

# How students perceive the teacher's use of humour and how it enhances learning in the classroom

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## Abstract

*Recently, scholarship on humour in teaching and learning has focused on the use of instructional humour. Past studies have reported that instructional humour is best used as a pedagogical tool for teaching and learning purposes. Nevertheless, how students perceive instructional humour and how humour enhances learning in the classroom is still not clear. This exploratory study aims to gain further understanding of students' interpretation of teachers' use of humour in relation to teaching and learning in a higher education context. In particular, it aims to explore the perspectives of students as to how the use of humour in the classroom enhances their learning. Data were collected from one-to-one in-depth interviews with 10 undergraduate students who were learning with award-winning teachers at a research-intensive university in New Zealand. Students explained a variety of ways in which humour enabled their process of learning. These included helping them to concentrate, remember and understand learning content by connecting humour to content. Additionally, a sense of rapport and positive attitude towards learning and the teacher were indicated as contributing to the learning environment. Our findings indicate that students considered instructional humour a tool that enhanced their learning cognitively and emotionally.*

*Keywords: instructional humour, instructional humour processing theory (IHPT), students' perspectives, learning process.*

## 1. Introduction

In recent years, there has been an increasing interest among researchers in understanding how humour affects teaching and learning. At the higher education level, research into higher education emphasises the importance of instructional humour (Daumiller et al. 2019; Wanzer et al. 2010), which is explained through the instructional humour processing theory (IHPT) (Wanzer et al. 2010). This theory posits that humour is considered instructional when students notice the presence of humour, perceive it as humorous and then link between the humour used and learning information (learning content or lesson). However, how students process teachers' humorous messages are still not clear. The focus of previous studies (e.g.,

Garner 2006; Ziyaeemehr et al. 2011) have only been on identifying whether humour enhances student learning in the classroom; these studies did not explore how students' process and connect humour to their learning. Students' perspectives and experiences are important, as they are the recipients of humorous messages and the ones who ultimately decide whether the humour used is instructional or not. Furthermore, it has been reported that not all humour used in the classroom is perceived as instructional by students (Bolkan and Goodboy 2015). Therefore, there is a need to further understand how students process teachers' use of humour and whether it is considered instructional or not.

In order to gain deeper insights into students' perspectives of humour, we explored university students' thoughts and learning processes as a result of the teacher's humorous messages. In particular, we explored how humour contributes to learning. We define the term 'students' learning processes in the classroom' as ways that students actively engage during lectures for deeper and richer learning outcomes, as proposed by Zepke and Leach (2010). In other words, we wanted to know how students recognise teachers' humorous messages, interpret and link these messages with the learning content. We refer to learning content or lesson as information or knowledge that a teacher shares with students during the class.

## **2. The effects of humour on teaching and learning in higher education**

The use of humour has been reported to be effective for learning and beneficial to students. The benefits are identified in three distinct areas: student learning, classroom environment, and teacher credibility. In relation to learning, researchers have demonstrated that humour makes people laugh and supports learning (Lomax & Moosavi 2002). It is particularly useful in gaining and retaining students' attention (Garner 2006; Miller et al. 2017; Ziyaeemehr et al. 2011). Humour also enables information acquisition (Houser et al. 2007; Miller et al. 2017) by simplifying complex concepts so that students can understand and recall learning content (Ziyaeemehr et al. 2011).

The second benefit of humour is that it contributes to a positive classroom environment. Humour helps students release anxiety, predominantly when learning content they dread (Garner 2006). A good sense of humour encourages students to listen and pay attention and keeps them engaged to attend the class (Masek et al. 2019). Another means by which the classroom environment is improved is that teachers use humour to build rapport with students (Van Praag et al. 2017). Chabeli (2008) and Ziyaeemehr et al. (2011) noted that teachers with a good sense of humour appear friendly and likeable. It is also suggested that humour assists students to be more sociable with teachers and other students (Lee 2006); hence, it would be justified to make a claim that the use of humour increases classroom interaction.

The third benefit of humour in the classroom is that humour establishes the credibility of teachers. If teachers use humour fittingly in the classroom, students possibly perceive the teacher as approachable (Banas et al. 2011). Humour can also increase a teacher's perceived credibility by increasing the teacher's perceived competence, trustworthiness and goodwill (Banas et al. 2011; Wrench & Richmond 2004).

