

### Teaching and Learning Day Tuesday October 22<sup>nd</sup> 2019

### **Turnitin Working Group Members**

- Shannon Langlois (Biotechnology Faculty and Chair)
- Thomas Jenkins (GAS, First Semester Communications Coordinator)
- Alana Callan (LDS)
- (Naman Khandewal, SAC)
- (Jeremy Spencley, Business Faculty)

## What to Expect



**Turnitin Working Group TOR** 



**Statistics** 



**Similarity Reports** 



Breakout groups with Exemplars



**Lessons Learned** 



**Question Period** 

### Terms of Reference

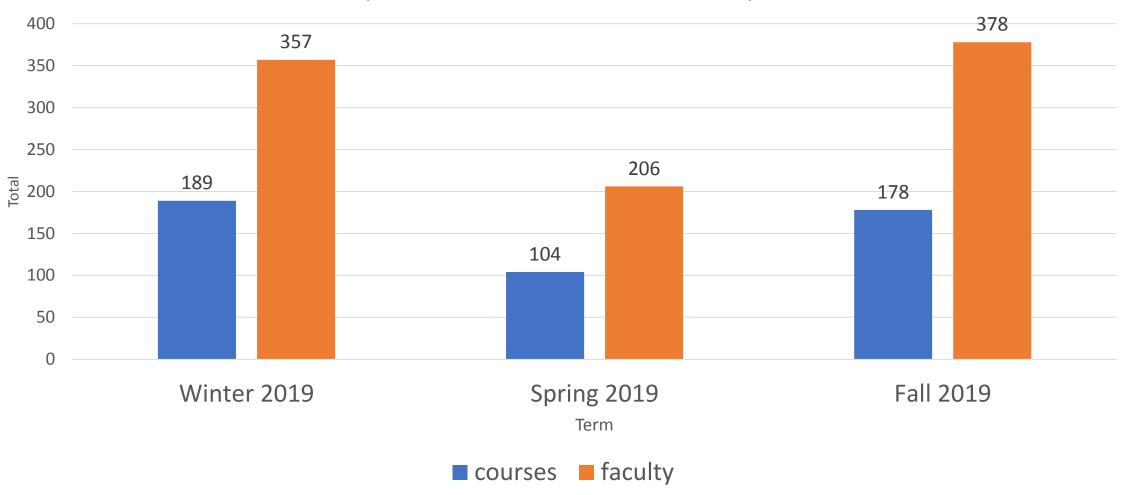
The Turnitin working group will bring forward concerns and present initiatives that may relate, but are not limited, to:

- Existing college resources that support Turnitin use, such as available online training tools, including identification of gaps and suggestions for improvement.
- Existing college policy and procedure as it relates to Turnitin and its intersection with other college policies (\*Note that this group is not tasked with revising policy or procedure, but pertinent suggestions will be critical in the development of recommendations for future discussion).
- Best practices for faculty usage of Turnitin, allowing for faculty discretion and understanding of optimal usage of the tool
- Best practices for communication of the value of this education tool for students and faculty

### Deliverables

- Specific recommendations regarding the Turnitin operating procedure and the interaction with other college policies and procedures (such as Academic Integrity, Academic Appeals, Student Rights and Responsibilities, etc.);
- A guide/resource/workshop on best practices and lessons learned for Turnitin usage for faculty and students;
  - Specific recommendations regarding a communication strategy for students and faculty regarding the purpose and use of the tool; and
  - Other specific recommendations as determined by the group that would highlight best practices, lessons learned, and future opportunities for faculty and students.

## Turnitin Usage Fleming College 2019 (based on course outline data)



### Similarity

• Blue: No matching text

• Green: One word to 24% matching text

• Yellow: 25-49% matching text

• Orange: 50-74% matching text

• Red: 75-100% matching text

TITLE	SIMILARITY	
Submission	0%	
Submission	6%	
Submission	43%	
Submission	58%	
Submission	80%	

https://help.turnitin.com/feedback-studio/turnitin-website/instructor/the-similarity-report/interpreting-the-similarity-report.htm

