

Evaluation of The Relationship Between Drone Pilots and Humour in Türkiye

Tamer Savaş^{1*}, Serdar Kocaekşi²

^{1*} Eskisehir Osmangazi University, Motor Vehicles and Transportation Technologies, 26110, Eskisehir, Türkiye. (tsavas@ogu.edu.tr).

² Eskisehir Technical University, Sports Science Faculty, 26555, Eskisehir, Türkiye. (skocaeksi@eskisehir.edu.tr).

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Corresponding Author: Tamer SAVAŞ

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Abstract

This study aims to analyse the sense of humour of drone pilots depending on the amount of time they have used the drones, the sort of instruction they have gotten, and their educational levels. The study covers 148 male drone pilots with drone education backgrounds. The Humour Styles Questionnaire is used to collect data for this study. The specified statistics, reliability analysis and MANOVA analyses were employed to analyse the collected data.

As a consequence of these analyses, there was no significant statistical difference between the humour questionnaire sub-dimensions of participative humour, self-developing humour, aggressive humour, and self-destructing humour. Participatory humour, self-enhancing humour, offensive humour, and self-defeating humour sub-dimensions were not significantly different by income level. There was no statistically significant difference in the sub-dimensions of the humour scale according to education level: participative humour, self-enhancing humour, offensive humour and self-defeating humour. As a result, the sense of humour of drone pilots does not differ based on the type of schooling, income level, or education level within the contents of this study.

1. Introduction

It is a well-known fact that the interactions developed between individuals play a significant role in people's life. There are already numerous behavioural components and lifestyles that incorporate a desire for life satisfaction and the enjoyment of quality time. The significance of interpersonal relationships in achieving life's goals should not be underestimated. It is a well-known fact that humans must continue to live their lives as social beings, and they do so through developing ways of communication in order to come to terms with other people. It is critical to perceive, analyse, synthesize, and assess human interactions in situations involving the initiation, growth, and maintenance of interpersonal relationships.

There are various qualities that shape an individual's behaviour patterns in terms of how he will make an impact on the other party. One of these attributes, "Humour," which has piqued the interest of researchers today, should be conceptually defined and addressed. When the term "humour" in English is questioned about its first use, it is noted that in Ancient Greek culture, physiological fluids in four distinct forms were referred to as "humour" (blood, phlegm, black bile, yellow bile) (Ruch, 1998). These four bodily fluids are considered to have physiological and psychological effects on humans.

Humour, a phrase borrowed from Arabic, is the skill of making people ponder, amuse, or laugh at the outcome of events by reflecting on the ludicrous, unexpected, and paradoxical qualities of such events. As time passed, humorous aspects started to be used as a technique to represent a mood, and in today's world, its significance has evolved to reflect an individual's understanding of amusement (Erentay, 2012). Among the definitions of humour, according to Adams, are those that allow an individual to have a good time, such as hilarious behaviour. When asked, "What is humour?" individuals frequently characterize it as something that makes them chuckle.

Humour is commonly defined as a scene that begins with a hilarious remark continues with a smile, and ends with a pleasant sensation (Susa, 2002). Sense of humour evolves as a personality attribute, according to Ruch. While some studies suggest that humour is intrinsic in humans, others argue that it may be cultivated (Martin, 1998). Einstein defined humour in the simplest and most concise manner: "Humour is thinking that laughs." To be properly presented or interpreted, humour requires logic and a well-planned attitude. Millsbaugh (1979: 2644), as referenced by Özkan (2008), characterizes humour as "everything done to entertain."

Unmanned aerial vehicles, or drones in general, are one of the most indispensable technologies of the future. Even though its name is "unmanned", the most significant component in

this ecosystem is humans. The most current drone regulation produced by the local aviation authority DGCA (General Directorate of Civil Aviation) to carry out efficient, regular, and safe drone flight operations in Turkey is the Unmanned Aerial Vehicle Systems Instruction (DGCA, 2021).