Although humour has been reported to be beneficial for learning, enhancing the classroom environment and improving teacher credibility, previous studies focused only on identifying such benefits quantitatively. Past studies have not dealt with how humour enables or contributes to learning or, more specifically, how students perceive teachers' humorous messages as instructional. The question still remains as to how humour affects student learning. In this paper, we qualitatively explore students' thoughts and feelings at the time they were learning with the presence of humour, providing rich data gathered through

interviews to understand students' perceptions of teachers' used of humour. This is important, as humorous information and learning content or lesson must be linked in a way for humour to be considered instructional.

### **3. Instructional humour: instructional humour processing theory**

The instructional humour processing theory (IHPT) describes how humour can assist teaching and increase learning (Banas et al. 2011). According to Wanzer et al. (2010), there are two aspects of the IHPT that are pertinent for instructional humour: 1) humour should be relevant to enhance learning and 2) humour should be appropriate to motivate students to engage in learning. First, students should be able to recognise teacher's humour and perceive it as humorous and relevant to the teaching and learning context (Petty & Cacioppo 1981, 1986). Students who interpret humorous information accurately are able to foster a better understanding of the learning content. If the students are not able to recognise the message as humorous, they will feel puzzled or distracted (Wanzer et al. 2010).

Second, Wanzer et al. (2010) assert that the humour used can contribute to students' motivation to learn in class if the humour used is appropriate (i.e., creates positive affect). Appropriate types of humour such as funny stories and anecdotes should create positive affect in students, whereas inappropriate types of humour such as disparaging or offensive jokes could negatively affect students (Wanzer et al. 2006). This successful interpretation is suggested to be instructional humour. If students do not perceive the teacher's humour as humorous, relate it to their learning, and perceive the teacher's humour as inappropriate, it will not enhance student learning and could cause a negative impact on students (Wanzer et al. 2010). Thus, in this paper, we attempt to explore students' perceptions of these aspects of humour as regards their process of learning in the classroom.

## **4. Methodology**

### **4.1 Participants and context**

We interviewed ten undergraduate students (two each from the anatomy, biochemistry, chemistry, law, and psychology departments) who were enrolled in classes taught by five award-winning teachers at a research-intensive university in New Zealand. The teachers were selected by the university's student association with the help of university-wide open-ended surveys. We selected the award-winning teachers who were reported to inject humour into their teaching. Three of them were males, New Zealanders; there were also one international male and one international female teacher. We approached students presently taught by these award-winning teachers and distributed information sheets which contained a brief explanation of our research and invited voluntary participation. Ten students who agreed to participate were interviewed for approximately an hour each. They were mostly New Zealand European, domestic students, with one indigenous (Maori) domestic student and one international student.

### **4.2 Data collection and analysis**

Data collected for this qualitative exploratory study included one-on-one interviews between the students and us. Some of the questions we asked were as follows:

- Does the humour used by your teacher help you in your process of learning in the classroom and how?
- What do you think and feel about the teachers' use of humour?
- Do you understand and remember the humour used by your teacher? Can you explain and describe it?

Audio recordings of the interviews were later transcribed, checked for accuracy and analysed using thematic analysis in line with the process outlined by King and Horrocks (2010). We first independently open coded two transcripts, focused on ways humour enabled learning in the classroom. At this stage, we identified words and sentences from the transcriptions that had similar meanings such as 'focus in the class' and 'engage in the class' as descriptive codes.

We met to discuss and refine our codes; then, one of us coded the remaining eight transcripts. At this stage, descriptive codes and relevant material were clustered into themes. Once completed, the second researcher then reviewed all the codes and focused on construing it to answer the research question. Areas of disagreement were discussed and resolved. We then engaged in axial coding, looking for connections between the codes and collapsing overlapping codes. Member checking was performed by discussing our emerging themes and categorisations with colleagues in our department. At the last stage, we finalised the key themes and interpreted them according to the IHPT used in this study.

## **5. Findings and discussions**

We discuss our findings concerning the main research question, which is how humour enables students' learning in the classroom. Our data, based on verbatim quotes from students and consolidated in two categories, are discussed using four themes for how humour enables learning and two themes focused on the effects of humour on the classroom environment. All participants' names reported are pseudonyms. We draw on the IHPT (Wanzer et al. 2010) to explore the ways in which humour contributes to student learning. Our discussions on the first category of the findings provided insights as to how teacher's humorous information enhanced students' learning process in the classroom.