## Breakout groups



BREAK INTO 5 GROUPS OF 5



EACH GROUP WILL RECEIVE THE ONE EXEMPLAR



DETERMINING IF YOU HAVE ENOUGH EVIDENCE TO BE CONSIDERED A BREACH OF ACADEMIC INTEGRITY



AS A WHOLE GROUP WE CAN ROUND TABLE EACH EXAMPLE AND DISCUSS

### 15 minutes for Breakout Groups

Example 1: 32% Similarity

### Polymerase Chain Reaction (PCR)

Polymerase Chain Reaction or PCR was introduced by Doctor Kary Mullis and his colleagues at the Cetus Corporation in 1986 (Mullis et al. 1986). In 1993, Doctor Kary Mullis and Professor Michael Smith received the Nobel Prize in Chemistry for the development of Polymerase Chain Reaction (NobelPrize 1993).

It is a thermal cycling process that uses different temperatures to duplicate a region of DNA to produce numerous copies of this particular region in DNA sequence within a short time period (Butler 2010). There are three main stages that occur in one cycle: denaturation, annealing, and extension (Gupta 2019). In the first stage, denaturation uses heat at 94°C to separa the double-stranded DNA into single-stranded DNA (Kubista et al. 2006). In the second stage, the emperature decreases from 95°C to 50°C to give primers the ability to bind to a single-stranded DNA (Kubista et al. 2006). In the third stage, the temperature increases from 50°C to 72°C to enable DNA polymerase to create a new copy of DNA by extending the primers using the deoxynucleotide triphosphates (Kubista et al. 2006).

PCR Cocktail is a combination of the components and reagents used to prepare an amplification reaction (Butler 2010). It may vary in ingredients from one PCR reaction to another PCR reaction, but it is mainly composed of buffer containing magnesium, deoxynucleotide triphosphates (dNTPs), forward and reverse primers, DNA polymerase, bovine serum albumin, and DNA template (Butler 2010). The most common DNA polymerase used in PCR is *Thermus aquaticus* or *Taq* because it can function at high temperature during the main stages (Innis et al. 1988). Deionized water is then added to the PCR cocktail to ensure that the

			Match Overview		×
			<b>32</b> %		
		<			>
	<i>₫</i>	1	exploredoc.com Internet Source	5%	>
		2	peerj.com Internet Source	5%	>
	2	3	S Wilton. "Dideoxy Seq Publication	3%	>
	7	4	Submitted to The Sage Student Paper	3%	>
(	<u>)</u>	5	archive.org Internet Source	2%	>
		6	Submitted to University Student Paper	2%	>
		7	Submitted to Fleming Student Paper	2%	>
		8	www.infoplease.com Internet Source	2%	>

