance in case of an emergency situation, such as a fire, earthquake, etc, please meet with your individual instructors to develop a safety plan within the first week of the quarter.

The DRC office is temporarily located in the Library or you can call the reception desk at (425) 564-2498. Deaf students can reach us by video phone at (425) 440-2025 or by TTY at (425) 564-4110. Please visit our website for application information into our program and other helpful links at:

http://bellevuecollege.edu/drc

Public Safety

The Bellevue College (BC) Public Safety Department's well trained and courteous non-commissioned staff provides personal safety, security, crime prevention, preliminary investigations, and other services to the campus community, 24 hours per day, 7 days per week. Their phone number is (425) 564-2400. The Public Safety website is your one-stop resource for campus emergency preparedness information, campus closure announcements and critical information in the event of an emergency. Public Safety is located in K100 and on the web at: http://bellevuecollege.edu/publicsafety/

Academic Calendar

The Bellevue College Academic Calendar is separated into two calendars. They provide information about holidays, closures and important enrollment dates such as the finals schedule.

- Enrollment Calendar http://www.bellevuecollege.edu/enrollment/deadlines/. On this calendar you will find admissions and registration dates and important dates for withdrawing and receiving tuition refunds.
- College Calendar http://www.bellevuecollege.edu/enrollment/holidays/. This calendar gives you the year at a glance and includes college holidays, scheduled closures, quarter end and start dates, and final exam dates.

Course Calendar

9/23/14 - 12/9/14

Prologue: Psychology's Roots; Psychology's Big Issues; Psychology's Perspectives;

Psychology's Subfields; Studying Psychology

<u>Chapter 1</u>: The Need for Psychological Science; Description; Correlation;

Experimentation; Statistical Reasoning; Frequently Asked Questions About Psychology

<u>Chapter 2</u>: Neural Communication; The Nervous System; The Brain; The Endocrine System

Chapter 3: Waking Consciousness; Sleep and Dreams; Hypnosis; Drugs and

Consciousness; Near-Death Experiences

Chapter 4: Brief Overview

Chapter 5: Prenatal Development and the Newborn; Infancy and Childhood;

Adolescence; Adulthood; Reflections on the Major Developmental Issues

<u>Chapter 7</u>: Classical Conditioning, Operant Conditioning; Learning by Observation

Chapter 8: The Phenomenon of Memory; Encoding: Getting Information In; Storage:

Retaining Information; Retrieval: Getting Information Out; Forgetting; Memory

Construction; Improving Memory

<u>Chapter 11</u>: Motivational Concepts; Hunger; Sexual Motivation; The Need to Belong;

Achievement Motivation

Chapter 12: Stress and Illness; Promoting Health

<u>Chapter 14</u>: Social Thinking; Social Influence; Social Relations

Chapter 15: Perspectives on Psychological Disorders; Schizophrenia; Mood Disorders;

Anxiety Disorders; Dissociative Disorders; Somatoform Disorders; Personality Disorders

11/7 Last Day to Withdraw 11/11 Veterans Day (Holiday) 11/27 Thanksgiving Day (Holiday)

12/9 Last Unit Exam (Chapters 15 & 14), 5:30-7:40 pm

12/9 Special Presentation on William Perry's Theory of Intellectual and Ethical

Development in College Age Individuals

Exam Dates

Exam dates, other than the last unit exam date, will be announced in class, and posted on Canvas. Class discussions, and potential days when class will not be held (e.g., school closure due to weather) prevent exact exam dates from being known ahead of time.

Expansion

Information about Bellevue College's copyright guidelines can be found at:

http://bellevuecollege.libguides.com/copyright

A good resource for Plagiarism is the Writing Lab:

http://bellevuecollege.edu/asc/writing/essays-guides/documents/plagiarism.pdf

Advising

In-house advising is available for the Social Sciences with Deanne Eschbach in D110C.

Division Statements

PROCEDURES AND GUIDELINES OF THE SOCIAL SCIENCE DIVISION Fall 2013

Cheating, Stealing and Plagiarizing*

Cheating, stealing and plagiarizing (using the ideas or words of another as one's own without crediting the source) and inappropriate/disruptive classroom behavior are violations of the Student Code of Conduct at Bellevue College. Examples of unacceptable behavior include, but are not limited to: talking out of turn, arriving late or leaving early without a valid reason, allowing cell phones/pagers to ring, and inappropriate behavior toward the instructor or classmates. The instructor can refer any violation of the Student Code of Conduct to the Dean of Student Services for possible probation or suspension from Bellevue College. Specific student rights, responsibilities and appeal procedures are listed in the Student Code of Conduct, available in the office of the Dean of Student Services and at

http://www.bellevuecollege.edu/policies/id-2050p/

<u>Email Communication</u> with instructors must be done through student email accounts only. Instructors cannot communicate with students about their course work or grades through student's personal email accounts.

