

**ATTITUDE & BEHAVIOUR
TRUTH & WHISTLE-BLOWING
PLAGIARISM & COPYRIGHT**

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ATTITUDE

- Attitude is an expression of *favour* or *disfavour* toward a person, place, thing, idea or event (the attitude object)
- It is an evaluation of any *attitude object*, ranging from extremely negative to extremely positive
- It is a feeling or way of thinking that affects a person's behavior, thus it can be difficult to measure because measurement is *arbitrary*, meaning people have to give attitudes a scale to measure it against and attitudes are ultimately a hypothetical construct that cannot be observed directly

BEHAVIOUR

- **The way in which one acts or conducts oneself, especially towards others; the reactions can be instinctual or learned**
- **Three types of behaviour patterns people exhibit when interacting with others:**
 - **passive behavior is non-confrontational and respectful without demanding reciprocity**
 - **aggressive behavior is the opposite; these people require respectful treatment without giving it in turn**
 - **assertive behaviour refers to people being truthful with high self-esteem; they value others and have empathy and compassion for them**
- **Behaviour refers to actions that stem from and are direct reactions to the feelings of fear, excitement, joy, sorrow or anger**

PROFESSIONAL ATTITUDES AND BEHAVIORS

- Professionalism is a set of attitudes and behaviors believed to be appropriate to a particular occupation demonstrated actively as traits of a professional
- Social scientists described professions as possessing sets of structural and attitudinal attributes that set them apart from occupations
- Structural attributes of professions and professionals can be distinguished from attitudinal attributes



STRUCTURAL ATTRIBUTES

- **specialized body of knowledge and skills**
- **unique socialization of student members**
- **licensure/certification**
- **professional associations**
- **governance by peers**
- **social prestige**
- **vital service to society**
- **code of ethics**
- **autonomy**
- **equivalence of members, and**
- **special relationship with clients**