Page: 1 of 2

Word Count: 680

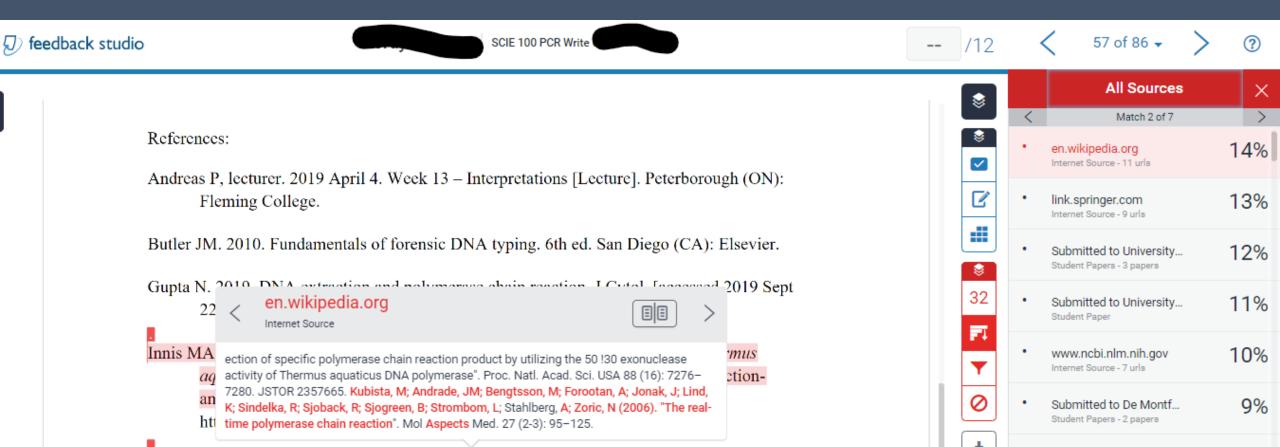
Text-only Report

**Turnitin Classic** 

High Resolution

e





Kubista M, Andrade JM, Bengtsson M, Forootan A, Jonak J, Lind K, Sindelka R, Sjoback R, Sjogreen B, Strombom L, Sthalberg A, Zoric N. 2006. The real-time polymerase chain reaction. Molecular Aspects of Medicine. [accessed 2019 Sept 22]; 27(2-3): 95-125. doi: 10.1016/j.mam.2005.12.007

Mullis K, Faloona F, Scharf S, Saiki R, Horn G, Erlich H. 1986. Specific enzymatic amplification of DNA in vitro: the polymerase chain reaction. Cold Spring Harbour

9%

9%

9%

d-nb.info

Internet Source - 3 urls

repository.up.ac.za Internet Source

rd.springer.com

Exclude Sources

Example 2: 0% Similarity

### PCR assignment

PCR stands for Polymerase Chain Reaction. (Butler, 2012) DNA Polymerases are an enzyme that are needed for DNA replication, they will produce two identical DNA strands from the complete original DNA strand. (Butler, 2012) There are three cycles in PCR that consist of denaturation at 94 °C, which breaks apart the two DNA strands, annealing at 55 °C which binds the primers to the DNA strands, and finally extension at 72 °C that extends the primers. (Mohindra, 2018) PCR is used to amplify your DNA, that allows you to see the quality and quantity or your DNA. (Mohindra, 2018) There are many components to a PCR cocktail which consist of: Buffer (MgCl<sub>2</sub>), dNTPS, Primers, BSA, Taq, DNA, and finally water. (Massey, 2018) One of the components in the PCR cocktail is tag polymerase that can withstand high temperatures and is an enzyme that allows for the replication of DNA. (Butler, 2012) There is also something called a plateau, which happens in the cycles of PCR when PRC is finished and can not produce anymore DNA. (Langlois, 2019)

#### **Bibliography**

Butler JM, 2012. Fundementals of Forensic DNA Typing. San Diego, California, Elsevier Inc.

Personal communications Penny Massey 2018

Personal communications Ashvin Mohindra 2018

**Match Overview** 0%  $\checkmark$ 0 F 0 There are no matching sources for this report. (i)





# Example 3: Student A – 25% Similarity and Student B – 35% Similarity

## Student A

feedback studio

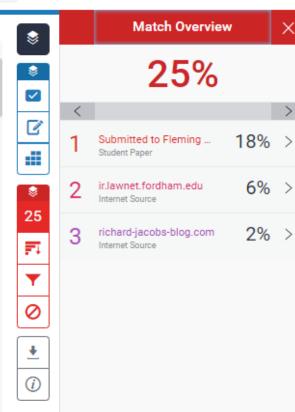
The job of science inside the legal framework is not all that much.docx

83 of 113 -

#### PART A

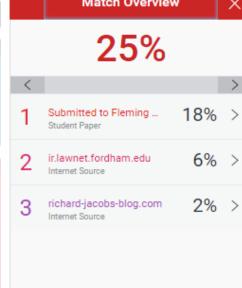
The job of science inside the legal framework is not all that much; be that as it may, the center has moved to incorporate the assessment of strategies and systems instead of essentially the master's translation of the outcomes. Assessing technique legitimacy and understanding error are critical, in any case, paying little mind to whether ends end up in court. The idea of error has been hazardous, and over and over again, the courts just as scientific professionals misconstrue the importance of mistake as it identifies with legal science research, methodology, and strategies. Error can be characterized in various ways including the accompanying: a demonstration, declaration, or conviction that accidentally strays from what is right, right, or genuine; the state of having off base or false learning; the demonstration or an occurrence of going amiss from an acknowledged code of conduct; or an error. Scientifically and factually, mistake may allude to the contrast between a figured or estimated esteem and a genuine or hypothetically right esteem. (Christensen et al. 2013)

The Daubert criteria were planned to give rules to conceding logical master declaration to guarantee its dependability and legitimacy. While the tumult encompassing the potential effect



