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Research on The Overall Attitude Towards Mobile Learning in Social Media: Emotions Mining Approach

THE PURPOSE

- Developing and approbating a lexicon-based emotions mining approach, aimed at extracting knowledge from social media.
- To test it, Twitter social networking data are used to study attitudes towards mobile learning.
- The approach can also be applied in areas such as cyber security, politics, commerce, etc. It takes into account the specifics of the language in which the posts are written.



EMOTIONS ARE ...

- associated with temporary body reactions that have been obtained in response to external stimuli or changes in the internal state (thought-driven, for example).
- short term states which duration is strictly individual and dependent on their type – positive or negative, as well as external stimuli.
- significant for human beings from an evolutionary point of view is related to their survival.

EMOTIONS ARE ...



physical and instinctive

common biological
momentary (1 – 3 sec.)



coded in the genes

SOME FUNCTIONS OF EMOTIONS ARE ...

- Decision making
- Life saving behavior
- Communication
- Influence thoughts
- Motivating future behavior
- Self-validating
- Motivating immediate actions



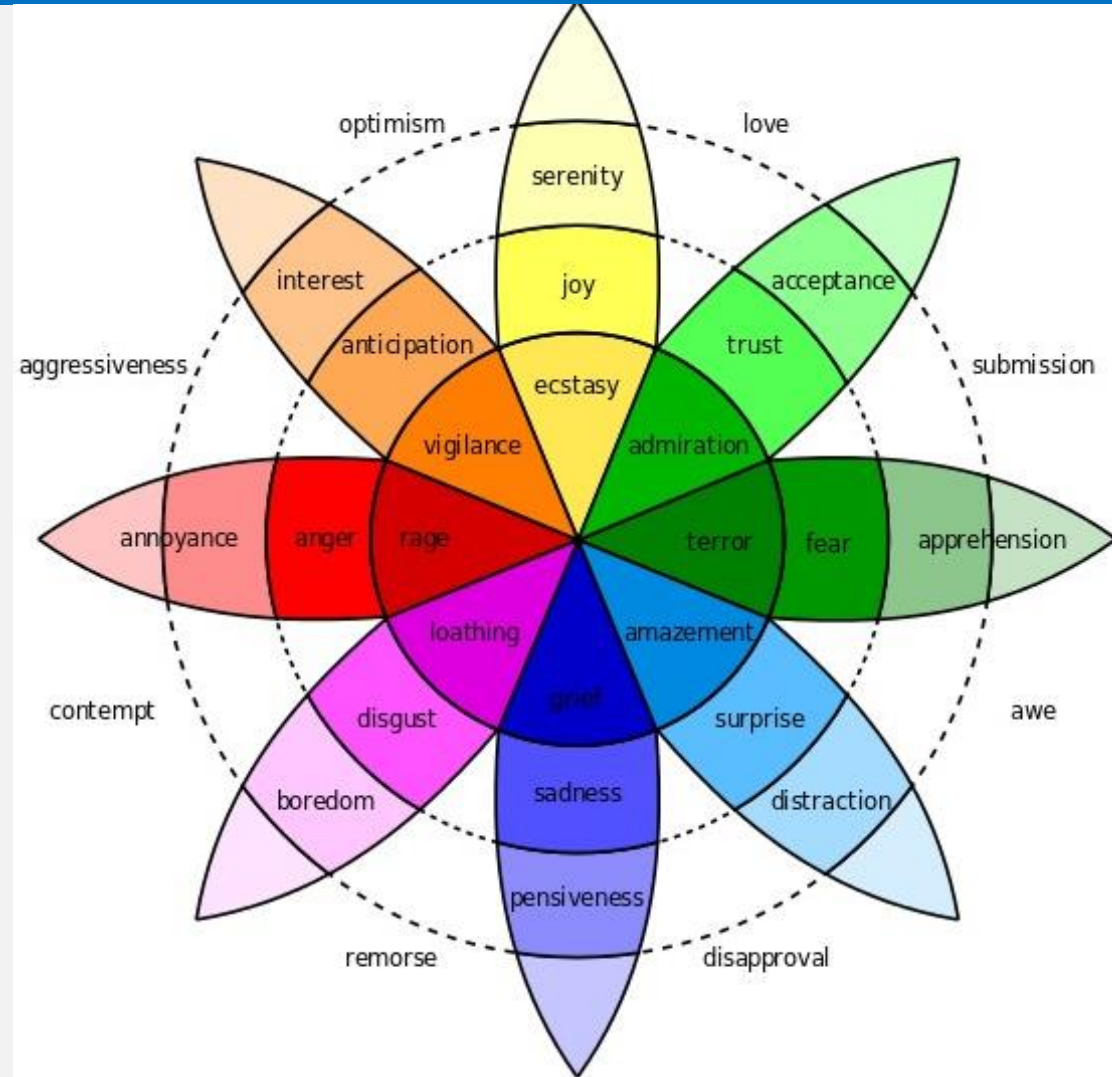
SOME THEORIES ...