### **5.1 How does humour affect learning?**

Based on the interview sessions, the students asserted that teachers' use of humour helped them to concentrate, remember, comprehend, and support their thinking in relation to the learning content.

#### *5.1.1 Humour helps students to concentrate*

Eight interviews indicated that the teacher's use of humour assisted students in concentrating by keeping them attentive and also by helping them to evade diversions. Tina, a participant, referring to humour assisting her in concentrating, said,

I think that humour helps by keeping me more focused. By laughing, it makes me more awake, and whatever he was saying after that helps the learning. Other teachers, they are

not funny, and I am, like, zoned out, and I do not remember what they have said for five minutes, and when I am focused again, it is gone.

Tina highlighted the importance of concentrating effectively on the lesson. Korobkin (1988) specifies that humour provides a cognitive break that empowers students to comprehend and digest content. Thus, humour aids to retain students' concentration during the lesson throughout the lecture, as they do not feel sleepy or bored owing to their teacher delivering a continuous stream of information.

Moreover, there is the possibility that students can become inattentive in the classroom, particularly when they daydream or allow their concentration to wander (Tait et al. 2015). The students interviewed in our study noted that with the presence of humour, they did not feel left out of the class, as they stayed concentrated. Kim, for example, explained: 'It helped me to stay on task because if I missed a joke, and everyone was laughing, and I feel like ... oh ... crap! I should have paid attention'.

In addition, technology such as smart devices and laptops can be a diversion in the classroom if it is not used appropriately in relation to the lesson that is being delivered. Fried (2008) reported that students who had their electronic devices switched on during lessons get side-tracked during the lecture in the classroom. Similar to Kim, another participant, Jaden, reported that incidences of humour used by his teacher meant that he was able to fully pay attention and not be distracted by his electronic devices:

The teacher is holding the whole room's attention on him. Nobody wants to examine their laptop screens and read the newsfeed on Facebook or anything when he is up the front cracking a joke every couple of lines, not that it is a bad thing that he is cracking a joke every couple of lines. I want to be listening to what this teacher is saying.

What seems to be apparent from the above examples is that the use of humour in the classroom kept the students interested and concentrated on the lesson being delivered by their teachers. These findings echo those of earlier studies by Benjelloun (2009) and Ziyaeemehr et al. (2011). They found that humour plays an important role to ensure attentiveness to the teacher and the contents of the lecture.

### *5.1.2 Humour aids students in remembering learning content*

All students interviewed said that humour helped them to remember the learning content. This finding reiterates those of Benjelloun (2009), Garner (2006), and Ziyaeemehr et al. (2011). When we asked, 'Do you recall any instance in which your teacher used humour?', all students were able to describe at least one such occasion by associating the humour with the lesson they were learning.

The students were able to provide some insights as to how the recall was possible. To them, it was the teacher's presence and the way the teacher made them feel. According to Vivy,

I feel it kind of click 'I was to go through my lectures now, through his block, and I could get to a point, I would be, 'That is when he made that joke.' It helps because if you went back and watched the lecture on Capture,<sup>1</sup> you do not need to be with him. I can

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<sup>1</sup> Capture is a lecture-recording system.

remember his presence and him with his humour; it kind of links me back to little parts of the topic that I have learned. I feel like that is quite helpful.

### *5.1.3 Humour aids students in comprehending learning content*

Seven students also affirmed that humour has a role in helping them to comprehend the learning content. This finding is aligned with Berk (1996) and Kaplan and Pascoe (1977). In these studies, students indicated that teachers' funny drawings of the learning content and funny examples related closely to their daily experiences enriched their understanding of the lesson.

Students reported that funny drawings have an effect in simplifying a difficult lesson. Lily and Prue clarified how their teacher made a challenging lesson on law easy for students to comprehend with a funny drawing (see Figure 1).



Figure 1. Lily's recreation of an illustration of a sheep drawing used by her lecturer while explaining cases in a law lecture.

Lily described,

He draws some sheep, and it just looks like this [see Figure 1], and it has got two eyes and four legs. It helps me. I think it is funny because I look at the little sheep and I go, 'He really simplifies the crux of the case on one piece of paper.'

Prue clarified how the humorous drawing of sheep facilitated comprehension:

He wrote the sheep out, and then he had a sheep, and he says, 'This was Parliament.' He said, 'I write the law', and then another sheep was, 'I implement the law', and then the judiciary was here saying, 'I make sure you, the executive, exercises its power lawfully' for the third sheep.

