



# Recognizing Reader's Affect Using EEG Data

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# INTRODUCTION



# INTRODUCTION

## Affective Computing

- Relates to, arises from, or influences emotions (Picard, 1997).
- Imbue the computer with emotional intelligence\*

\*subset of social intelligence that involves the ability to monitor one's own and others' feelings and emotions, to discriminate among them and to use this information to guide one's thinking and actions (Salovey & Mayer, 1990)





# INTRODUCTION

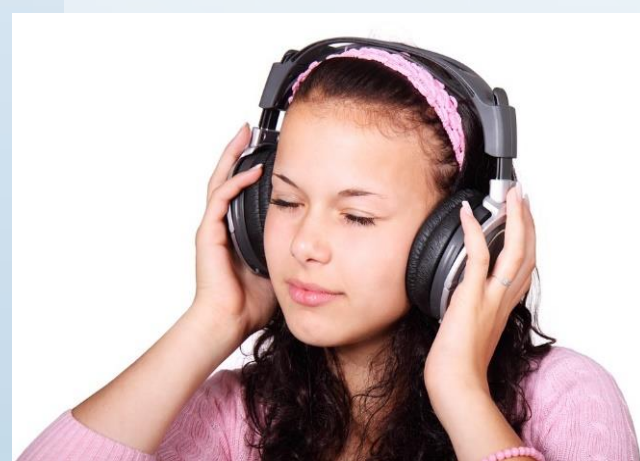
## Affective Computing

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COMP	Cannot Express Affect	Can Express Affect
Cannot Perceive Affect	[1] Most computers	[2] Synthesis
Can Perceive Affect	[3] Analysis	[4] A true “personal” and “user-friendly” computer

# INTRODUCTION

- Apart from facial and vocal expressions, humans naturally read many physiological signals of emotions (Picard, 2000).
- Emotion recognition involves pattern recognition of physiological data, one of which is brainwaves or EEG.



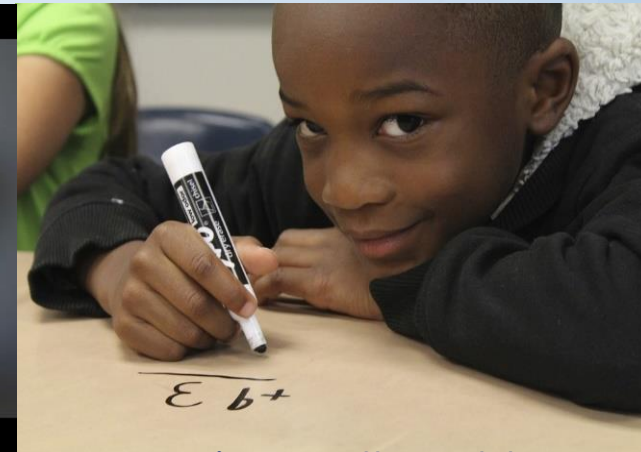
Listening to Music  
Lin et al. (2010)



Watching Movies  
Nie et al. (2011)



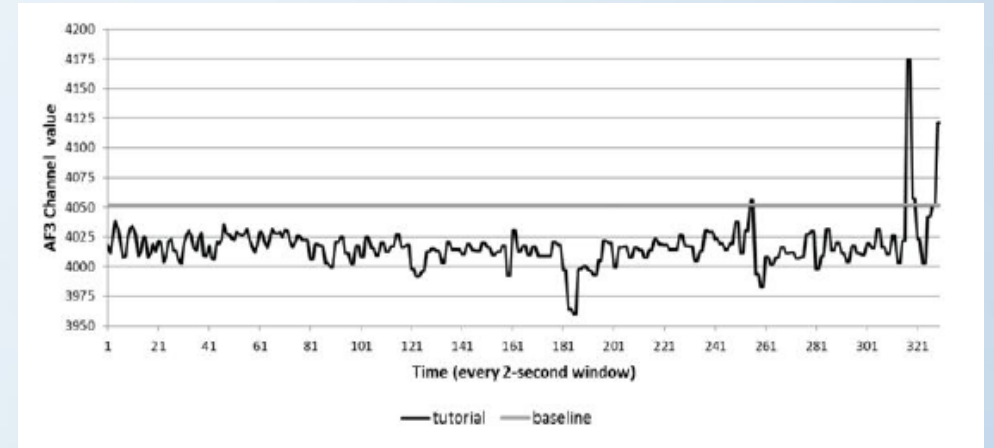
Watching Music Videos  
Yazdani et al. (2012)