Researcher	Positive emotions	Negative emotions
Watson (1930)	love	fear, rage
Izard (1971)	interest, joy, surprise, shame	anger, contempt, disgust, distress, fear, guilt
Plutchik (1980)	anticipation, acceptance, joy, surprise	anger, disgust, fear, sadness
Ekman (1982)	joy, surprise	anger, disgust, fear, sadness
Panksepp (1982)	expectancy	fear, rage, panic
Tomkins (1984)	interest, joy, shame, surprise	anger, contempt, disgust, distress, fear
Frijda (1986)	desire, happiness, interest, surprise, wonder	sorrow
Kemper (1987)	satisfaction	fear, anger, depression
Oatley & Johnson-Laird (1987)	happiness	anger, disgust, anxiety, sadness
Piryova (2011)	happiness, surprise	sorrow, anger, fear, disgust

SOME THEORIES ...

Plutchik's wheel of emotions

- 8 primary emotions:
 - ✓ Joy - sadness
 - ✓ Fear - anger
 - ✓ Anticipation - surprise
 - ✓ Disgust - trust
- The emotions with no color represent an emotion that is a mix of the 2 primary emotions.



CULTURAL AND INDIVIDUALS DIFFERENCES



EMOTIONS MINING ...

- Automated extraction of emotions from text.
- A lexicon is used that contains common words which express human emotions.

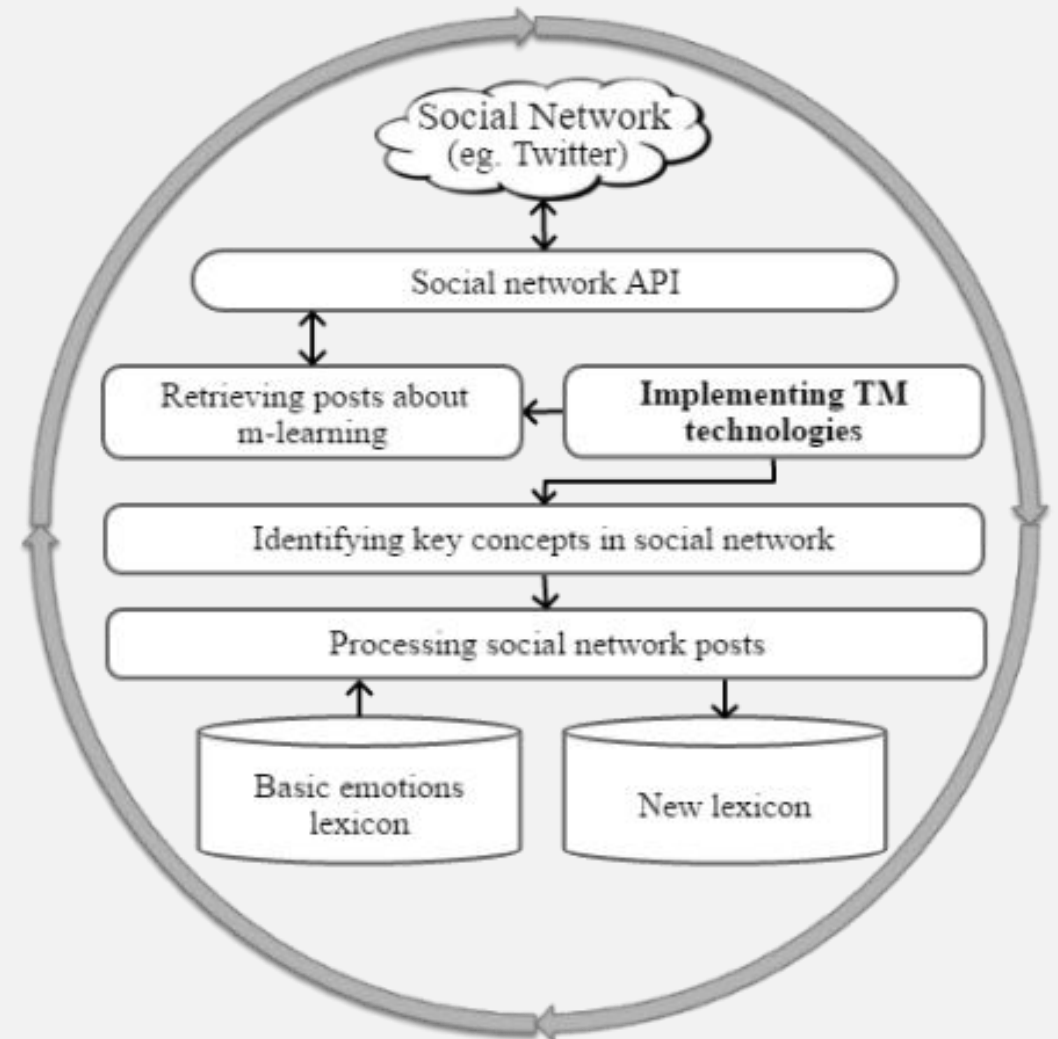


WHY EMOTIONS MINING?