Lily and Prue believed that they had an improved understanding of the learning content when their teacher exemplified the materials through humorous sketches. This was evidenced when they were able to recall the lesson and provide a convincing depiction of the learning content during the interview. This is in line with Berk's (1996) and Kaplan and Pascoe's (1977) studies, as they found that students comprehend and remember humorous examples easier

compared to the challenging ones. Even though it is recommended, there is an argument that humorous sketches or examples may be perceived as unimportant or trivial (Huss 2008). Based on the students' explanation in this study, the teachers used humorous examples *after* they clarified the learning content to students.

The students interviewed in this study also said that teachers' use of humour assisted them in comprehending the lesson by linking information to students' everyday experiences. This finding was unanticipated, as the IHPT focuses on connecting humorous information to the lesson and not on everyday experiences. As an example of this usage, Rayven explained her chemistry teacher's used of humour:

He was going through enzyme and substrates complexes, and then he would start to talk about things in real life that are funny but simulate the same thing, such as when a substrate binds to an enzyme complex and what goes through with that, and he would kind of dance and say, 'This is when a girl goes into the club and she is kind of shy and starts getting a lot of energy;' so, he made it relatable to our age and what we see around.

In this instance, Rayven described how the teacher connected the lesson with humorous anecdotes relevant to her life experience as a young adult. Rayven recalled the example and was able to explain what she comprehended during the lesson. She was also able to link the lesson, humorous information used by her teacher and her experiences in life. Rayven further elaborated,

The teacher can bring something from another part of our lives that we maybe did not have with us when we came to the university and then apply it to our experience here. So, this is something I have picked up along the way and now I can apply it to my chemistry understanding; it is pretty good.

Wanzer et al. (2010) indicated that humour is considered instructional when students are able to link the teachers' humorous examples with the lesson or learning content. The explanation given by Rayven, however, suggests that humour is considered as instructional when students are able to associate not only teachers' humorous examples and the learning content, but also students' everyday experiences.

#### *5.1.4 Humour supports students' thinking*

Two students disclosed that humour had an influence on their ways of discerning the learning content. Jaden and Amy specified that humour triggered their thoughts to ponder about the content that was delivered by the teacher. Jaden described a humorous experiment that his teacher demonstrated on an M&M chocolate that helped him to recall learning content:

There is some energy in a bond, that is, a tiny amount of energy in a bond, but then the teacher was like, 'Hey, you know what else? There is a ton of bonds inside this M&M here'. So, not only do you get humour out of using these examples that the students are not expecting, but also generate thinking, and he showed that.

Jaden was able to recall the experiment, the humour associated with the experiment and, ultimately, link these to the content. In a way, what Jaden did was to "think and rethink [his] understanding of the content and examine their reasoning so that new knowledge can be

constructed” (Chabeli 2008: 56). Other students reported similar experiences too. For instance, Vivy explained,

Humour really just makes me think about what the teacher is saying and kind of process it, which I hopefully learn because of that. I know I am processing everything he is saying, not just a little bit here and then getting bored, because he is constantly coming out with things. It forces my brain to process everything he says.

The teachers’ use of humour prompted Jaden and Vivy to think about the content to consider justifications and alternatives to better understand the learning content. The IHPT hypothesises that the teacher’s use of humour should be suitable and connected to the lesson for it to be beneficial for student learning in the classroom (Wanzer et al. 2010). This seems to be the case in the examples above. Furthermore, the students in this study considered it instructional humour because there was the push to challenge their understanding of learning content. The teacher’s use of humour was observed as enhancing students’ thinking because it invigorated students “to critically analyse, interpret and evaluate assumptions, beliefs, thoughts and actions” (Chabeli 2008: 55).

## **5.2 How does humour affect the classroom environment?**

The findings from this study showed that the teachers’ use of humour facilitated learning in two ways: firstly, by making the students feel relaxed with the humorous teacher, as it helped them to build a rapport; and, secondly, humour made the students feel that the classroom environment was conducive to learning, that is, they felt positive and encouraged to learn. In this regard, the present study draws on the IHPT (appropriateness of humour in the classroom for students’ motivation) to provide insights as to the effects of humour on students’ feelings and how humour influences the learning environment. In other words, this premise of the IHPT is the emotional aspects of humour rather than the cognitive aspects (i.e., concentration, remembrance, comprehension, and thought).