The most recent drone regulation produced by the local aviation authority DGCA in order to carry out efficient, regular, and safe drone flight operations in Turkey is the Unmanned Aerial Vehicle Systems Instruction (DGCA, 2021). The instruction, which was revised for the fourth time in 2020, has been prepared to establish procedures and principles for the import, sale, certification, and registration of civil UAV systems to be operated or used in Turkish airspace, ensuring airworthiness, qualifications of those who will use the systems, air traffic services, and UAV operations.

According to Turkish drone regulations, UAVs used for civilian purposes are categorized into four groups based on their maximum take-off weight:

- UAV 0: 500 gr (included) <MTOW <4kg,
- UAV 1: 4 kg (included) <MTOW <25kg,
- UAV 2: 25 kg (included) <MTOW <150kg,
- UAV 3: 150 kg (included) <MTOW < and more

Drones weighing 500 grams, or more are registered in Turkey. Regardless of weight, if a drone chooses to fly in Turkish civil airspace, it must first obtain flight permission from the DGCA up to 5 days before the commercial flight. Drone pilots must complete appropriate drone training to receive a flight permit.

Drones can be used in Turkish airspace in two ways: sportive/amateurly or commercially. Those who are to fly commercially in Turkish airspace must receive a training certificate from certified training institutes. Such institutions might be either universities or private entities. As of 2022, Turkey has 61 educational institutions and organizations, 36 of which are universities. Drone training differs depending on the type of UAV to be used. The types of training and the hours required are indicated in the table below (Table 1).

Table1. Training Hours of UAV Pilot Training

Hours	UAV 0	UAV 1	UAV 2	UAV 3
Theoretical Training	13	26	85	140
Practical Training	1	2	3	4
UAV Flight Training	2	4	36	54
Total Training	16	32	124	198

The drone market is constantly expanding due to the use of drones in civil applications in a variety of businesses. According to 2020 research, the drone industry, which had a production value of \$ 20 billion in 2020, is anticipated to rise by 15% each year from 2021 to 2027. (Global Market, 2021). As a result, it is unavoidable that drone technology will grow in popularity and proliferate in the future. Some psychological features of humans, such as their sense of humour, maybe a key component in the development of this technology, as one of the significant aspects of this inevitable process.

1.1. The History of Humour

Western-oriented perspectives, the purpose, and type of comedy date back to the fourth and fifth centuries BC. It is said to have extended to Greece (Health, 1998). The use of humour may be traced back to the ancient Greek characters Oedipus and Theseus, and it can be found not just in the sources but also in everyday life. Riddles were employed to convince people with comedy during the era of Oedipus and Theseus. Until the end of the XX century, persuasion, knowledge transfer, learning, and success were all associated with humour. Moreover, it has been argued that it plays a key role in communication (Williams, 1987). When it comes to medieval Europe, religious groups abhor comedy and perceive it as a harsh reaction, believing that it will undercut the state's dominance. Laughter, which refers to the determination of heaven, one of the most fundamental tenets of religion, as a mocking, implies that heaven might be lived on earth. Because, according to Catholic doctrine, laughing is the equivalent of paradise. Given this, if one's laughter is restricted to the world, one is deemed to be mocking heaven (Sanders, 2001). Until the Renaissance period, the church and priests had a great influence on the sense of humour. With the coming of the Renaissance, this effect disappeared over time. With the disappearance of this effect, it was seen that humour gained a

wider understanding. Works such as Don Quixote, Voltaire's Dictionary of Philosophy, and Moliere's works have been the precursors of the basic features of humour (Öngören, 1983).

1.2. Forms of Humour and Their Importance

Even though there is still no way to address the issue of how humour evolved and how humanity initially laughed, academics thoroughly investigate this topic. Humour, according to Snetsinger and Grabowski, comprises three stages. These are as follows: stimulation, problem solution, and result. The individual receives a hilarious cue during the stimulation stage. It can also be considered a symbol. The stimulation stage is related to social position. Form, simplicity, and the content of humour should be applicable for this stage. The confusion comes to an end after problem solutions are found. Laughter and enjoyment grow as the story progresses (Williams, 2001).

While humour may occasionally offer individuals amusing elements of life, it can also refer to problems in its own unique way. Humour is commonly used to relieve tension, improve communication, and pique people's attention. Although it is preferable to handle humour positively, it may also be used with negative views such as derision and dismissiveness. To be happy, individuals must be tranquil, physically, and mentally healthy, and, most notably, have the ability to laugh. Humour is the psychological fingerprint that separates people (Manning, 2002).