- Emotions mining could detect irregularities in the behavior of social media players.
- In the context of education area to study attitudes to applying a given type of teaching approach.
- To explore consumer attitudes to raising the rate on loans or the drop-in shares of large companies.

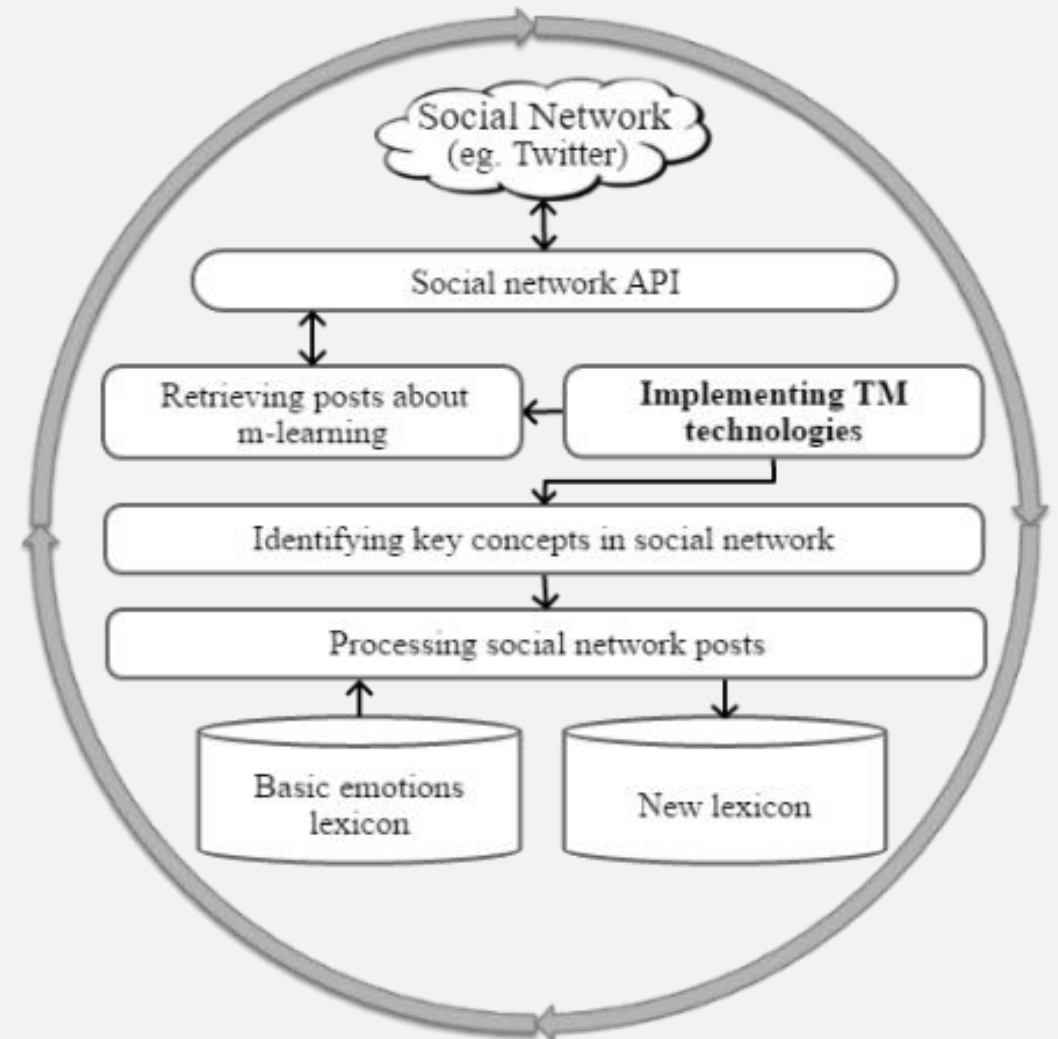
LEXICON-BASED EMOTIONS MINING APPROACH

- Social media mining – Twitter.
- Approximately 5285 Tweets for the period 1.06-10.06.2019 have been derived for the approbation of the approach.
- The keywords used in the extraction are “mobile learning” and “m-learning”.
- Text extraction and processing are done with the RapidMiner software product.