Incomplete

If a student fails to complete all the required work for a course, an instructor may assign the grade of Incomplete ("I"). The student must complete the coursework by the end of the next quarter, or receive the assigned letter grade (usually an "F").

F Grade

Students who fail a course will receive a letter grade of "F."

Final Examination Schedule

The Social Science Division will adhere to the final examination schedule as stated in the BC Schedule. Final examinations will be held at the end of each quarter at fixed times. Instructors will not give examinations in advance of the regular schedule. A student who is absent from any examination held at any time during the quarter may forfeit the right to make up the examination. If, for illness or some other circumstance beyond the student's control, the student is unable to be present at any scheduled examination and has contacted the instructor on a timely basis, the student may be permitted to take such examination at a time designated by the instructor.

Withdrawal From Class

College policy states that students must formally withdraw from a class by the end of the seventh week of the quarter (Registration Office, B125). If a student has not withdrawn by that date, an appropriate letter grade will be assigned for the course.

Hardship Withdrawal

Instructors may assign the grade of "HW" (hardship withdrawal) at their discretion in the event that a student cannot complete the coursework due to extreme and exceptional circumstances. Students may also contact the Enrollment Services office BEFORE grades are assigned in cases of hardship.

Students Who Require Disability Accommodations:

Students with disabilities who have accommodation needs are encouraged to meet with the Disability Resource Centre (DRC) office located in D125 inside the library media center (telephone 425.564.2498 or TTY 425.564.4110), to establish their eligibility for accommodation. The DRC office will provide each eligible student with an accommodation letter. Students who require accommodation in class should review the DRC accommodation letter with each instructor during the first week of the quarter.

Students with mobility challenges who may need assistance in case of an emergency situation or evacuation should register with Disability Resource Centre, and review those needs with the instructor as well.

Distribution of Grades

Grades will not be posted in the Social Science Division or in faculty offices, and program assistants or coordinators will not give out grades. Students should access their grades through the BC Web site.

Return of Papers and Tests

Paper and/or Scantron score sheet returns will be arranged in the following ways ONLY: by mail, if student supplies the instructor with stamped, self-addressed envelope (with appropriate postage); or by the instructor designating a time and place whereby the student may retrieve his/her papers. Unclaimed papers and/or Scantron score sheets must be kept by the instructor for a minimum of sixty (60) instructional days following the end of the quarter.

*If you are accused of cheating, stealing exams and/or plagiarism, there is a Bellevue College Student Discipline and Appeals Procedure (the right to due process) which you may pursue. Contact the office of Division Chair (D110), the Dean of Student Services (B231A) or the Associated Student Body (C212) for information regarding the appeals process.

Syllabus Addendum Grading Standards for All Written Assignments

Psychology is a Social Science, and therefore the writing for this class will primarily involve exercise(s) in technical writing, as would be the case in any Science class. A grade in the C-range is considered to be an Average grade, with a grade in the B-range being considered as Above Average, and a grade in the A-range being considered as Excellent.

Content

The point total for a written assignment is based on content.

Complete, Essential Information

First and foremost, an assignment in technical writing for a science class needs to present <u>all</u> of the <u>essential</u> information on a subject. If an assignment is missing essential information, then point(s) will be lost.

Correct, Accurate Information

The information in technical writing assignments must be correct and accurate. If incorrect/inaccurate information is included in an assignment, then point(s) will be lost.

Specific word usage errors, such as incorrect uses of technical terms, relating to the actual content of the assignment, can lead to the loss of additional points.

Concise, Non-Repetitive Information

Technical writing assignments need to present information efficiently. It is <u>not</u> desirable to be overly elaborate or to attempt to present information in a highly creative fashion. Generally, information should be stated once, and <u>not</u> repeated. Although this will only be one (1) point in the actual grading process, it is still a good idea to pay attention to this factor.

Insurance Points

Insurance Points are small possible rewards earned by students demonstrating quantifiable forms of effort, that can be used to improve a student's grade on an assignment. Insurance Points can never be used to improve a student's grade above the maximum number of base points possible on that assignment, and total Insurance Points may never exceed 10% of the maximum number of base points possible on that assignment. Insurance Points can only be used on the specific assignment where they were earned, and will <u>not</u> carry over to other assignments.

Form

Language Usage

Grammar, Spelling/Typos, Basic Word Usage. Although having correct grammar, spelling/typographical accuracy, and correct basic word usage will <u>not</u> be requirements in this class, students who have one (1) or fewer errors in each of these areas on an assignment can earn one (1) possible insurance point for each area per assignment for doing so.

Formatting. All written assignments for this class must be fully typewritten, including the student's name and the basic course information (course name & number), must be submitted online as email attachments using the BC student email system, rather than other email addresses or Canvas, and need to be submitted in some form of file format that can be opened directly by MS Word (.doc and .docx files work the best); file formats that require the document to first be saved to a computer, before being opened, create additional computer security risks and will not be accepted.