1.3. Types of Humour

The term "humour" refers to a broader concept. Humour has both positive and negative aspects, and many hypotheses that attempt to explain this feeling fall into two categories, which are both compatible and incompatible with humour (Martin et al., 2003). These two categories of humour are further subdivided into four sub-dimensions. While

participative and self-enhancing humour falls within the compatible humour category, self-destructive and offensive humour fall into the maladaptive humour category.

Self-enhancing humour, also known as harmonized humour, encompasses a person's self-perception while also reflecting the humour style used to minimize negative thoughts and eradicate difficulties such as coping with stress and anxiety, taking into account the needs of others as well. This sense of humour does not have to be sensed separately and shared with others. When humour is employed in this manner, it allows for a hilarious outlook on life and the ability to maintain a sense of humour even in the face of difficulties (Kuiper, Martin, & Olinger, 1993).

Participatory humour: Participatory humour is a sub-dimension of adaptive humour. This kind of humour is intended to amuse and ease people (Hampes, 2006; Kazarian & Martin, 2004). Participatory humour improves interpersonal interactions and fosters a positive ambience. In addition, it has a crucial role in socializing individuals and forging communities (Romero and Cruthirds, 2006). This approach aims to leverage humour to be the understanding of oneself or other people. People that use this form of humour frequently have a positive vibe, which includes things like nice crafting phrases, being witty, encouraging conversation, and soothing the ambience (Martin et al., 2003; cited by Yerlikaya, 2007).

Offensive humour is a sub-dimension of maladaptive humour that is described as using an ethically hostile method with other people to satisfy and meet their requirements for one's own purposes. Referring to what Zillman has pointed out, this feature is employed detrimentally, such as humiliation and derision (cited by Martin et al., 2003). This type of humour undermines and complicates interpersonal contact and communication.

Self-Defeating Humour: People with this humour style may pretend to be joyful by assuming that these sentiments do not exist, regardless of how miserable and unhappy they look from the outside (Kuiper & Martin, 1993). Individuals with a self-defeating temperament have a conceptual framework that enables them to say or do things that will make them appear poor, which is one of the purposes of being valued and acceptable by other people's viewpoints (Martin, Puhlik, Doris et al. 2003).

1.4. Humour Theories

The supremacy theory: the aim of this theory is to consider oneself superior to others and to be in a better position. In interpersonal communication, the individual strives to consider himself superior to others by utilizing humiliating humour. In summary, this notion is an emotional condition that seeks to shame the individual or other people's flaws and failings (Fidanoğlu, 2006). Plato believes that the phenomenon that makes a person hilarious is that the person believes he is wealthier, wiser, and more popular than he actually is. Aristotle, who has an approach similar to Plato's, emphasizes that humour is based on not being a wealthy and upstanding person (Sanders, 2001). Because individuals dislike being laughed at, humour guarantees that people have a social regulatory element that will urge them to behave in a way that matches the desires of society (Bergson, 1996).

Conflict Theory: Beattie, a Scottish poet from the 18th century, provided key definitions of humour, stating that it is generated by irrelevant thoughts and unexpected occurrences. As a result of this formulation, he has been dubbed "the father of conflict theory" (cited by Keith-Spiegel, 1972). The

progenitors of conflict theory associate humour with fancifulness and rationale (Martin, 1988). Aristotle was the first to assess this theory, but because it conflicted with the superiority theory, Aristotle did not pursue the notion of incompatibility any further. According to Aristotle's viewpoint, the speaker first serves as a beacon of hope for the listeners before surprising them with his or her sense of humour (Morreall, 1997). Because Aristotle's insights on the theory of conflict are few and far between, he is not considered a major figure in this theory. Schopenhauer and Kant were the most prominent proponents of this theory. According to Kant (1970), when a person's expectations for his status and knowledge are not satisfied, he develops an ambiguous condition, and humour is evident in such uncertain situations. Humour, on the other hand, is considered a result of the disparity between a person's ambitions and actual position (Martin, 1998).