Because of our contribution with the lawful framework, we ought to likewise be proactive in instructing the lawful network about the contrasts between logical error, strategy confinements, vulnerabilities, and botches and be set up to relieve issues identified with mistake. This can best be practiced by guaranteeing that we comprehend, recognize, and convey technique constraints and potential wellsprings of error in our exploration and measurable examinations. (Christensen

et al. 2013)



F

0

(i)

### Student B

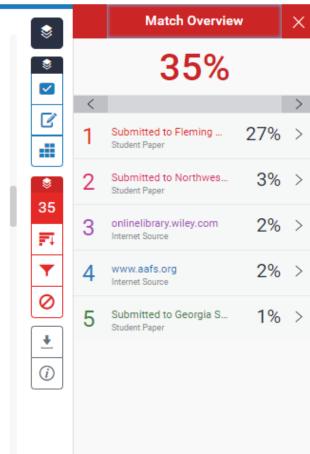
		Match Overviev	٧	×
<b>♦</b>		35%		
	<			>
	1	Submitted to Fleming Student Paper	27%	>
\$	2	Submitted to Northwes Student Paper	3%	>
35 <b>₽</b> ∓	3	onlinelibrary.wiley.com Internet Source	2%	>
~	4	www.aafs.org Internet Source	2%	>
0	5	Submitted to Georgia S Student Paper	1%	>
<u>·</u>				

Page: 1 of 5 Word Count: 969 Text-only Report | Turnitin Classic | High Resolution On 🕥 💢 🔍 🛑 💮

Errors - DNA.docx

mappened because of improper training, misunderstanding of the error (christensen et al. 2015). To provide a valid method in science the practitioners produce a valid and reliable method to understand the importance of error and should consider the lawful setting as judges and legal counselors ordinarily don't see how mistake rates are inferred or the unpredictability in isolating errors from vulnerability (Christensen et al. 2013). As scientific researchers, we should be worried about the clearness, dependability, and legitimacy of our strategies (Christensen et al. 2013). Due to our contribution with the legitimate framework, we should be active in educating the legal community about the different types of errors and should be ready to face the errors (Christensen et al. 2013). Which can best be practiced by guaranteeing that we comprehend, recognize, what's more, convey strategy confinements and potential wellsprings of the blunder in our examination and scientific investigations (Christensen et al. 2013).

feedback studio



94 of 113 -

/40

Page: 2 of 5 Word Count: 969 Text-only Report | Turnitin Classic | High Resolution On O 24 Q

## Areas of Similarity Between Student A and B

### Student A

The job of science inside the legal framework is not all that much, be that as it may, the center has moved to incorporate the assessment of strategies and systems instead of essentially the master's translation of the outcomes. Assessing technique legitimacy and understanding error

### Student B

The job of science inside the legal framework is not all that much in any case, the center has moved to incorporate the assessment of strategies and methods Instead of basically the master's elucidation of the outcomes. Guessing the validity method and knowing how the error is happened considered more

### Original Quote from the paper by Christensen et al. (2014)

"The role of science within the judicial system is nothing novel; however, the focus has shifted to include the evaluation of methods and techniques rather than simply the expert's interpretation of the results."

### Student A

The Daubert criteria were planned to give rules to conceding logical master declaration to

guarantee its dependability and legitimacy. While the tumult encompassing the potential effect

Student B

The Daubert criteria were expected to give rules to conceding logical master declaration to guarantee its

firm quality and legitimacy (Christensen et al. 2013). To accept the testimony the following rules were

Original Quote from the paper by Christensen et al. (2014)

The Daubert criteria were intended to provide guidelines for admitting scientific expert testimony to ensure its reliability and validity.

Example 4: 68% Similarity

X

been published. After years, NAS report emphasized scientific and technical challenges are the main concern. The statement expressed interest about some disciplines lacked scientific accuracy and a vital need for "more and better research" and gave several approvals to advance the state of forensic science. As per report recommendation, three states research is needed to address issues of accuracy, reliability, and validity in the forensic science disciplines. Reliability is discussed frequently in this study and scientifically, the term reliability is used to express the degree of inconsistency in observations between different viewers and includes how well the method can be frequent. Reliability creates how good a technique can be repeated, but it does not mean that the method will produce optimal decisions. The authors note that the use of "reliability" in the Daubert case seems to be mistreated, and that "dependability" is what the court planned. Dependability, in a scientific





<



















acordion, renability to aldoudded repeateury.