### *5.2.1 Humour promotes teacher-student rapport in the classroom*

Eight students from this study perceived that the humour used by the teachers allowed a constructive rapport between students and teachers. One of the reasons for this was that humour was viewed as a communication strategy that took away any barriers to create understanding, collegiality and, also, a sense of togetherness between students and teachers (Bellert 1989).

In the interview session, Amy stated: ‘I feel like I want to listen because she just comes across as, like, a nicer person’. This seems to align with a study by Nesi (2012), who reported that teachers who use humour, such as self-disparaging humour, make themselves appear humble. One student, Carly, described the self-disparaging humour of her teacher as follows:

I really enjoy it because it is the type of humour that I think everyone can understand, and, I mean, psychology as a subject also attracts people from so many different walks of life or ethnicities or cultures, and it is a really applicable humour to so many people, and that is why I think it is quite funny because it is just, like, making you feel like she is down-to-earth or she is just one of us.

Likewise, Lily said that her teacher's use of humour made her feel he was a friendly person. She stated, 'He could come to our level and communicate with us.' Both teachers used humour that was relatable to students' daily experiences. As a result, the students felt that their teachers could understand them. Hence, the teachers seemed approachable and friendly because their use of humour 'closed the gap' between them and their students. These findings align with those of Carver (2013), who argued that humour makes teachers appear less authoritarian, and students like this use of humour.

### *5.2.2 Humour inspires positive attitudes and emotions in the classroom*

It is important that teachers inspire students to have positive attitudes and emotions while learning in the classroom (Chabeli 2008). Six students in this study indicated that the teacher's use of humour inspired them to feel positive towards the lesson and the teacher. For example, Ari stated: 'It is not like the teacher is trying to be funny. It is just his way of trying to keep the students interested in the subject'.

Rayven echoed by reporting how humour aided her to be inspired in learning the lesson. She noted,

It is quite a daunting subject, but the teacher really made it quite something that I could latch on to and really want to study more, so it was really good. He did well with the humour aspect.

Rayven initially had the view that learning chemistry would be boring and demotivating but changed her perceptions once she realised that chemistry seemed fun because of the humour was used to explain complex ideas. As a result, her interest in chemistry developed. Garner (2006) indicated that humour and laughter may help students to feel less anxious and encourage students to enjoy a dreadful lesson better.

Additionally, Jaden spoke about the emotional aspects of how humour played a role in his learning. He stated: 'The point of the jokes is to slowly calm us and keep our attention on the teacher through the lecture while still making sure that the focus of the lecture is on chemistry'. The teacher's use of humour reduced Jaden's sense of anxiety in relation to learning chemistry. He was able to pay attention on learning in the classroom better because he enjoyed listening to his teacher's instructional humour.

## **6. Summary of findings**

The findings of this study provide deeper insights into *how* or *in what way* humour enables learning and influences the learning environment. From the discussions with the students in the interview sessions, we discovered that the teachers' use of humour affected them in two ways: (a) by constructing learning and (b) by constructing the classroom environment which, in turn, moulded their learning.

Even though the findings in this study resonate with earlier studies in terms of the effects of humour, our analysis provides deeper insights as to how classroom humour was utilised by the students in their learning processes. As students indicated, they stated that the teachers' use of humour aided them in concentrating better in class by avoiding distractions and allowed them to follow the teachers' pace in teaching. The students clarified that they did not feel bored, sleepy or tired listening to the teachers and the learning content, particularly when the teachers used humour. The students did not want to miss interesting information that the

teachers were providing, nor did they want to miss humorous comments that the teachers made. Students also noted that they did not feel distracted by their electronic devices (laptops and smartphones) and did not use them for non-academic purposes, such as scrolling through Facebook during the lecture.

Moreover, students associated the humour used by the teachers with their own capability to learn better during the lecture. Students disclosed that the teachers' use of humour assisted them in remembering and recalling the lesson being taught in class when they were revising. They discussed recollection and revision as both cognitive and affective processes, stating that, through remembering humorous examples, they would visualise the teachers' presence, the humour used and the lesson taught. The students also explained how the humour used by the teachers facilitated comprehension and linking with the lesson. Further, students indicated that they comprehended the material better and thought more greatly about the lesson because the teachers exemplified the learning content through humorous illustrations and examples related closely to their daily experiences.

