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## Classroom management in higher education: A systematic literature review

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### ABSTRACT

This paper presents the findings of a systematic literature review (performed from 2010 to 2020) about classroom management (CM) in higher education. The purpose of this article is to present the state of CM in higher education. Search terms identified 129 papers, from which 42 relevant articles met the inclusion criteria of the current review. Data extraction was initially conducted based on title, keywords, and abstract; it continued with a full-text analysis for the final set of 42 included studies. Based on the reviewed articles factors affecting CM are classified according to students, instructors, and the system. The results show that novice instructors need training about CM and instructors should integrate active learning strategies for better CM. The results also point to a need for researches in online CM. Finally, the findings provide suggestions for future research on CM in higher education.

### ARTICLE HISTORY

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### KEYWORDS

Classroom management; classroom management models; higher education; college; systematic literature review

One of the greatest challenges for instructors is maintaining positive and organised learning environments in order to achieve their goals of instruction for student achievement (Brophy 1988; Emmer, Evertson, and Worsham 2006); therefore, they are always searching for alternative ways to cope with these challenges. Nevertheless, finding solutions to the specific circumstances in the classroom is not easy because classroom management (CM) is accepted as a complicated issue (De Jong 2005; Postholm 2013; Shindler 2009). Before making decisions related to problems in the classroom, one needs to assess the many variables: instructors' characteristics, the physical arrangement of the classroom, the structure of the classroom environment, instructional management, and the procedures and rules of the classroom.

The definition of CM changes based on the views, focus, goals, and philosophy of the instructor. As defined by Doyle (1986), CM is the actions and tactics instructors' practice to retain order. In some cases, CM and discipline are interchangeable (Burden 1999; Hardin 2008); instructors who use this approach define CM as *preventing off-task behaviour and facilitating learners to be on-task*. This view is more like directing learners' behaviours through the influence of a teacher-centred approach. On the other hand, educators who use learner-centred methods define CM as *preparing learners for life*. They focus on learners' future lives, and instead of controlling behaviour, they encourage learners to take responsibility for their own behaviour. They define this as 'the process of creating a positive social and emotional climate in the classroom' (Hardin 2008, 4).

Getting ready for the effective management of a classroom starts before the instructors and students meet one other. Instructors prepare for the whole learning period (year/semester) by organising their environment in specific ways, such as: gathering and arranging support materials, forming classroom procedures and routines, organising helpers (teaching assistants), acquiring class

lists, planning for instruction (preparing a weekly outline, syllabus, policy sheets, planning for assessment), and creating a plan to deal with unexpected behaviours that may hinder learning environment. When the academic year starts, planning for the first day and running the plans is crucial for effective CM (Burden 1999).

Another important aspect of CM is organising the classroom's materials and its environment. An instructor has to consider the six functions of Steele (1973), security and shelter, social contact, symbolic identification, task instrumentality, the provision of pleasure, and the stimulation of growth, when organising the classroom environment. After starting an academic year, the instructor may invite students to help create the classroom rules (Emmer, Evertson, and Worsham 2006).

Detailed planning of instruction is a must for effective CM (Richards & Renandya, 2002; Singh 2008; Sterling 2009). While planning for instruction, the instructor should consider the intrinsic and extrinsic motivations (Deci and Ryan 1985) of the students, including interest, relevance, expectancy, and satisfaction. Instructors should make learning interesting and engaging and find ways to connect what students are learning with their interests and life experiences (Fraser 2016). To get students' attention, the beginning of the lesson is important, as well as the attitude of the instructor and the needs of the students. While planning for instruction, one should also consider the diversity of students

A creative, cooperative classroom environment will help the instructor create a more civilised atmosphere. To accomplish this, the instructor gives students the chance to become involved in classroom activities and decisions via their interactions with peers. Another important aspect is helping students feel that they can manage to complete the required learning assignments and be successful. This enhances students' self-esteem and helps strengthen their positive behaviour. Students who believe in their own capacity are less likely to get disturbed in class and misbehave (Raebeck 1992). The positive relationships in the classroom facilitate good CM (Marzano 2003). A noteworthy amount of studies show that academic achievement and student behaviour are influenced by the quality of the student-instructor relationship (Jones and Jones 2016; Marzano, Marzano, and Pickering 2003). Instructors can promote positive student-instructor interactions through praise and positive feedback (Conroy et al. 2009). Besides that, helping students experience success, being invitational, using effective communication skills, establishing a safe, nonthreatening environment, being fair and consistent, showing respect and affection, communicating basic attitudes and expectations, forming open conversation with students, analytically building better relationships, and creating occasions for one-on-one interactions will promote good relationships within the classroom (Burden 1999).

## CM Models

CM models are classified from high to low (Burden 1999; Glickman and Tamashiro 1980; Martin and Sass 2010; Wolfgang 1995) according to the degree of control of instructor and student.

