

# Exploring Bem's Self-Perception Theory in an Educational Context

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## Abstract

This study offers a synthesis of critical elements of Bem's self-perception theory in an educational context. Ultimately people understand their beliefs, attitudes and perceptions by understanding their own behaviour and the circumstances behind it. Thus, Bem's theory is integral in gaining a better understanding of pre-service teachers' perceptions regarding their TPACK (Technology, Pedagogy and Content Knowledge) dispositions and capabilities. This study explores various experiments. It highlights applications of the theory to the field of education and field experience. It provides a comparative analysis of cognitive dissonance theory and self-perception theory, as both are valuable frameworks for education. Results yielded from this study could potentially impact the way in which ministries, institutions and schools develop educational policies and manage educational programs.

Questo studio offre una sintesi di elementi critici della teoria dell'autopercezione di Bem in un contesto educativo. In definitiva, le persone comprendono le loro credenze, atteggiamenti e percezioni comprendendo il proprio comportamento e le circostanze che ne sono alla base. Pertanto, la teoria di Bem è parte integrante nell'ottenere una migliore comprensione delle percezioni degli insegnanti pre-servizio riguardo alle loro disposizioni e capacità TPACK (Tecnologia, Pedagogia e Conoscenza dei Contenuti). Questo studio esplora vari esperimenti. Mette in evidenza le applicazioni della teoria al campo dell'istruzione e dell'esperienza sul campo. Fornisce un'analisi comparativa della teoria della dissonanza cognitiva e della teoria dell'autopercezione, in quanto entrambe sono quadri preziosi per l'istruzione. I risultati ottenuti da questo studio potrebbero potenzialmente avere un impatto sul modo in cui ministeri, istituzioni e scuole sviluppano politiche educative e gestiscono programmi educativi.

**Keywords:** Self-perception Theory; Cognitive Dissonance Theory; Pre-service Teachers' Experiences; Educational Policy; Educational Management.

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## 1. Introduction

The current study explores Bem's (1972) perception theory to create an understanding of how it can be reflected on in an educational context. Bem's (1972) self-perception theory is based on two claims. Firstly, the theory claims that people understand their beliefs, attitudes and perceptions by understanding their own behaviour and the circumstances behind it. Secondly, the theory states that if an individual doesn't have full understanding of his behaviour, he or she acts like an outsider who observes the actions and conducts and tries to make a sense out of it and deduce their own inner characteristics (International Encyclopedia of the Social Sciences, 2008). Bem (1970, p. 8) also asserts that individual's "own behaviour will be used by him as a source of evidence for his beliefs and attitudes". The self-perception concept is based on the assumption that people are what they do. In this sense, the relationship between self-perception and behaviour is of paramount importance. Following this introduction are sections that will highlight the theory in detail. Additionally, this study provides salient examples of experiments and practical applications. Lastly, the researchers provide a discussion of its use in educational contexts.

## 2. Self-Perception Concept

The self-perception theory is considered to be counterintuitive (Dico, 2018; Guadagno *et al.*, 2010). Conventionally, it is believed that personalities and attitudes drive individuals' actions and behaviours, such is not the case with the concept of self-perception (Ito, Chiao & Devine, 2006). The concept is based on the assumption that people are what they do (Bem, 1967). The self-perception theory is based on the argument that individuals interpret their actions the same way they interpret others' actions and every individual's action is influenced by social surroundings and not influenced by one's free will (Bem, 1972). According to Bem (1967), individuals' attitudes are developed from observing one's own behaviour and making a conclusion on what attitude caused that behaviour. The theory further assumes that individuals can induce attitudes without retrieving their internal states (Guadagno *et al.*, 2010). People are believed to interpret their unconcealed behaviours in the same manner they interpret others' behaviour.

The self-perception theory is considered to be among the most influential theories that explain how self-knowledge is gained. The theory was developed by Daryl Bem (1972) and has two assertions as indicated earlier. The first assertion is that people become aware of their inner states, such as attitudes and beliefs, by assessing their behaviours and circumstances under which these behaviours occur (Bem, 1972). An example of this assertion is that an individual who observes that he or she loves listening to classical music may infer an interest in classical music. The second claim is that individuals who do not have a clue of their internal states are in the same position as external observers who have to rely on external clues of their behaviour to deduce or infer their internal states (Bem, 1972). In short, people depend on their behaviours and the circumstances in which these behaviours occur, to infer their inner states such as beliefs and attitudes.