Scientifically, the term "reliability" is generally

used to express the degree of variability in

observations between different observers, and includes how well the technique can be

given a sample to examine by a particular

technique, and 99 examiners reached the same conclusion, the technique would be

regarded as highly reliable. In the same scenario, if only 45 examiners reached the

would have low reliability. Reliability

same conclusion, and the conclusions of the remaining 55 examiners varied, the technique

repeated. For example, if 100 examiners were

Match 4 of 14

http://www.floridaforen...

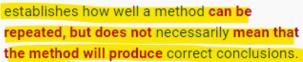
Internet Source

66%

68

買





The authors note that the use of "reliability" in the Daubert case appears to be misused, and



















myCampus Portal L...













Network Members...







Chemistry & Trace Evidence

Toxicology

Patterned Evidence

Biology

Digital Forensics

Medical Trauma

Crime Lab Information

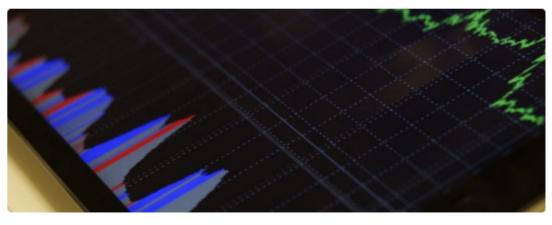
Reviews

News

Terminology

Ask An Expert

**Events** 



### Review: Error and its Meaning in Forensic Science

August 2, 2017

Emily C. Lennert

### Category

Statistics

### Keywords

error, rate, mistake, uncertainty, limitation, Daubert, admissibility, proficiency

#### Article Reviewed

1. Christensen, A. M.; Crowder, C. M.; Ousley, S. D.; Houck, M. M. Error and its meaning in forensic science. Journal of Forensic Sciences. 2014,

### **READ MORE ARTICLES**



Evidence Before

Trial

Event: From Lab to Market: A New Tool for Identifying Controlled Substances -

Orlando, October

17

FREE Webinar: Medical Evaluation

of Child Sexual

Abuse: Why Can't We Be More Like

CSI?



PD9 Hosts Its **Annual Law Camp** with the Boys and Ointe Olude

## Example 5: Student A – 59% Similarity and Student B – 46% Similarity

## Student A – submitted to dropbox after Student B

### Part A

(a) feedback studio

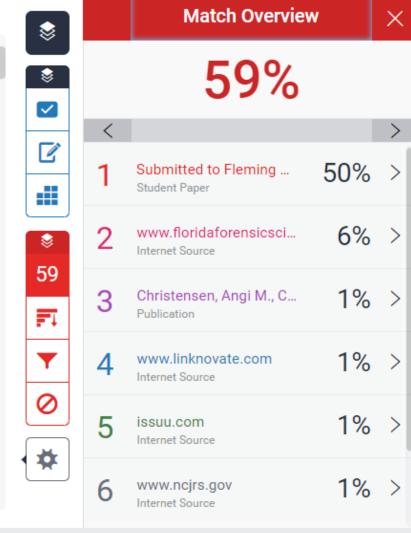


103 of 113 🕶





In this article (Error and its Meaning in Forensic Science) the authors endeavors
about the "errors" in the forensic science and however the center has been moved to
in compounts the accompant of strategies and mothed instead of basically the average/s
incorporate the assessment of strategies and methods instead of basically the expert's
interpretation of the outcomes 1. Previous to the Daubert ruling, reliability in scientific
interpretation of the outcomes treevious to the budgeter aimig, rendshirty in scientific
methods and validity were not appropriately implemented in the courtroom while giving the
testimony <sup>1</sup> . But after following the guidelines it was required to include reliability/validity
methods <sup>1</sup> . The challenge was the interpretation of error in the courtroom and explaining to
the people belonging to non-scientific background <sup>1</sup> . Furthermore, article discuss about the
the people belonging to non-scientific background. Furthermore, article discuss about the
potential source of any protocol is estimated to be 100% 1. Later, lack of acknowledging
scientific methods and other challenges are reported in NAS report <sup>1</sup> . The essential objective