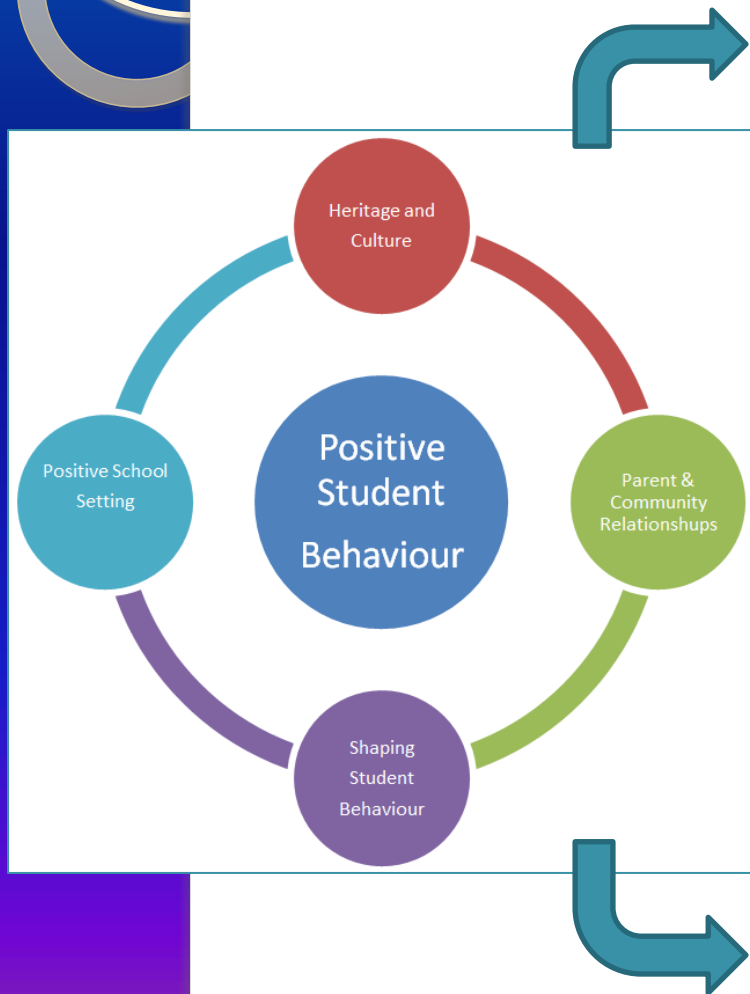
ATTITUDINAL ATTRIBUTES

- **use of the professional organization as a major reference, i.e., using professional colleagues as the major source of professional ideas and judgments in practice**
- **belief in service to the public, i.e., one's professional practice is indispensable to society and benefits the public**
- **belief in self-regulation, i.e., one's peers are the best qualified to judge one's work**
- **sense of calling to the field, i.e., dedication to the profession regardless of extrinsic rewards**
- **autonomy, i.e., one can make professional decisions without external pressures from clients, non-professionals, and employers**

EXAMPLES FOR ENGINEERING STUDENTS

ATTITUDE	BEHAVIOUR
<i>Accountability</i>	Takes responsibility for actions
<i>Caring</i>	Volunteering Acts of service
<i>Desire for self-improvement</i>	Continued learning Self-instruction
<i>Diversity</i>	Fair treatment of all people regardless of demographic characteristics
<i>Honesty</i>	Behaviors that demonstrate honesty and trustworthiness
<i>Open-minded</i>	Increased receptiveness to new ideas
<i>Respect</i>	Dresses appropriately Punctual Maintains confidentiality
<i>Responsibility to learn</i>	Comes to class prepared Actively participates in class activities, such as engages in discussion
<i>Team player</i>	Engages in constructive peer assessment Accepts and applies constructive critique
<i>Values new experiences</i>	Desire to seek out and take on new challenges

LEARNED BEHAVIOURS



MOTIVES FOR PROFESSIONALISM

- **A desire for interesting and challenging work and the pleasure in the act of changing the world**
- **The joy of creative efforts. Where a scientist's interest is in discovering new technology, engineers interest is derived from creatively solving practical problems**
- **The engineer shares the scientist's job in understanding the laws and riddles of the universe**
- **The sheer magnitude of the nature – oceans, rivers, mountains and prairies – leads engineers to build engineering marvels like buildings, bridges, tunnels, etc., which appeal to human passion**
- **The pleasure of being in the presence of machines generating a comforting and absorbing sense of a manageable, controlled and ordered world**
- **Strong sense of helping, of directing efforts towards easing the lot of one's fellows**
- **The main pleasure of the engineer will always be to contribute to the well-being of his fellow-men**

BEHAVIOUR & SOCIAL NORMS

- The *behaviour* of humans falls within a range with some behaviour being common, some unusual, some acceptable, and some outside acceptable limits
- The acceptability of behaviour depends heavily upon social *norms* and is regulated by various means of social *control*
- Without social norms (*including ethical* ones), human society would not function as it currently does
- Behavioural *standards vary* from place to place, they also change over time within the same society

CULTURAL RELATIVISM

- Diversity means that there are no *absolute* standards for moral judgment
- Any standard for determining right and wrong behaviour is *relative* → (relativism)
- *Ethical relativism* is the belief, that there is no moral truth that applies to all people at all times
- *Cultural relativism* says that each person's culture is the standard by which actions are to be measured
- „*When in Rome do as the Romans do*” is a simplified statement of cultural relativism