Relaxation Theory: This theory is associated with the biological dimension of humour and the physiological condition of a humorous expression. According to Spencer (1980), humour is distinct from the body's relaxation processes and that humour relaxes just forty-three nerves since any of the physiological activities related to humour are not a baseline (Spencer, 1989). Descartes (1649) was the first to put this theory into existence. Descartes loves comedy; he claims that happiness exists when we remain mute about an unpleasant incident or recognize that we are not adversely impacted by that event (Türkmen, 1996). Laughter represents the departure of an unpleasant and unfavourable occurrence. Laughter follows us as a result of the constructive relaxation of our environment via behaviours such as humour and amusement. Laughter is constantly waiting to be disclosed behind the doors within us, and for it to be released, we must relax.

Researchers conducting studies on this particular theory sought to alleviate tension and challenges as well as relaxation. Laughing, according to researchers, relaxes the nerves in the body and is biologically comforting. Although the relaxation in question is not considered to be a focal point for theories, it exists for all of them (Dursun, 2019).

Psychoanalytic theory: Freud developed this theory based on one of his works. Humour, according to Freud, has two aspects. These are purposeful jokes delivered with a full heart. For purposeful jokes to be made, three elements are required: the person making the joke, the joke being made, and the person who provides the sensation of enjoyment. While jokes delivered with pure emotion elicit only a grin, jokes created with intent and purpose elicit more laughter (İkadin, 1998).

The individual expresses some facts that he is unable to express precisely through humour. As a result, he is freed of his difficulties in a way that everyone can agree on. There are three things to laugh at, according to Freud: humour, jokes, and quips. Other theories describe laughing in ways that differ from Freud's. According to this definition, what makes us laugh is not our readiness to argue with opposing viewpoints or our sentiments that we are superior to others. When the energy observed in the individual differs from the effort made by others to communicate his intention, the act of laughing develops (Freud, 1998).

Physiological theory: Physiological theory is concerned with humour in the context of biology. According to proponents of this view, humour is on the nerves, emanates from within, and contains characteristics such as simplicity of understanding. When the literature on humour is scrutinized, it is concluded that humour is related to behaviours that have

existed since the beginning of human life and developed with humans, while also making it simpler for people to cling on to life. Humour and laughter, according to physiological theory, are beneficial to the organism and the body (Keith-Spiegel, 1972). The physiological theory was developed by Sigmund Freud. Freud defined humour as having a psychological content and highlighted that it arises as a result of coping with negative human sentiments and emotions (Cited by Sepetçi, 2010).

In his study, Yılmaz (2011) analysed the humour styles of school management in terms of several characteristics. As a finding of the studies, it was concluded that managers are close to the participatory humour style, taking into consideration the hobbies, reading, age, and several instructors, and this has a positive impact on the teachers and administrators. To identify the definition and types of humour in nurses, Sousa et al. (2019) studied the humoristic practices adopted by nurses. According to the findings, nurses define humour as follows: laughter, joy, state of mind, and well-being, while the types of humour are: optimistic/healthy humour and deleterious/unhealthy humour. Kramen-Kahn and Hansen (1998) discovered that humour is essential in sustaining a successful career at an 82 per cent rate in a study of psychotherapists on occupational hazards, incentives, and coping mechanisms.

2. Method

Sampling: The expedient sampling technique, one of the non - probability sampling technique methods, was used for sampling purposes. In this context, 148 male drone pilots (average age: 36.54 ± 9.59) who received drone training in recognized training institutions between 2018 and 2022 voluntarily participated in the study (Table 2).

2.1. Data Collection Tools

Personal information form: The researchers utilized the Personal Information Form to examine the characteristics of the drone pilots who took part in the study, such as age, drone usage time, kind of drone training they received, income and education levels.