In his most influential work, Daryl J. Bem stands out that "when we want to know how a person feels, we look to see how he acts" (Bem, 1972, p. 5). Thus, self-perception theory is grounded on the premise that the overt behaviour of a person is a route to find and interpret the feelings or inner states of that person. In this sense, as he expresses, "the crux of the self-perception interpretation is that the individual's own behaviour will be used by him as a source of evidence for his beliefs and attitudes" (Bem, 1972, p. 8). It follows from this that, according to the theory, our actions are interpreted by ourselves the way we interpret the actions of others. In other words, we can judge ourselves from an observer's perspective, just like an outsider that is capable to draw certain conclusions about what attitudes must have caused such behaviour (van den Brink, 2017, p. 12).

As a series of previous psychological experiments suggest, there is a relationship between the effect of self-perception on behaviour and, also, the effect of behaviour on self-perception. For example, it is well known that an individual's perception of pain is only partially a function of the pain-producing stimulus. Although self-perception is a complex acquired perception, the self-perception hypothesis implies the presence of an external observer of the subject. This point is crucial. The observer-subject

dyad is the teacher-student dyad in an educational context. Thus, the teacher is able to influence the student's self-perception as well as the student's behaviour.

In the self-perception explanatory framework, there is a dynamic interplay between self-perception and interpersonal perception. It is clear that there is a difference in perspective between *Actor vs. Observer*, "in which different features of the situation are differentially salient to them" (Bem, 1972, p. 42). Therefore, self-perception is a product of social interaction. According to the theory, a subject's self-descriptive statement of an attitude or belief is a dependent variable. And, no doubt, some self-descriptions of internal stimuli can be learned. In Bem's own words, "an individual is unable to make more than a small number of independent discriminations among stimuli that have never been publicly available to a socializing community" (Bem, 1967, p. 185). So, in a technology-driven educational context, the educator strives to induce the student a change in his or her self-perception of the educational process, contents and tools.

It's worth noting that Bem is a behaviourist. In his line of reasoning, self-perception needs self-observation, and his main goal is "to account for observed relations between current stimuli and *responses* in terms of an individual's past training history" (Bem, 1967, p. 197). Since the main purpose of education is to persuade students to incorporate new knowledge and to change attitudes and beliefs, the self-perception framework is very illustrative and useful in order to clarify the process of change acceptance that educational programmes try to promote or induce. Additionally, the self-perception experiments have created the possibility to elaborate a self-perception theory as a result of individuals empirically exposed to information that is discrepant with information they already possess. For example, certain subjects received information discrepant with their "self-images" or self-concept. These experiments contributed to open a new field of inquiry in experimental psychology and paved the way to enhance the applicability of self-perception theory to education.

### 3. Comparison Between Self-Perception and Cognitive Dissonance

Self-perception theory simply claims that people become aware of themselves by observing their behaviours. However, beyond this theory's simplicity, it is also influential because of its ability to contrast the most prominent psychological theories that explain how behaviour associates with self-knowledge (Bem, 1967). The self-perception theory is mostly known for its ability to contrast the cognitive dissonance theory (Bem & McConnell, 1970). The Cognitive Dissonance Theory is based on the assumption that people have a tendency of maintaining consistency between self-beliefs and whenever they are faced with two inconsistent beliefs about the self, they experience a dissonance state (Bem, 1967; Harmon-Jones & Mills, 2019; Jeong *et al.*, 2019). For instance, the inconsistency between the thought that one does not like something and another that he or she constantly does the same thing, causes dissonance. The individual in such a state is motivated to resolve dissonance by altering one of the inconsistent thoughts. Bem and McConnell (1970) suggest that one of the ways to reduce dissonance is to alter prior belief to align with the behaviour. For instance, if one does not like football but constantly finds himself watching football games, he or she needs to change the belief to align it with the behaviour. In short, an individual can resolve his dissonance by changing prior attitude or belief to become more favourable to behaviour.