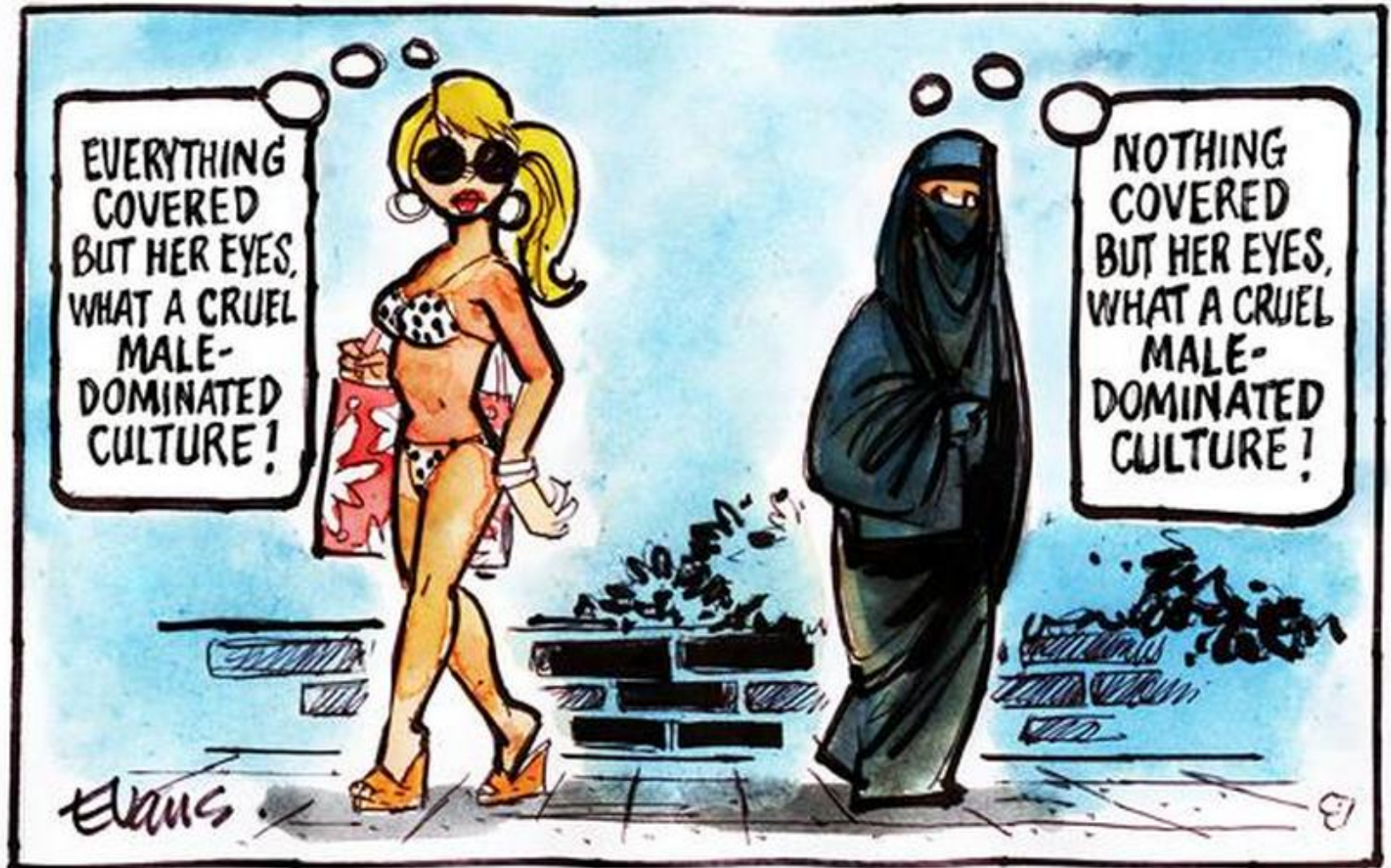


DENIAL OF CULTURAL RELATIVISM

- The statement has nothing to do with the *superiority* of Roman ethics: no ethical system is better than any other, because
 - The only thing we can say about different behaviours or practices is that they are *different*, not that they are *better* or *worse*
 - Better and worse are *comparative terms* that make sense only with a measure not tied to any culture
- Every society has to have some *structure* and *order* or it cannot survive and ethical standards are included into that social structure
- Although ethical standards differ from one place to the next, to *preserve* social order, people is *obligated* to follow the norms of the culture they live in



CULTURAL RELATIVISM?