Page: 1 of 5

Word Count: 1271

**Text-only Report** 

**Turnitin Classic** 

High Resolution On







### Part B

(J) feedback studio

Error and its meaning article.docx

**--** /40 <

103 of 113 **→** 



According to me, in this article (Error and its Meaning in the Forensic Science) error plays a vital role in determining the validity, which impacts the Daubert criteria. The overall concept is misunderstood as there are many misconceptions in understanding the error and error rates. For example, the NAS Report talks about the scientific and technical challenges faced by the forensic community. The report published is concerned about the disciplines and rules are not followed during any research and demands about "more and better research". Specifically about the Daubert's decision, the authors talk about the "reliability" very often. Reliability is basically used to express the variability in the methods. For instance, there are 10 forensic examiners examining the same sample with the same technique and 9 examiners got the same result. The technique is considered highly reliable. But, in my opinion, that doesn't mean it will give correct conclusions each time. The article talks about the misuse of the "reliability" in the Daubert case but the court planned or wilfully linked to "dependability" which is not true. As scientifically reliability cannot create dependability hence, proper validation studies are necessary. Overall, I disagree with the authors because they gave

**Match Overview** Submitted to Fleming ... 50% Student Paper 6% www.floridaforensicsci... ⇛ Internet Source 59 Christensen, Angi M., C... Publication # www.linknovate.com 1% Internet Source issuu.com Internet Source

Page: 3 of 5

Word Count: 1271

Text-only Report

**Turnitin Classic** 

High Resolution

**⊋** ⋅

## Student B Original Similarity Report

### PART A:

In this article (Error and its Meaning in Fore cic Science) the authors endeavors about the "errors" in the forensic science and however the center has been moved to incorporate the assessment of strategies and methods instead of basically the expert's interpretation of the outcomes 1. Previous to the Daubert ruling, reliability in scientific methods and validity were not appropriately implemented in the courtroom while giving the testimony 1. But after following the guidelines it was required to include reliability/validity methods <sup>1</sup>. The challenge was the interpretation of error in the courtroom and explaining to the people belonging to non-scientific background <sup>1</sup>. Furthermore, article discuss about the potential source of any protocol is estimated to be 100% 1. Later, lack of acknowledging scientific methods and other challenges are reported in NAS report 1. The essential objective of this report was to characterize four potential sources of error <sup>1</sup>. Practitioner error refers to human error(s) <sup>1</sup>. It can be minimize through quality assurance system checks, peer review, maintaining standard laboratory protocols and proficiency testing <sup>1</sup>. Instrument error can be determined between a given instrument value and true value and the errors can be reduced by proper maintenance and calibrations of instruments 1. In general terms, statistical errors are defined by standard errors 1. Method (or technique) error is measured by the overlap of different groups of data set 1. It not only influences the sensitivity, probative value and lastly validity of the followed procedure 1. Briefly explained by the example of nuclear DNA having more sensitivity than the mtDNA in determining the recognition 1. The authors stated the reason behind this is because mtDNA occurs more often in the given population of data set 1. To minimize the method errors more calibration need to be taken into consideration 1. Understanding the significance of actualizing meanres to limit mistakes and constraints in legal sciences can resolve the issues

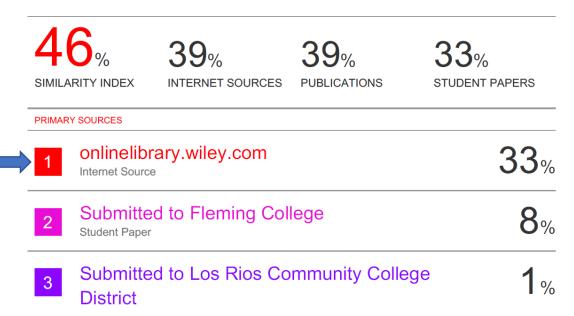
46% 39% 39% 33% SIMILARITY INDEX INTERNET SOURCES PUBLICATIONS STUDENT PAPERS

PRIMARY SOURCES

1 onlinelibrary.wiley.com Internet Source 33%
2 Submitted to Fleming College Student Paper 8%
3 Submitted to Los Rios Community College District 1%