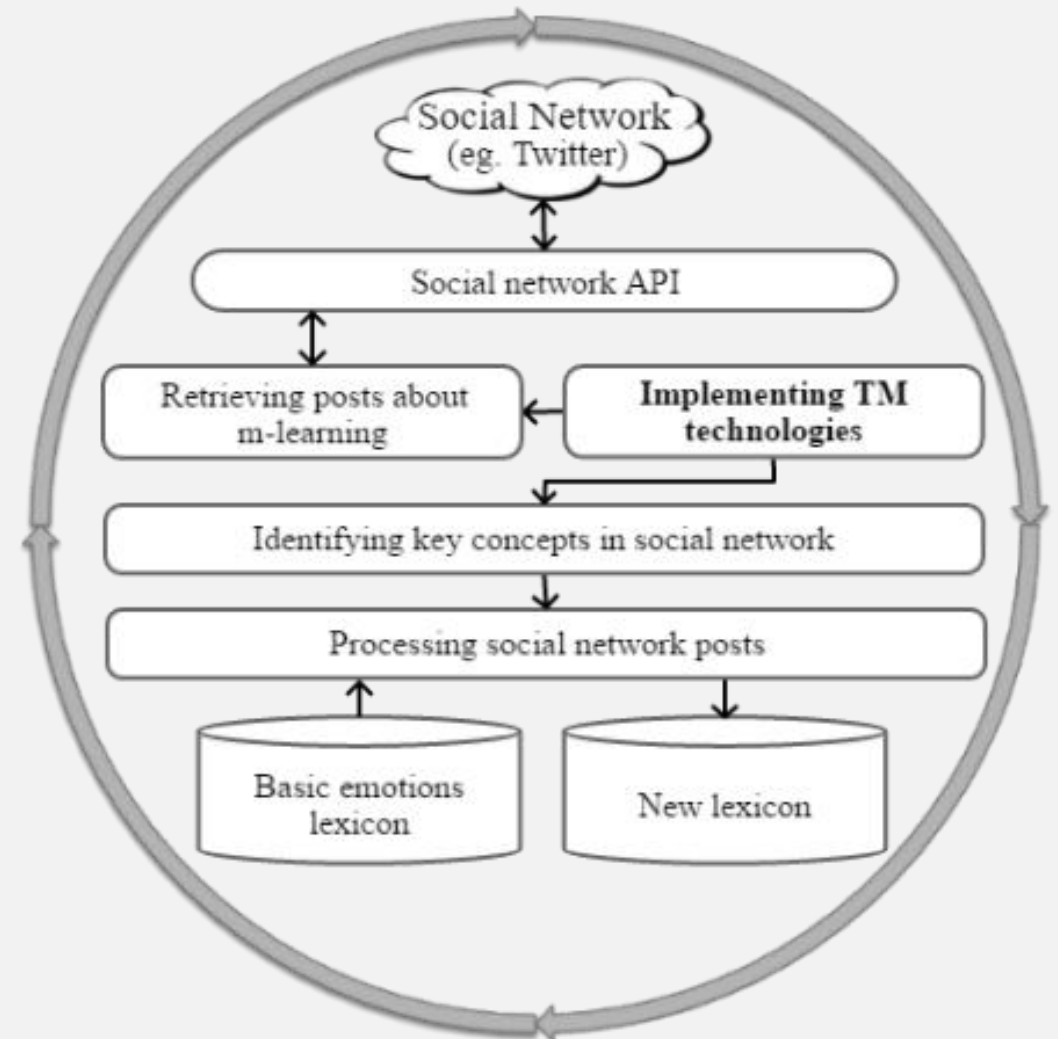
LEXICON-BASED EMOTIONS MINING APPROACH

1. Retrieving posts from the Twitter social network, reflecting the opinions and attitudes of users towards mobile learning. At this stage, specially written programming solutions that work with the Twitter API or one of the many software add-ons to the data analysis software can be used.



LEXICON-BASED EMOTIONS MINING APPROACH

2. Implementing text mining technologies to identify key concepts in social networking sites.
3. The processing of twitter posts.
4. Adding the extracted words and phrases to the original basic vocabulary of emotions.



CONCLUSION

- Emotions are an important and fundamental aspect of our lives. By communicating on social networks, users usually express their emotions. This has led to searching for ways to extract and analyze the moods and attitudes inherent in communication to specific events and subject areas.
- The proposed lexicon-based emotions mining approach has an universal application and can be used for another social network, not only for education but also for other areas, for example security. The main advantages of the approach are that it is based on a lexicon in words that conform to the way of communication in the social networks and the cultural differences of the people. The lexicon can be improved by including phrases showing attitudes and emotions.

Spasibo Gracias ۱ شکر Obrigado Spasibo Dank U
Grazie Euxαριστώ Danke
Dziękuję Euxαριστώ Merci
Danke Thank You Ngiyabonga Dank U
Grazie Diolch Ngiyabonga Obrigado
Dziękuję Danke Tack
Diolch Gracias Merci
Dank U Terima Kasih Diolch
Grazie Tack Euxαριστώ
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