The cognitive dissonance theory and the self-perception theory are different in two distinct ways. The first way they are different is the cognitive dissonance concept, the self-perception concept is not based on the assumption that a motivational state is required which is dissonance reduction in cognitive dissonance theory to change self-knowledge (Bem & McConnell, 1970). Instead, the self-perception theory assumes that individuals only need the willingness to infer their inner states by considering circumstances under which their behaviours occur to change their self-knowledge (Bem, 1967; Teng, 2018). Second, self-perception theory is again based on the belief that individuals can use their behaviours to infer their self-knowledge if their internal knowledge of their prior beliefs is weak or ambiguous (Bem & McConnell, 1970). On the other hand, cognitive dissonance theory assumes that individuals can only change their self-knowledge with the existence of clear clues or knowledge of prior beliefs and conflicts (Bem, 1967; Harmon-Jones & Mills, 2019). Besides, different from self-perception theory which assumes that behaviours are not within individual's free will, cognitive dissonance theory assumes

that individual's behaviours are freely chosen (Bem & McConnell, 1970). Although the two theories contradict each other, psychologists suggest that both can be used to explain changes of self-knowledge in different circumstances (Bem, 1967). The self-perception theory provides an explanation on how new self-knowledge is created from behaviour that does not conflict with prior self-belief whereas the cognitive dissonance theory explains how self-knowledge changes from freely chosen behaviour that conflict with prior self-beliefs (Bem & McConnell, 1970).

The comparison of the cognitive dissonance theory with the self-perception theory is considered to be a significant contribution to the latter. Yee and Bailenson (2007) argue that the field of psychology has been advanced by criticizing cognitive dissonance and other old theories. However, Bem (1967) argues that the self-perception theory's contributions go beyond cognitive dissonance theory because of its ability to explain various self-attribution phenomena. Most importantly, self-perception can be used to explain how individuals can develop self-knowledge from behaviour even with the existence of inconsistency between behaviour and initial beliefs. In short, the theory helps to understand how individuals can infer that they intrinsically like doing some activities that they thought they do not enjoy doing when there are no motivations to explain their behaviour. Besides, however, self-perception can be used to explain how individuals deduce that they do not intrinsically like doing a certain activity that they initially believed to be enjoyable when there were obvious situational motivations that could be used to explain their behaviour (Burmam, Hegner & Riley, 2009).

Cognitive dissonance cannot be used to explain how self-views change when there is no inconsistency between initial belief and behaviour (Bem, 1967). In contrast, the self-perception theory explains the change in self-views without assuming that inconsistency has to occur between behaviour and initial self-beliefs. In short, the individual must infer that their behaviours are supposed to earn them external rewards rather than meet their intrinsic interest in the activity. Self-perception not only explains how individuals change their self-views due to external motivations that cannot be associated with cognitive dissonance but also stresses the risks of offering motivations to people for them to engage in tasks or behaviour that they already love (Burmam, Hegner & Riley, 2009). The ability to explain how self-knowledge changes under different condition makes the self-perception theory one of the most important theories.

#### 4. Self-Perception Experiments and Applications

The self-perception theory is mostly used in changing people's attitude (Yee & Bailenson, 2007). In the therapeutics field, self-perception is used differently from other psychological theories. Conventionally, it is believed that inner states of individuals cause mental issues. Different for the other psychological perspectives, the self-perspective theory considers external behaviours as the cause of psychological problems. The assumption is that behaviours and perceptions that are unfavourable may affect the individual's ability to adapt their behaviours and will then cause psychological problems (Yee & Bailenson, 2007). Using this assumption, the self-perception concept can be used to address psychological problems affecting individuals. Psychological problems are addressed by guiding individuals on how to change their behaviours to more favourable behaviours that allow them to develop positive attitudes and consequently solve their psychological problems. Treating social anxiety is an example of a therapy that uses self-perception theory to help individuals with poor social skills to learn social skills (Grover *et al.*, 2013). The concept can also be used to change people's self-image. For instance, young people may be engaged in community work to help them improve their self-image. Self-perception theory is also used in marketing and persuasion (Burmam, Hegner & Riley, 2009). Marketers may engage individuals in certain activities that will later change their attitude towards a product that is being marketed. The main aim is to ensure that individuals are guided towards preferring certain products after performing certain tasks that allow them to observe their behaviours.