#### PART B:

Establishing scientific validity and dependency is very important but also very difficult regarding the determination of error in the field of Forensics. I agree with the author error has different meanings and functions in the courtroom compared with the research setting. Errors occasionally occur and may have very serious consequences as important decisions in intelligence and justice are based on it. The government officials in court lack knowledge as do not have science background so we need to give them a better idea of these concepts [1]. Error has different definition an act, assertion, or belief that unintentionally deviates from what is correct, right, or true; the condition of having incorrect or false knowledge; the act or an instance of deviating from an accepted code of behavior; or a mistake while mathematically and statistically, error may refer to the difference between a computed or measured value and a true or theoretically correct value[1]. This article is relevant as the factors considered to admit a expert testimony, whether the theory or technique in question can be (and has been) scientifically tested, it has been subjected to peer review and publication, its known or potential error rate and the existence and maintenance of standards controlling its operation still pertain [1]. Lets focus on one of the aspect i:e; 1) Statistical error it is the deviation between actual and predicted values, generally stimated by the standard error or other measure of uncertainty in prediction [1]. Statistical error often merely expresses normal variability and is inherent in mersurements and estimates because they are based on the properties of a sample.



Student B – submitted first but after rerunning Turnitin the new Similarity score increased from 46 to 89%

### Part A





-- /4(

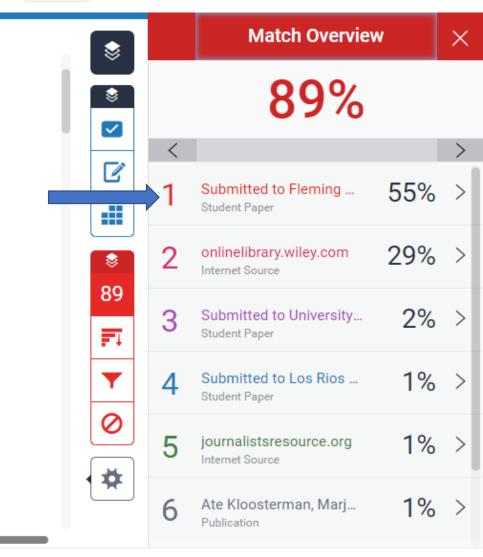
10

106 of 113 🕶





In this article (Error and its Meaning in Forensic Science) the authors endeavors about the "errors" in the forensic science and however the center has been moved to incorporate the assessment of strategies and methods instead of basically the expert's interpretation of the outcomes 1. Previous to the Daubert ruling, reliability in scientific methods and validity were not appropriately implemented in the courtroom while giving the testimony 1. But after following the guidelines it was required to include reliability/validity methods 1. The challenge was the interpretation of error in the courtroom and explaining to the people belonging to non-scientific background 1. Furthermore, article discuss about the potential source of any protocol is estimated to be 100% 1. Later, lack of acknowledging scientific methods and other challenges are reported in NAS report 1. The essential objective of this report was to characterize four potential sources of error 1. Practitioner error refers to human error(s) 1. It can be minimize through quality assurance system checks, peer review, maintaining standard laboratory protocols and proficiency testing 1. Instrument error can be determined between a given instrument value and true value and the errors can be reduced by proper maintenance and calibrations of instruments 1. In general terms, statistical errors are defined by standard errors 1. Method (or technique) error is measured by the overlap of different groups of data set 1. It not only influences the sensitivity, probative value and lastly validity of the followed procedure 1. Briefly explained by the example of nuclear DNA having more sensitivity than the mtDNA in determining the recognition 1. The authors stated the reason behind this is because mtDNA occurs more often in the given population of data set 1. To minimize the method errors