Additionally, the students noted another positive value of classroom humour, that is, how humour added to a better environment in the classroom by improving the teacher-student rapport. When the teachers integrated humour into teaching, the students perceived the teachers as friendly, humble and pleasant. The students also said that the humour used by the teachers inspired them to have positive attitudes and emotions while learning in class. By using humour, the teachers made the students feel at ease, encouraged and able to enjoy learning the lesson, even if it was a dreaded one.

## **7. Implications**

The findings of this study support both the tenets of the IHPT concerning the relevance and appropriateness of humour proposed by Wenzel et al. (2010). Our data suggest that humour has an instructional value, as it helps students to relate to the learning content and enhance their cognitive learning. The students revealed that, when the teachers used humour, they were processing the humorous information to enhance their focus in class. It was also reported that humour enabled them to easily recall and understand the learning content, as well as foster their thinking by helping them to connect with the learning content. These findings are in line with the IHPT on the relevance of humour and with the previous studies (e.g., Benjelloun 2009; Garner 2006; Ziyaemehr et al. 2011).

The students also revealed that the teachers' use of humour creates emotive conditions that allow students to learn, such as building good relationships between the teacher and students, and encourages positive attitudes and emotions towards the teacher, the lesson and the classroom environment. In this regard, the findings of our study support the IHPT's appropriateness aspect of humour. Wenzel et al. (2010) argued that the humour used can contribute to students' motivation to learn in class, if appropriate, and focused on types of both appropriate and inappropriate humour to determine its effects on learning. Our findings indicated specifically a type of appropriate humour, such as self-disparaging humour that made the teachers appear pleasant and humble, and, subsequently, enhanced teacher-student rapport. Furthermore, our findings on students' positive attitude and emotions are in accord with the finding presented in a recent study by Bakar (2019) reporting that appropriate humour enhances teachers' credibility. Bakar (2019) indicated that this type of appropriate humour is able to make the teachers appear enthusiastic and passionate about what they teach and, subsequently, make the students feel motivated to learn. It may therefore be the case that

these tenets of humour (relevance and appropriateness) are important elements to study and determine what is considered as instructional humour for teaching and learning purposes.

## **8. Limitations**

There are some limitations of this study. Firstly, there was a small number of participants. We only managed to get ten students to participate in our study. Many students we approached were reluctant to discuss their teacher's use of humour or they were occupied with their study and had no time for an interview session. Although the number of participants was small, the findings, nonetheless, offer insights that add to the higher education literature on students' perspectives on humour.

Secondly, due to the small number of participants, we also had a limited variety of ethnic backgrounds and genders. We acknowledge that different ethnic backgrounds of participants may have provided richer and diversified insights into humour from the cultural perspectives, as suggested by Lee (2006). We could only get eight student participants who were New Zealand European, one was indigenous Māori, and one was an international student. A larger student cohort would have permitted for better ethnic and gender diversity and may have led to more nuanced findings.

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## **References**

- Bakar, F. A. (2019). 'Appropriate and relevant humour in the university classroom: insights from teachers and students'. *The European Journal of Humour Research* 7 (4), pp.137-152. doi: <http://dx.doi.org/10.7592/EJHR2019.7.4.bakar>.
- Banas, J. A., Dunbar, N., Rodriguez, D. & Liu, S. J. (2011). 'A review of humor in educational settings: Four decades of research'. *Communication Education* 60 (1), pp. 115-144. doi:10.1080/03634523.2010.496867.
- Bellert, J. L. (1989). 'Humor: A therapeutic approach in oncology nursing'. *Cancer Nursing* 12 (2), pp. 65-70.
- Benjelloun, H. (2009). 'An empirical investigation of the use of humor in university classrooms'. *Education, Business and Society: Contemporary Middle Eastern Issues* 2 (4), pp. 312-322. doi:10.1108/17537980911001134.
- Berk, R. A. (1996). 'Student ratings of 10 strategies for using humor in college teaching'. *Journal on Excellence in College Teaching* 7 (3), pp. 71-92.
- Bolkan, S. & Goodboy, A. K. (2015). 'Exploratory theoretical tests of the instructor humor–student learning link'. *Communication Education* 64 (1), pp. 45-64.
- Carver, M. (2013). 'Edgy humour in the classroom: A case study of risks and rewards'. *Journal of Perspectives in Applied Academic Practice* 1 (1), pp. 30-34. doi:10.14297/jpaap.v1i1.42.
- Chabeli, M. (2008). 'Humor: A pedagogical tool to promote learning'. *Curationis* 31, pp. 51-59.