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The originator of self-perception theory, Bem (1972) conducted the first experiment that involved individuals who were tasked with listening to a recording of a man describing the peg-turning task. One group of participants were told that the man had been rewarded with USD 1 to give his description while the second group was told that the man had been rewarded with USD 20. The first group believed that the man enjoyed his work more than the second group. These conclusions of the two groups showed a correlation with the feeling that was expressed by the individuals involved. The fact that the participants were able to infer the man's feelings correctly helped to conclude that they were able to guess their own feelings from observing their behaviours.

Other studies have also provided a similar conclusion to Bem's experiment and have also confirmed that self-perception influences people in different, unexpected contexts. Ito, Chiao and Devine (2006) conducted a study to investigate whether facial changes can trigger racial bias among participants. Participants in the study were required to use their mouths to hold a pencil (which shaped their mouth in a smile automatically) while looking at pictures of anonymous white and black subjects. The findings indicated that participants who smiled while looking at pictures of black men had less implicit prejudice than those who were made to smile while looking at pictures of white men.

Blascovich *et al.* (2002) conducted a study that involved participants who were placed in a virtual environment. Some individuals were made to watch their virtual doppelgänger do similar exercises, some watched their doppelgänger stand still, and some watched other people's virtual doppelgänger exercise. Those who were made to watch their own doppelgänger exercise reported greater beliefs than the other two groups that they could exercise successfully. Chaiken and Baldwin (1981) conducted a study that focused on environmental attitudes. Each participant was found to have well or poor prior attitudes towards the role of an environmentalist. They were grouped into two, with one group required to fill a questionnaire that was supposed to arouse past pro-ecology behaviours and the other group filled questionnaire that aroused past anti-ecology behaviours. Individuals who had prior attitudes towards the role of the environment were not affected by the manipulation of questions. The study therefore showed that past behaviours could affect individuals' attitudes.

Another study was conducted by Guadagno *et al.* (2010) to investigate individuals' attitudes towards recruitment by terrorist organizations through the internet. The authors were interested in understanding how new converts acquire radical attitudes that affect their radical behaviours. The study concluded that the self-perception theory could be used to understand social influence and identity in a terrorist recruitment scenario. Critcher and Gilovich (2010) conducted several studies to investigate the relationship between mind wandering (unobservable behaviours) and the self-perception theory. They were interested in determining whether mind wandering can allow individuals to infer their preferences and attitudes. They found that allowing the mind to wander to current events rather than past events, many events as opposed to just one and positive events is associated with boredom, and therefore lead to dissatisfaction.

## 5. Self-Perception in Education

Different studies have shown that attitudes and perceptions of teachers and students affect the integration of technology in education. Chai *et al.* (2017) suggest that understanding students' perceptions

of learning with technology can help in improving educational programs. In a study to investigate students' perception on weblogs, Lui *et al.* (2006) found that students' perceptions are essential in promoting successful adoption of technology in education. They further argue that since technology does not have inherent pedagogical value, students should pursue to adopt sound behaviours such as interaction with technological application to improve their acceptance of technology and learning. Ramey (2013) argues that the use of technology by teachers helps reduce the difficulties that are often experienced in teaching. Abdullahi (2013) argues that teachers' perception towards technology integration into education can change if they are trained and allowed more time to interact with technology. A study by Schuck and Kearney (2008) indeed found that initial use of interactive whiteboards (IWBs) increased students' positivity towards this technological tool. Chai *et al.* (2012) argue that TPACK perceptions are associated with teachers' capabilities. In short, teachers' repeated use of the TPACK elements help to improve their perceptions regarding their abilities. These studies show that perceptions towards technology are important in facilitating its implementation. Also, it is essential for designing educational programs.

Understanding pre-service teachers' perceptions in TPACK (Technology, Pedagogy and Content Knowledge) areas would help teachers, educators and designers to design more effective lessons and programs. In this context, Chai *et al.* (2013, p. 38) suggests that "survey studies about students' perception of learning with technology could also provide important information to help ministry and schools in planning education programs". Bem's theory can support the study in gaining a better understanding of the current pre-service teachers' perceptions regarding their TPACK capabilities.