Source: <https://thesocietypages.org/socimages/files/2008/12/1.png>

MORAL AUTONOMY

- This is viewed as the skill and habit of *thinking rationally* about ethical issues on the basis of moral concerns independently or by self-determination
- *Autonomous individuals* think for themselves and do not assume that customs are always right
- They *seek* to reason and *live* by general principles
- Their *motivation* is to do what is morally reasonable for its own sake, maintaining integrity, self-respect, and respect for others



TRUTHWORTHINESS OF ENGINEERS

- **As society is becoming increasingly professionalized, it has become more dependent on the services of professionals whose knowledge and expertise are not widely shared or understood**
- **In its ignorance, the public must place its trust in the reliable performance of engineers, both as individuals and as members of teams of engineers who work together**
- **Thus it is important to focus on areas of moral concern that are especially relevant to the truthworthiness of engineers: honesty & dishonesty, confidentiality, expert witnessing, true communication with the public (among others)**

HONESTY & TRUTH

- ***Honesty*** refers to a facet of moral character and connotes positive and virtuous attributes such as integrity, truthfulness, straightforwardness; it means being trustworthy, loyal, fair, and sincere
- ***Truth*** is most often used to mean being in accord with fact or reality, or fidelity to an original or standard
- The commonly understood ***opposite of truth*** is ***falsehood***, which, correspondingly, can also take on a logical, factual, or ethical meaning

FORMS OF DISHONESTY

- A *lie* is a statement that the stating party believes to be false made with the intention to deceive
- Communicating lies, i. e. lying is the most common form of dishonesty despite the fact, that there are no circumstances in which one may *ethically* lie
- Even if the *only* way to protect oneself is to lie, it is never ethically permissible to lie even in the face of murder, torture, or other hardships
- Capacity to lie is noted early and nearly universally in human development, but a liar may be subject to social, legal, religious, or criminal *sanctions*



DELIBERATE DECEPTION

- Discussing technical matters in a manner that implies knowledge that we don't have, to impress an employer or potential customer, means engaging in *deliberate deception* even if lies are not communicated
- Arguing in favour of his/her own enterprise, one can *misrepresent* the value of certain products, designs or services by praising their advantages inordinately
- Deliberate deception can have more *disastrous consequences* than outright lying

OMISSION OR WITHHOLDING INFORMATION

- *Omitting* or *withholding information* is another type of deceptive behaviour
- If an engineer *fails* to to discuss some of the negative aspects of a project under preparation to his/her superior, he/she is engaged in serious deception even *avoiding* to lie
- Cases of dishonesty by omission or by withholding information:
 - Failing to convey information that the audience would *reasonably expect* would not be omitted (at a mandatory public hearing of any big project of civil engineering)
 - In case the *intent* of the omission is to deceive

INFORMED CONSENT

- Engineers have some degree of responsibility to ensure that employers, clients and the general public make autonomous decision,
- Their responsibility is limited, since it extends only to ensure that these decisions regarding technology are made with appropriate understanding, particularly related to their eventual consequences
- If a customer is paying for professional engineering advice and is given misinformation than he/she cannot make a free and informed decision



EXAMPLE 6.

Withholding Information

On 28/01/1986, NASA Space Shuttle **Challenger** broke apart 73 seconds into its flight, leading to the deaths of its seven crew members. Disintegration of the vehicle began after an O-ring seal in its rocket booster failed at liftoff.

The astronauts were informed on the morning of the flight about the ice buildup at the launching pad and were given the option of postponing the launch. They chose not to exercise that option. However, no one presented them with the information about the O-ring behaviour at low temperatures. Therefore they did not give their fully informed consent to launch, because they were unaware of the O-ring related risk.

The incident is a tragic example of the violation of the engineer's obligation to protect informed consent. The fault, however, was not primarily with the engineers but with the managers who supported the launch and did not inform the astronauts of the danger.

WHISTLE-BLOWING

- A day before the launch two engineers employed by rocket booster manufacturer Thiokol pleaded against launching the space shuttle as *whistle-blowers*, but their complaints were dismissed
- *Whistle-blowing* is alerting relevant persons by *revealing the truth* concerning some moral or legal misdemeanor of or within an organization, where “*relevant persons*” are those in a position to act in response
- *Whistle-blowing* is the act of a man or woman who, believing that the public interest *overrides* the interest of the organization he/she serves, publicly “*blows the whistle*” if the organization is involved in corrupt, illegal, fraudulent, or harmful activity