Table 2. Descriptive Statistics for the Demographic Variables for the Drone Pilots

	N	Min	Max	Mean	Std. Deviation
Age	148	19.00	69.00	36.5405	9.59902
Drone Usage Time	148	1.00	10.00	2.2973	1.83488
Type of Education	148	1.00	3.00	1.7635	.45716
Income Level	148	1.00	4.00	3.0000	1.17803
Education Level	148	1.00	3.00	2.1689	.61044

Table 3. MANOVA Table for Humoristic Scores Based on the Education Received

	Type Sum of Squares	df	Mean Square	F	Sig	Partial Eta Squared
Participatory Humour	.076	2	.038	.003	.997	.000
Self-Enhancing Humour	22.332	2	11.166	.401	.670	.006
Offensive Humour	34.530	2	17.265	.883	.416	.012
Self-Defeating Humour	111.641	2	55.281	.909	.405	.012

P<.05, p<.01

When Table 3 is analysed, there is no statistically significant difference in the sub-dimensions of the humour scale according to the type of education received: participatory

Humour Styles Scale: Martin and Puhlik-Dorris (1999) developed a 60-item version of the Humor Styles Scale to analyse four types of humour. Martin et al. (2003) then updated the scale and generated a 32-item abridged version. The updated short version with 32 items was utilized in this investigation. The scale is classified into four categories: participatory humour, self-enhancing humour, offensive humour, and self-defeating humour. The Humour Styles Scale is a seven-point Likert scale with scores ranging from 1 (totally disagree) to 7 (totally agree). Yerlikaya performed the Turkish validity and reliability study of the scale for adolescents (2007). The internal consistency Cronbach alpha coefficients of the scale were calculated to be 0.75 for self-enhancing and participatory humour, 0.64 for aggressive humour, and 0.63 for self-defeating humour, as a result of the studies that proceeded with the adaptations to Turkish.

Data Collection: First and foremost, permission was received from the scale adaptors to use the scales. Due to the covid-19 epidemic experienced by the drone pilots, the personal information form and scale were taken via the internet by reaching out to the relevant groups using Google forms.

2.2. Data Analysis

Before delving into the analyses, missing and blank data were checked to find out whether there were any inaccurate data entries in the data set. There was no missing or empty data in the data set, which was discovered. Descriptive statistics, reliability analysis, and MANOVA analysis were used to scrutinize the data. The analyses were carried out using the SPSS 23 software package, and the significance level was set at 0.05.

3. Findings

The resulting tables, together with the data obtained by the study method, are listed as follows. Descriptive statistics for demographic variables for drone pilots are shown in table 2.

humour [F(,003), p=,997]], self-enhancing humour [F(,401), p=,670)], offensive humour [F (.883), p=.416)] and self-defeating humour [F(.909), p=.405).

Table 4. MANOVA Table for Participatory Humour Based on Income Level

	Type Sum of Squares	df	Mean Square	F	Sig	Partial Eta Squared
Participatory Humour	52.954	3	17.651	1.310	.274	.027
Self-Enhancing Humour	106.844	3	35.615	1.298	.277	.277
Offensive Humour	96.817	3	32.272	1.677	.175	.175
Self-Defeating Humour	214.752	3	71.584	1.172	.323	.323

P<.05, p<.01

When Table 4 is analysed, there is observed to be no statistical difference among the sub-dimensions of the humour scale according to income level including participative humour [F(1.31, p=.274)], self-enhancing humour [F(1,298),

p=.277), offensive humour [F (1.677, p=.175)] and self-defeating humour [F(1,172), p=.323].

Table 5. MANOVA Table for Participatory Humour Based on Education Level

	Type Sum of Squares	df	Mean Square	F	Sig	Partial Eta Squared
Participatory Humour	21.464	2	10.732	.789	.456	.011
Self-Enhancing Humour	35.11	2	17.555	.633	.533	.009
Offensive Humour	12.999	2	6.500	.330	.719	.005
Self-Defeating Humour	3.983	2	1.991	.032	.968	.000

P<.05, p<.01

When Table 5 is examined, there is no statistically significant difference between the sub-dimensions of the humour scales based on income level, which includes participative humour [F (1.31, p=.274)], self-enhancing humour [F (1,298, p=.277)], offensive humour [F (1.677, p=.175)] and self-defeating humour [F (1,172, p=.323)].

laughter in the classroom demonstrates that children like studying rather than being viewed as a foolish act by adults. Teachers that employ humour in their classes ensure that their students will learn while having fun (Hill, 1988).