Answering Math Problems  
Azcarraga & Suarez (2012)

# INTRODUCTION

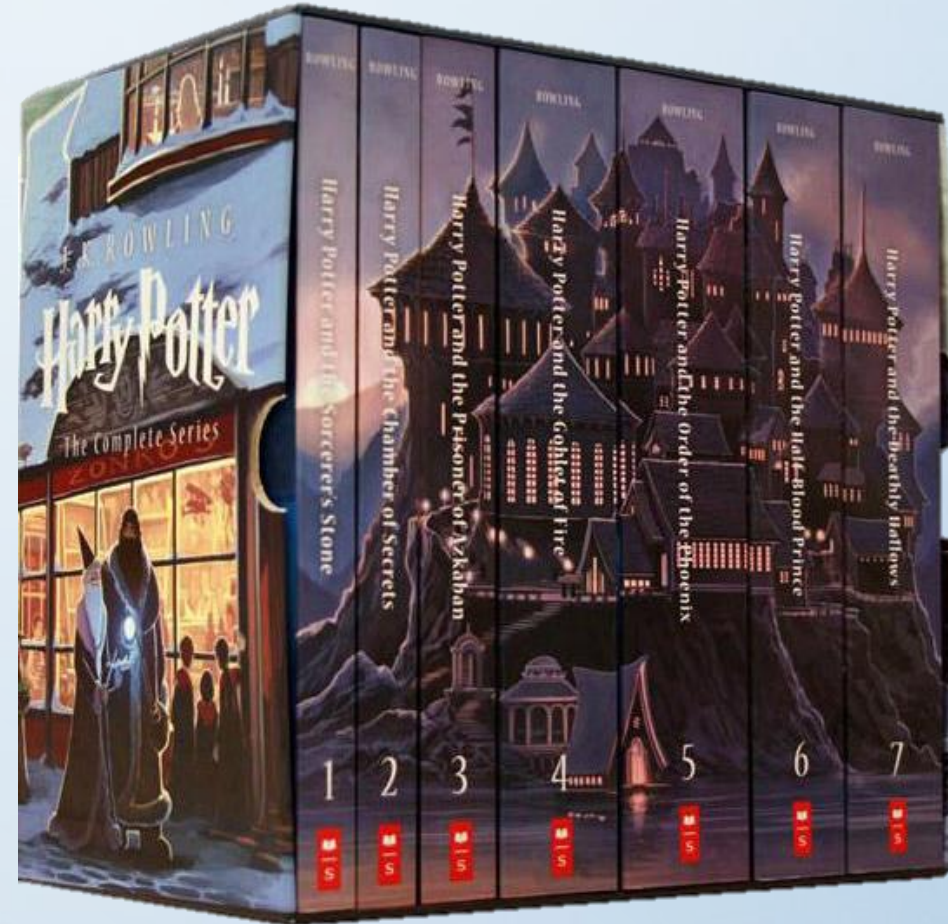
- **Electroencephalography (EEG)**
  - It is the recorded electrical activity generated by the brain (Rossetti & Laureys, 2015).
  - It is an effective means of neuro-imaging because it is a noninvasive and safe procedure which can record in milliseconds.
- **Emotiv Insight**
  - It is a 5-channel, wireless EEG headset that records brainwaves.
  - It is a commercial product marketed worldwide and is **designed for everyday use**.
  - It uses a polymer sensor that is safe to use and offers great electrical conductivity with the convenience of a **dry sensor**.