The Writing Lab has excellent PDF files on tips for the use of punctuation and MS Word: http://bellevuecollege.edu/asc/writing/essays-guides/documents/punctuationmarks.pdf

APA Formatting. The American Psychological Association created a set of formatting guidelines for written documents in psychology. The following web sites do an effective job of describing APA formatting:

http://owl.english.purdue.edu/owl/resource/560/01/

http://www.apastyle.org/learn/tutorials/basics-tutorial.aspx

The following PDF file on APA formatting can also be found through the Bellevue College Writing Lab:

http://bellevuecollege.edu/asc/writing/essays-guides/documents/apastylepaper.pdf

Although these formatting guidelines will <u>not</u> be a requirement in this class, students who use all five (5) formatting guidelines and tips described below can earn one possible (1) insurance point per assignment for doing so.

- Set Paper Size to US Letter (8.5" x 11"), and set Page Margins at 1" on all four edges of your written assignments.
 - Use the Times New Roman Font in 12 Point Font Size, in your written assignments.
- Paragraphs should be indented .5" on the first line. It is better to set the First Line Indent Marker at .5" for all of your paragraphs (rather than using the tab key or space bar to artificially create the indent on each paragraph).
- **Deviation from APA Formatting.** Normally, APA format requires double-spacing of content; this is mostly to create space for instructors to write comments between lines. Since I will be grading within the context of your word processed documents, double-spacing is unnecessary, and I am asking that you single-space the content of your assignments, with no added space(s) between lines or paragraphs.
- **Formatting Tip.** If you wish to move to an actual new page, please use the Insert Page Break command (rather than repeatedly pressing the return key).

Works Cited Page

If an assignment requires a Works Cited Page, students who use the formatting guidelines for the Works Cited Page described above <u>and</u> on the APA formatting websites listed above can earn one possible (1) insurance point per assignment for doing so.

The following PDF file on APA formatting for Works Cited can also be found through the Bellevue College Writing Lab:

http://bellevuecollege.edu/asc/writing/essays-guides/documents/apaworkscitedpage.pdf

Title Page

If an assignment requires a Title Page, students who use the formatting guidelines for the Title Page described above <u>and</u> on the APA formatting websites listed above can earn one possible (1) insurance point per assignment for doing so.

Note: This document, up to this point, generally follows correct APA formatting.

A Baker's Dozen of Tips for Writing Papers in Psychology Classes

- 1. Use the Spellchecker and Grammar Checker programs within your word processing program.
- 2. On the View options for your word processing program, set the document to Print Layout and turn on the Ruler; this allows you to see much of the formatting.
- 3. Have your paper proofread by someone proficient in the use of the English language, e.g., someone who routinely gets A's in English courses.
- 4. Read your paper out loud to yourself, and also to another person, preferably someone proficient in the use of the English language. This allows you to hear how it sounds, which often allows you to catch errors of grammar or logic.
- 5. Minimize your use of the word "that", which is probably one of the most overused words in the written form of the English language. The simple rule for "that" is, if leaving it out does not change the actual meaning of the sentence, then it should be left out.
- 6. Write something one time, rather than being repetitive; you can always refer to something you have written earlier in the paper.
- 7. Quote your sources explicitly, meaning use quotation marks or .5" indenting on the entire quote, and specifically cite the name and date of your source, otherwise it is <u>plagiarism</u>.

The Writing Lab has an excellent PDF file on the subject of plagiarism: http://bellevuecollege.edu/asc/writing/essays-guides/documents/plagiarism.pdf

- 8. Use legitimate scientific references, preferably from within the last ten years, unless writing a paper specifically dealing with a historically-based topic.
- 9. If you choose to use personal experiences as examples, be sure to compare and contrast your personal experiences with what has been scientifically shown to be "average."
- 10. If you choose to make an assertion or claim, provide scientifically gathered information in support of your assertion or claim.
- 11. If you choose to take a position, then explain, in detail, the logic of the position you are taking, and provide scientifically gathered information in support of your position. Writing a position paper is often extremely challenging to achieve in psychology.
- 12. Remember, things in psychology rarely, if ever, always occur in only one way, and rarely, if ever, have single causes.
- 13. If you choose to talk about anyone you know in a writing assignment, even a family member, remember to maintain confidentiality, changing his/her name and any other identifying information.

Possible solutions, if Writing is a problem for you, as a student:

Writing Lab

The Writing Lab can often provide brief assistance with specific technical problems with various aspects of writing.

Tutoring Center

The Tutoring Center may be able to provide referral to individuals who can provide more extensive assistance with writing, in general, and sometimes with writing in relation to specific subject matter areas, such as psychology.

Counseling Center

For students who experience problems with "writer's block", anxiety relating to writing exercises, tendency towards procrastination, and/or other issues of a more personal nature that might be affecting their writing, the staff at the Counseling Center can often be of considerable assistance in addressing such problems.