ARGUMENTS AGAINST WHISTLE-BLOWING

- Some of the *enemies of business* now encourage an employee to be disloyal to the enterprise
- They want to *create suspicion* and disharmony and pry into the proprietary interests of the business
- However this is labeled – industrial espionage, whistle-blowing or professional responsibility - it is another *tactic for spreading disunity* and creating conflict

MORAL GUIDELINES TO WHISTLE-BLOWING

- **It is morally permissible and advised for engineers to engage in whistle-blowing concerning health and safety:**
 - 1. If the harm that will be done by the product to the public is serious and considerable**
 - 2. If they make their concerns known first to their superiors**
 - 3. If getting no satisfaction from their immediate superiors, they exhaust the channels available within the corporation, including going to the board of directors**
 - 4. He/she must have documented evidence that would convince a reasonable, impartial observer that his/her view of the situation is correct and the company policy wrong**
 - 5. There must be strong evidence that making the information public will in fact prevent the threatened serious harm**

DISHONESTY

- *Dishonesty* in science and engineering takes several forms: falsification of data, fabrication of data and plagiarism
- *Falsification* involves distorting data by smoothing out irregularities or presenting only those data which fit one's favoured theory and discarding the rest
- *Fabrication* involves inventing data and even reporting results of experiments and tests never conducted
- *Plagiarism* is the use of others' intellectual property without proper permission or credit



INTELLECTUAL PROPERTY

- Intellectual property results from *mental labour* and can be *protected by law* as trade secrets, patents, trademarks and copyrights
- *Trade secrets* are formulas, patterns, devices or compilations of information that used in business to gain an advantage over competitors
- *Patents* are documents issued by the relevant authorities that allow the owner to exclude others from making use of patented information for a given time
- *Trademarks* are words, phrases, designs, sounds or symbols associated with goods or services



COPYRIGHTS

- Rights to *creative products* such as books, music, graphics, pictures, sculptures, movies and computer software
- The author's estate or heirs *retain the copyright* for a given time (50 years) after his or her death
- Copyrights *protect the expression of the ideas* but not the ideas themselves
- Many companies require their employees to sign an assignment whereby all copyrights of the employee *become the property of the company*, often in exchange of a token fee
- Engineers might find themselves *caught between two employers* with respect to such issues



CONFIDENTIALITY

- One can misuse the truth by disclosing it in inappropriate circumstances
- Information may be confidential if it is either given to the engineer by the client or discovered by the engineer in the process of work done for the client
- Using designs, methods, software and other proprietary information of a former employer can be dishonest and may even result in litigation



PLAGIARISM

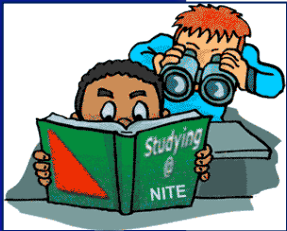
- It is the "wrongful appropriation" i. e. *stealing and publication* of another author's "language, thoughts, ideas, or expressions" and the representation of them as one's own original work
- Plagiarism is considered *academic fraud* and a breach of ethics, it is subject to sanctions
- Plagiarism is *not* defined or punished by law, but rather by institutions (including professional associations, educational institutions)
- False claims of authorship may constitute plagiarism regardless of whether the material is protected or not by *copyright*