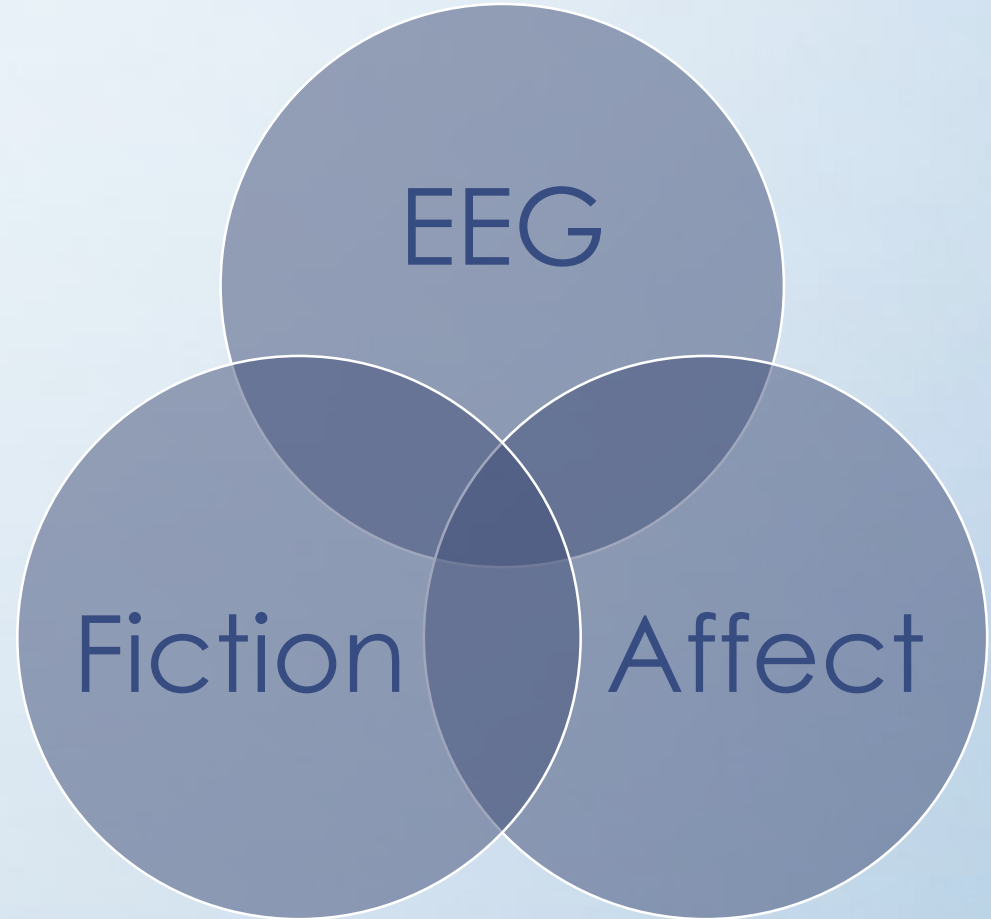
# INTRODUCTION

- Reading literary texts or fiction is not simply an activity but rather an experience that is never the same from one reading to the next (Tompkins, 1980).
- Usually, when one reads non-fiction such as academic texts or news articles, the goal is to be informed. Whereas when one reads fiction such as novels, short stories, or poems, the goal is to be entertained and moved (**experience a variety of emotions**) (Mar et al., 2011).