Perhaps new findings on whether or not humour is dependent upon the type of education received, with a style of changing the level of humour depending on the type of education received, will emerge in future studies by evaluating the humour understanding of both the training and the training groups together. Krobkin (1988) discovered that humour promotes motivation and happiness in learning (Cited by Steele, 1998). According to this study, the type of schooling evaluated as a variable in the current investigation did not yield the predicted effect.

4. Discussion and Commentation

The analysis conducted in this study, which sought to examine the humour understanding of drone pilots, found no statistically significant difference in the sub-dimensions of the humour scale, which are participatory humour, self-enhancing humour, offensive humour, and self-defeating humour, depending on the type of training received. In his study on university students, İlhan (2008) reported that there is no substantial correlation between humour types and grade levels. This particular finding might be construed as a result that supports the absence of a difference when the different forms of education received in the current study are evaluated as varied grade levels.

There is no statistically significant difference in levels of income in the sub-dimensions of the humour scale, such as participative humour, self-enhancing humour, offensive humour, and self-defeating humour. Sümer (2008) and Koçubaba (2019) discovered a relationship between humour style scores and income level in their study, and it was reported that participants with higher income levels had higher participant humour scores. These data fail to support the present study's conclusion. The fact that drone pilots' income levels aren't all that different may not have made a difference in their sense of humour.

Moreover, students with a critical mindset may generate assumptions about a specific subject, summarize knowledge, generate new ideas, and participate in intellectual dialogues (Değer and Fidan, 2004). This study, conducted by Değer et al., does not confirm the current study's findings, but the fact that there was no difference in terms of humour concerning the quality of education received offers an important conclusion concerning the humour of the drone pilot trainers. It might provide a fresh viewpoint for evaluation. Students can be more capable of enhancing their perspectives of the subjects taught and recalling knowledge if they employ humour in learning exercises (Bipp, Kleingeld, Tooren and Schink, 2015).

According to education level, there is no statistically significant difference in the sub-dimensions of the humour scale, participative humour, self-enhancing humour, offensive humour, and self-defeating humour. According to McGhee (1983), childhood humour is simplified with maturity, resulting in more cognitive development. According to Zigler et al. (1966), what appears to be irrational for adults may be amusing to youngsters. According to the education department, when characterization of humour is performed, it has been concluded that the use of humour in cognitive processes is at its maximum for the students from the child development departments than in machine students (Akıl and Eker, 2018). This data refutes the present study's conclusion.

Furthermore, as Greengross (2008) suggests, given that humour can be impacted by genetic variables, it is reasonable to assume that the perception of humour did not change based on the type of education received in the current study. According to another study, because one of the key functions of humour is to foster a pleasant learning environment,

Since the type and level of education attained by drone pilots may be associated with their income level, likely, it did not make a difference in terms of their sense of humour. There was no relationship between the father's education level and the participatory (social) humour style in Koçubaba's (2019) study on university students (Koçubaba, 2019). Likewise, no significant difference was observed between educational status and participatory (social) humour style in two studies with nurses (Ergözen, 2018; Ünal, 2018).

Satl (2019) noted a statistically significant difference in the mean scores of participatory (social) humour style according to education status in both healthy and risky pregnancies in his study comparing the humour styles of the husbands of healthy and risky pregnant women. The average participatory (social) humour style score of those with bachelor's and higher education is greater than that of those with secondary and high school education. Unlike the study's findings, no significant relationship between education level and participative (social) humour style was identified in the literature (Satl, 2019). In line with previous studies, no significant relationship was observed between the sense of humour of drone pilots and their educational level. The reason for this might be that there is no criterion for the level of education for drone users, even though drones are a new and evolving technical aircraft.

As a conclusion, the concept of humour, which is examined in several domains, has the distinction of being the first study with drone pilots, in addition to this study. Although there is no difference in terms of education level, income level, or quality of education, which are assumed to be different in the perspective of senses of humour among drone pilots, educational studies indicate that sense of humour appears to affect the quality of education, whether they are trainers or those who take drone training, which is a significant factor in improving the quality of education. It is expected to serve as a foundation for future studies on this subject.

Ethical approval

Not applicable.

Conflicts of Interest

The authors declare that there is no conflict of interest regarding the publication of this paper.

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