STUDENT PLAGIARISM

1

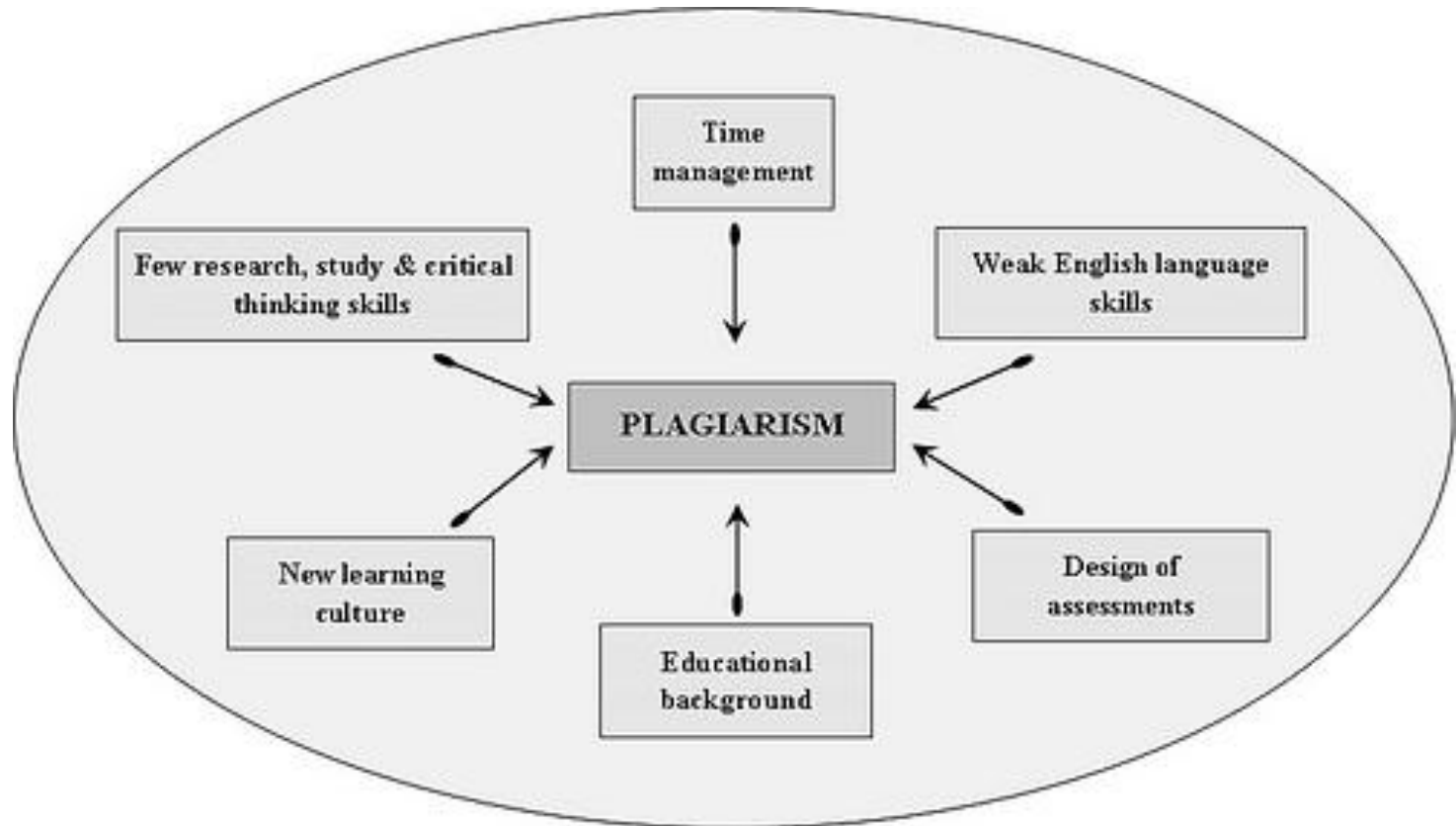
- Submitting someone's work as their own
- Taking passages from their own previous work without adding citations
- Re-writing someone's work without properly citing sources
- Using quotations, but not citing the source
- Interweaving various sources together in the work without citing
- Citing some, but not all passages that should be cited
- Melding together cited and uncited sections of the piece
- Providing proper citations, but fails to change the structure and wording of the borrowed ideas enough
- Inaccurately citing the source
- Relying too heavily on other people's work, i. e. fails to bring original thought into the text



Source: <http://healthinformatics.uic.edu/infographics/the-reality-and-solution-of-college-plagiarism/>

STUDENT PLAGIARISM

2



The core reasons (one or in combination) that could culminate in students plagiarising

Owen, H. (2007). ESL students: Fostering skills to avoid plagiarism. In A. Jendli, S. Troudi & C. Coombe (Eds.), *The power of language: Perspectives from Arabia* (pp. 215-231). Dubai: TESOL Arabia.

FOOD FOR THOUGHTS

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**"I need you to do a presentation on the topic of 'plagiarism'.
If you don't have time to prepare anything, just steal
something off the Internet."**