It is well documented that self-perception plays a crucial role in the success of technology-mediated educational programmes or interventions. In this respect, van den Brink (2017) carried out a literature review on the importance of self-perception in the field of innovation processes. Given the fact that technology-mediated education is an example of an innovation process, it is clear that a good self-perception is a success factor that exerts a positive influence on educational achievements. Thus, "if one's self-perception is that of being incompetent, then this might lead to fear of contribution in the innovation process" (van den Brink, 2017, p. 15).

C. Díaz Martínez (1994) evaluated a group of 116 13-year-old adolescents in four public schools in Madrid, Spain. The instrument of the evaluation was a written *essay* that tried to respond to the following question (proposal of the topic): How do you view yourself as a youngster, as a middle age person, and as an elderly person? The students had 1 hour to respond the question in an open manner. In the theoretical framework and methodology section of her thesis, the author explained that the essay is a form of self-expression and a way to access the *self-perception* of each adolescent. It is argued that a qualitative research is a weakly framed method of information gathering. This is precisely the reason why the written essay technique was chosen, because, in this case, the expressivity is stronger. One of the main results of the Díaz Martínez's empirical study is the classification of students in three *self-perception patterns*, in relation to two poles of attraction, that is, 1) profession-centred pattern, 2) family-centred pattern and 3) dual students, in accordance with the semantic repertoire of the essays. In this sense, the researcher found a remarkable semantic proximity between individuals sharing the same self-perception system. Additionally, specific patterns of self-perception were more likely to be prevalent among individuals having certain social backgrounds. However, the author stressed that some individuals showed an ability to produce a self-perception system which goes beyond the immediate horizons of their environments. This ability is linked to a kind of self-perception that expresses a *growth mindset* in contrast to a fixed mindset, in van den Brink words. Those with this growth mindset are more prone to accept change and incorporate new ideas in a technology-driven education programme.

In another paper, Lawrence and Sathiyaseelan (2019) assessed a series of studies that evaluated self-perception in children and adolescents with learning disability (LD). The concept of self-perception was based on Bem's theoretical framework. Learning disability (LD) was a broad term that includes difficulties in acquisition and use of different skills in the learning process. One of the most relevant findings was the fact that the term learning disability (LD) influenced the self-perception, behaviour and self-identity of students. This effect was termed labelling. It was concluded that "when any sort of deviancy is observed there is a tendency to generate a stigma or stereotype associated with it and is found to have more ill effects. And the application of a deviant label can have unfortunate results for the label

bearer" (Lawrence & Sathiyaseelan, 2019, p. 55).

An extension of Bem's theory towards an application in the educational field, can be seen when considering the field experiences of pre-service teachers. Pre-service teachers enter their field experiences holding certain beliefs and views about teaching. Woolhouse (2012) observed that preservice teachers often perceive themselves as unique from other teachers, as having distinct attributes and different motivations for pursuing their chosen career paths. Through the field experience, pre-service teachers engage in various challenging tasks. They demonstrate an array of behaviours and dispositions accordingly. Under various unforeseen conditions, they develop and express their views and perceptions in overt and covert ways. As pre-service teachers are in the throgs of their work (in actual classrooms), there is often times a change which occurs in their perception of self (Woolhouse, 2012). Pre-service teachers encounter a myriad of experiences and contend with varying conditions, in which they are forced to confront their perceptions of self during field experience.

Researchers Choy, Wong, Goh, and Low (2014) explored preservice teacher perceptions in an effort to observe the 'expectations, fulfilment of expectations and overall experience around their beliefs changing as a result of their field experience and the conditions thereof. Choy, Wong, Goh, and Low (2014) concluded that changes were present; as the pre-service teachers' first-hand field experience gave them the real-world experience needed for growth in confidence. In essence, classroom teaching experiences prompted pre-service teachers to renegotiate, re-examine and readjust the previous beliefs, self-views and perceptions. Consequently, a change in self-confidence, self-knowledge and strength of self-perception are most likely to take place for novice pre-service teachers. Some researchers contend that it is not only likely to take place, rather that it is essential to their professional journey and experience (Choy, Wong, Goh & Low, 2014; Naidoo & Kirch, 2016; Woolhouse, 2012).