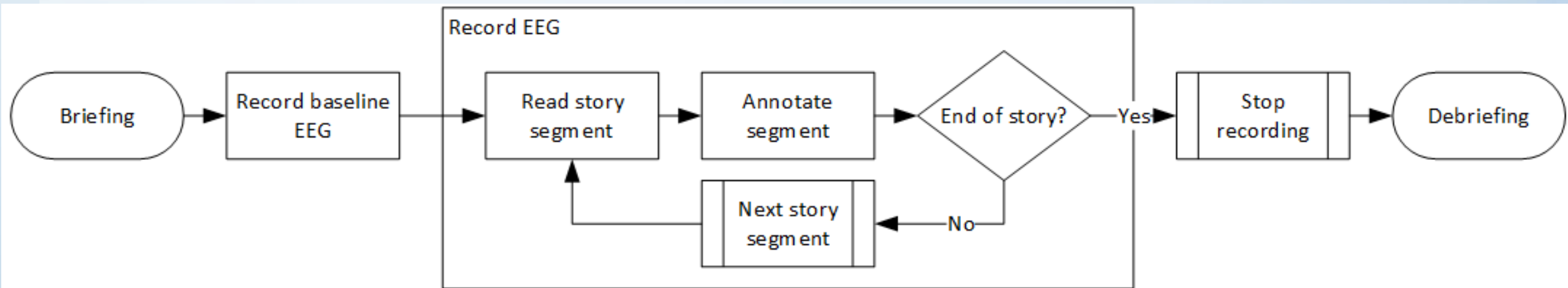
# INTRODUCTION

There is no current work that has studied **brainwave patterns** and their association to **affect** while a person is **reading literary fiction**.





# DATA COLLECTION (Jan 11-Feb 3 @ G409)




# https://tinyurl.com/ReaderAffectModel-Schedule

De La Salle University

Google Calendar

https://calendar.google.com/calendar/selfsched?sstoken=UUJiWTI2b3NBU0ZkfGRlZmF1bHR8Yzg3ZWU1NDc0YmQ4ZTQ5ZDkxMGYzMzdmM2Y3MDM3OTQ

 **DLSU**

Click on an open appointment slot to sign up. If no slots are available, please try a different time range. To cancel an appointment slot you've already booked, leave this sign-up page and delete the event from your own calendar.

Today

Jan 15 – 21, 2017

Refresh

Day

Week

	Sun 1/15	Mon 1/16	Tue 1/17	Wed 1/18	Thu 1/19	Fri 1/20	Sat 1/21
9am		Reader Affect Model Data	Reader Affect Model Data	Reader Affect Model Data	Reader Affect Model Data	Reader Affect Model Data	
10am		Reader Affect Model Data	Reader Affect Model Data	Reader Affect Model Data	Reader Affect Model Data	Reader Affect Model Data	
11am		Reader Affect Model Data	11 – 12p Class	Reader Affect Model Data	Reader Affect Model Data	Reader Affect Model Data	
12pm		Reader Affect Model Data	Reader Affect Model Data	Reader Affect Model Data	Reader Affect Model Data	Reader Affect Model Data	
1pm		12:30p – 1:30p Class	Reader Affect Model Data	12:30p – 1:30p Class	Reader Affect Model Data	Reader Affect Model Data	
2pm		Reader Affect	Reader Affect Model Data	Reader Affect	Reader Affect Model Data	Reader Affect Model Data	
3pm		Reader Affect Model Data	Reader Affect Model Data	Reader Affect Model Data	Reader Affect Model Data	Reader Affect Model Data	
4pm		Reader Affect Model Data	Reader Affect Model Data	Reader Affect Model Data	Reader Affect Model Data	Reader Affect Model Data	
5pm		Reader Affect Model Data	Reader Affect Model Data	Reader Affect Model Data	Reader Affect Model Data	Reader Affect Model Data	
6pm							

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De La Salle University - Google Calendar

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4pm							
5pm		Reader Affect Model Data	Reader Affect Model Data	Reader Affect Model Data	Reader Affect Model Data	Reader Affect Model Data	
6pm							

### Book an appointment

**What** Reader Affect Model Data Collection

**When** Mon, January 16, 9:15am – 10:45am

**Who**

**Where** G409

**Description** name@email.com  
09xxxxxxxxx

**Tip:** You can customize the details of the event after you save it.

**Save** **Cancel**

<https://tinyurl.com/ReaderAffectModel-Schedule>

<https://tinyurl.com/ReaderAffectModel-ConsentForm>

[kristine\\_ma\\_kalaw@dlsu.edu.ph](mailto:kristine_ma_kalaw@dlsu.edu.ph)

Thank you for  
listening! 😊