- Daumiller, M., Bieg, S., Dickhäuser, O. & Dresel, M. (2019). 'Humor in university teaching: Role of teachers' achievement goals and self-efficacy for their use of content-related humor'. *Studies in Higher Education* 44 (9), pp. 1-15.
- Fried, C. B. (2008). 'In-class laptop use and its effects on student learning'. *Computers & Education* 50 (3), pp. 906-914.
- Garner, R. L. (2006). 'Humor in pedagogy: How ha-ha can lead to aha!'. *College Teaching* 54 (1), pp. 177-180.
- Houser, M. L., Cowan, R. L. & West, D. A. (2007). 'Investigating a new education frontier: Instructor communication behavior in CD-ROM texts – do traditionally positive behaviors translate into this new environment?'. *Communication Quarterly* 55 (1), pp. 19-38.
- Huss, J. A. (2008). 'Getting serious about humour: Attitudes of secondary teachers toward the use of humour as a teaching strategy'. *Journal of Ethnographic & Qualitative Research* 3 (1), pp. 28-36.
- Kaplan, R. M. & Pascoe, G. C. (1977). 'Humorous lectures and humorous examples: Some effects upon comprehension and retention'. *Journal of Educational Psychology* 69 (1), pp. 61-65.
- King, N. & Horrocks, C. (2010). *Interviews in Qualitative Research*. Los Angeles, London, New Delhi, Singapore, Washington DC, Melbourne: Sage.
- Korobkin, D. (1988). 'Humor in the classroom: Considerations and strategies'. *College Teaching* 36 (4), pp. 154-158.
- Lomax, R. G. & Moosavi, S. A. (2002). 'Using humor to teach statistics: Must they be orthogonal?'. *Understanding Statistics: Statistical Issues in Psychology, Education, and the Social Sciences* 1 (2), pp. 113-130.
- Masek, A., Hashim, S. & Ismail, A. (2019). 'Integration of humour approach with student's engagement in teaching and learning sessions'. *Journal of Education for Teaching* 45 (2), pp. 228-233.
- Miller, J. L., Wilson, K., Miller, J. & Enomoto, K. (2017). 'Humorous materials to enhance active learning'. *Higher Education Research & Development* 36 (4), pp. 791-806.
- Nesi, H. (2012). 'Laughter in university lectures'. *Journal of English for Academic Purposes* 11 (2), pp. 79-89.
- Petty, R. E. & Cacioppo, J. T. (1981). *Attitudes and Persuasion: Classic and Contemporary approaches*. Boulder, CO: Westview Press.
- Petty, R. E. & Cacioppo, J. T. (1986). 'The elaboration likelihood model of persuasion'. *Advances in Experimental Social Psychology* 19, pp. 123-132.
- Tait, G., Lampert, J., Bahr, N. & Bennett, P. (2015). 'Laughing with the lecturer: The use of humour in shaping university teaching'. *Journal of University Teaching & Learning Practice* 12 (3), pp. 1-15.
- Van Praag, L., Stevens, P. A. & Van Houtte, M. (2017). 'How humor makes or breaks student-teacher relationships: A classroom ethnography in Belgium'. *Teaching and Teacher Education* 66, pp. 393-401.
- Wanzer, M., Frymier, A. B. & Irwin, J. (2010). 'An explanation of the relationship between instructor humor and student learning: Instructional humor processing theory'. *Communication Education* 59 (1), pp. 1-18.
- Wrench, J. S. & Richmond, V. P. (2004). 'Understanding the psychometric properties of the humor assessment instrument through an analysis of the relationships between teacher humor assessment and instructional communication variables in the college classroom'. *Communication Research Reports* 21 (1), pp. 92-103.

- Zepke, N. & Leach, L. (2010). 'Beyond hard outcomes: *Soft* outcomes and engagement as student success'. *Teaching in Higher Education* 15 (6), pp. 661-673.
- Ziyaeemehr, A., Kumar, V. & Abdullah, M. (2011). 'Use and non-use of humor in academic ESL classrooms'. *English Language Teaching* 4 (3), pp. 111-119.