### Part B

J) feedback studio

Tech report summary..docx

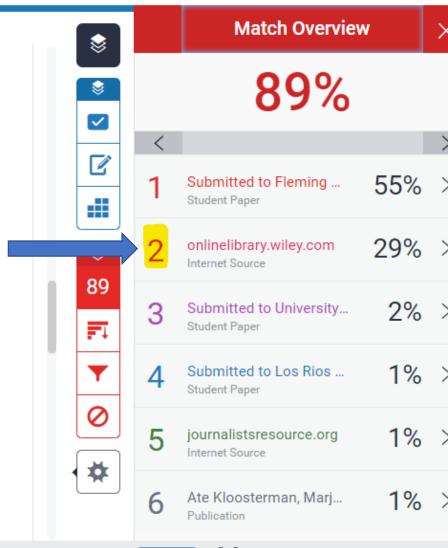
-- /40

10

106 of 113 +



the condition of having incorrect or false knowledge; the act or an instance of deviating from an accepted code of behavior; or a mistake while mathematically and statistically, error may refer to the difference between a computed or measured value and a true or theoretically correct value[1]. This article is relevant as the factors considered to admit a expert testimony, whether the theory or technique in question can be (and has been) scientifically tested, it has been subjected to peer review and publication, its known or potential error rate and the existence and maintenance of standards controlling its operation still pertain [1]. Lets focus on one of the aspect i:e; 1) Statistical error it is the deviation between actual and predicted values, generally estimated by the standard error or other measure of uncertainty in prediction [1]. Statistical error often merely expresses normal variability and is inherent in megsurements and estimates because they are based on the properties of a sample. 2) Practitioner error refers to a mistake or operator (human) error. It may be random or systematic, may be related to negligence or incompetence, and is, for the most part, unintentional and unquantifiable [1]. Another author published about bite marks in relation to practitioner error states bite mark evidence are relatively uncontroversial, and the majority of forensic odontologists are satisfied that bite marks can demonstrate sufficient detail for positive identification, bite mark testimony has been criticized on different grounds [2]. Several methods of bite mark analysis have been reported, all involving three steps: (i) reproductions of both the bite mark and the suspect's dentition through a variety of methods; (ii) direct or indirect comparison of the dentition and bite mark; and (iii) evaluation of the points of similarity or dissimilarity affirmed that even under carefully controlled conditions.



Page: 2 of 3 Word Count: 1134





## Which student wrote the original paper?

New

□ Open

Info

Save

Save As

Print

Share

Export

Iransforn

Close

### Info

### Student B's Original Word File

Tech\_report\_summary.

Downloads

🗘 Upload

🖒 Share

ල Copy path

🗁 Open file location



### Protected View

This file came from the Internet, so we opened it in a way that helps to keep your computer safe from viruses (just in case).

Don't worry—you can continue reading in this view. If you need to edit, and you trust this file, then enable editing.

Protected View Settings

Learn more about Protected View

Student B's original Word file was created by student A and then modified by student B

Pro	perties	v

Size 18.0KB

Pages

Words

Total Editing Time 90 Minutes

Title None

Tags None

None

#### Related Dates

Comments

 Last Modified
 2019-02-06 9:06 AM

 Created
 2019-02-06 2:42 AM

 Last Printed
 2019-02-06 2:42 AM

#### Related People

Author

PB

Student A

Last Modified By

MI

Student B

Related Documents

Account

Feedback





Info

New

Open

Save

Save As

Print

Share

Export

Close

Account

Feedback

Options

### Account

### User Information



Change photo

About me

Sign out

Switch account

### Office Background:

Circles and Stripes

### Office Theme:

Colorful

### Connected Services:



OneDrive - Personal

Add a service ₹

### Accounts

Switch Account | Sign out

### Current Account



Student B's Laptop

 $\times$ 

### Other Accounts



Student A's Log in details

ded and installed.

Product ID, and Copyright information. llick-to-Run)



Add Account

Click to sign in a new account into Office

See the most recently installed updates.

What's New



### Lessons Learned

- Always check each assignment with unbiased opinion of the similarity score
- Check if highlighted text match proper intext citations
- Check if Dropbox has different seminar due dates and rerun Turnitin after all assignments are submitted
- When you find something suspicious save the Turnitin report as potential evidence
- Always have a conversation with the student in private about their similarity report
  - Don't be accusatory ask the student to explain why the material has been flagged as potential plagiarism or breach of academic integrity.

## Questions for the group

For Non-Turnitin users or potential future users – What are your hesitations or road blocks incorporating Turnitin into your course/assessments?

For Turnitin users - What are the main issues or positive outcomes you have seen in your course?

What would you like to see in a future Turnitin session?