## 6. Conclusion

Our initial premise was that Bem's (1972) self-perception theory is based on two claims. People understand their beliefs, attitudes and perceptions by understanding their own behaviour and the circumstances behind it. In addition to this, if an individual doesn't have full understanding of his behaviour, he or she acts like an outsider, who observes the actions and conducts, then tries to make sense out of it and deduce their own inner characteristics. Therefore, Bem's theory supports this study in gaining a better understanding of the current pre-service teachers' perceptions regarding their TPACK capabilities.

Furthermore, Bem (1972) established his self-perception theory on how to ask questions and understand the mind. His theory analyses self-perception based on the premise that more people than the individual can know that person's overt actions. Bem (1972) posits that self-perception differs from interpersonal perception in four different ways: insider vs. outsider, intimate vs. stranger, self vs. other, and actor vs. observer. Bem's theory gives credence to the notion that conditions and circumstances of field experience, can impact and yield a 'change in pre-service teachers' perceptions, beliefs and assumptions. In conclusion, we must acknowledge that pre-service teachers are observers of themselves, but they are also still learners themselves, navigating in uncharted territories. Bem's (1972) theory of self-perception could broaden the range of analysis that preservice teachers employ in their reflective practice to think more critically about their specific classroom roles and how they impact the perceptive interpretation of their professional development as educators. Through this process, pre-service teachers are re-thinking and re-creating new forms of practice that do not exist for them (Naidoo & Kirch, 2016).

Self-perception determines self-efficacy. Self-efficacy is the measure of strength or extent of one's belief in one's ability to complete tasks and reach goals. In this sense, Bem's theory supports the notion that self-perception is malleable to such an extent that well-trained teachers can cause a positive change in the students' self-perception as a mediator to positive attitudes and desired behaviours. What is important to note here is that external experiences and self-perception are the sources for building self-efficacy. Consequently, those who believe they can are more likely to set and accept challenging goals and stay committed to them.

Bem's self-perception theory is a useful framework to apply to educational studies and practices, especially to assess self-views and promote a better performance. Self-perception is an individual's ability to respond differentially to his own behaviour and its controlling variables. Verbal statements that are self-descriptive are among the most common responses comprising self-perception. Many of the self-descriptive statements that appear to be under the exclusive control of the individual, are present in the training community and were acquired by the individual during his or her formative years. An individual's verbal self-descriptive statements appear to have an extensive cross-cultural generality. Self-perception theory is grounded on the premise that the overt behaviour of a person is a route to interpret the feelings or inner states of that person.

People are what they do. According to Bem, individuals interpret their actions the same way they interpret others' actions and every individual's action is influenced by social surroundings and not influenced by one's free will. Individuals' attitudes are developed from observing one's own behaviour and making a conclusion on what attitude caused that behaviour. Many subtle discriminations which individuals do make when describing their attitudes are based, rather, on the kinds of cues that are potentially available to an outside observer. Our actions are interpreted by ourselves the way we interpret the actions of others. In other words, we can judge ourselves from an observer's perspective, just like an outsider that is capable to draw certain conclusions about what attitudes must have caused such behaviour. In some circumstances, the actor and the observer are the same person, but in the educational context, the observer-subject dyad is the teacher-student dyad so that self-perception is a kind of dependent variable that can be influenced and modified by the educational activities, technologies, and programmes. This point is relevant when we are training pre-service teachers to implement a change management project by means of a technology-mediated educational programme or intervention. Since technology-mediated education is an example of an innovation process, it is clear that self-perception is a success factor that exerts a positive influence on educational achievements.

Self-perception is in relation with self-confidence, self-esteem and self-efficacy. Self-efficacy is the measure of strength or extent of one's belief in one's ability to complete tasks and reach goals. As a result, the applicability of self-perception theory is rich and diverse in the field of education management. For example, we can apply self-perception to pre-service teachers training and TPACK capabilities. In addition, as we have seen in the case of the Díaz Martínez's thesis, Bem's self-perception theory was successfully applied to the elaboration of self-perception patterns in secondary schools in Spain. And to the self-image of students with learning disabilities (LD) in order to explore the potential negative effects of labelling.

In sum, a series of previous experimental studies provides support to the notion that verbal, self-descriptive attitude statements can be based on the individual's observations of his or her own overt behaviour and the external stimulus conditions under which it occurs.



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