### *High level CM model*

In this model, students' behaviour is influenced by external factors. Their individual potential to manage themselves is not accepted. Instructors have the responsibility to decide on behalf of students and shape their behaviours to maintain classroom order. The individual needs and thoughts of students are not taken into consideration. Managing the individual over the group has priority. The belief is that students do not have the capacity to control their behaviour, so the instructor decides the rules and procedures by him/herself.

### **Medium level CM model**

Instructors and students are responsible for students' behaviour. In this approach, the student-centred view is accepted, and learning takes place in group activities. The individual needs of students are considered, but the group dynamics have priority. Students are aware of the consequences of their behaviour.

### **Low level CM model**

Students are responsible for their behaviour, and the instructor has little control over decision making in the classroom. This model gives students a chance to improve their self-regulation skills and control themselves. The instructor has a responsibility to facilitate the personal growth of students by giving them an opportunity to have a high degree of autonomy. The classroom is ordered and stabilised by the students' views and decisions, but with the instructors' guidance.

It is hard to put boundaries around these models and impossible to say that one instructor always favours either a high, medium, or low control model. The view of an instructor may change from one occasion to another (Burden 1999) and depending on the learning environments (such as the characteristics of the course and the learners).

### **Higher education and CM**

According to the studies, it is not a requirement that one is trained with the knowledge of pedagogy and/or andragogy to become an instructor of higher education, (Otto and Everett 2013; Tanner and Allen 2006). As a result, instructors at higher education institutions can have major CM problems, which affect the mechanism of the learning environment (Raturi and Boulton-Lewis 2014). In higher education institutions, there are misbehaving and high-level control students who prevent their own, and their peers', ability to learn (Oliver, Reschly, and Wehby 2011). These students are responsible for the lower achievements of themselves and their friends. It is suggested that instructors have to find a formula to control misbehaviours (for e.g. cheating, texting, sleeping during class hours, leaving the classroom without permission, chewing gum, talking, arriving late, making sarcastic remarks) (Alberts, Hazen, and Theobald 2010; Baker, Comer, and Martinak 2008) in order to manage classrooms and improve the academic achievements of the class (Schussler 2009). As a start, instructors need to specify their expectations of classroom behaviour and learning outcomes in the course syllabus (Kirk 2008; Murphy 2010). Instructors also need to be informed about higher education institutions' codes of conduct about misbehaviours and their consequences. According to the studies, it is found that instructors who used prevention techniques in CM had less CM incidents (McKeachie and Svinicki 2006; Murphy 2010).

With the recent changes in technology, the classroom concept is changing in higher education institutions. Many colleges and universities are offering distance education to students, which provides flexibility (Allen and Seaman 2014; Radford 2011). This change in learning environment brought other issues, specifically related to the management of the online classroom. Based on the results of limited studies, common management problems are late assignments, consumerism, academic dishonesty, and hostile comments (Galbraith and Jones 2010). Because this is today's reality, higher education institutions providing distance education have to decide on the procedures, policies, and codes of conduct in regard to student misbehaviour in the online learning environment.

## Method

This section presents the research methodology employed in searching. The following section details the purpose and research questions, review process, used databases, keywords, inclusion criteria, and data extraction.

### Purpose and research questions

Reviews of research literature are conducted for a variety of purposes. They include providing a theoretical background for subsequent research or answering practical questions by understanding what existing research has to say on the matter. In other words, systematic literature review helps us to understand the depth of the existing body of work and identify gaps to explore. A systematic literature review (SLR) identifies, selects, and critically interprets research to answer research questions (Dewey, A. & Drahota, A. 2016). The purpose of this systematic literature review (SLR) was to examine the studies on CM in higher education. The research questions guiding the study were:

**RQ1.** What type of CM models were observed by students?

**RQ2.** What are the factors that promote effective CM according to students?

**RQ3.** What type of CM problems were experienced by the students?

**RQ4.** What are the impacts of CM on different variables according to students?

**RQ5.** What type of CM problems were experienced by the instructors?

**RQ6.** What are the factors that promote effective CM according to instructors?

**RQ7.** How did instructors experience online CM and use of technology in the classroom?

**RQ8.** What are the impacts of CM on different variables according to instructors?

**RQ9.** In what way management of classroom changes according to different characteristics of the instructors?

**RQ10.** In what way instructors show reaction to CM problems?

### Review process of the study

The review process of this study was conducted in accordance with the recommendations of Kitchenham (2020). It can be examined in three main phases: *Planning the Review*, *Conducting the Review*, and *Reporting the Review*. Figure 1 presents the timeline of the phases with the end date of the steps of the review process.

### Databases used in the search

The searches were performed in a form of queries to be answered by suitable data from the Web of Science and Scopus online academic databases.

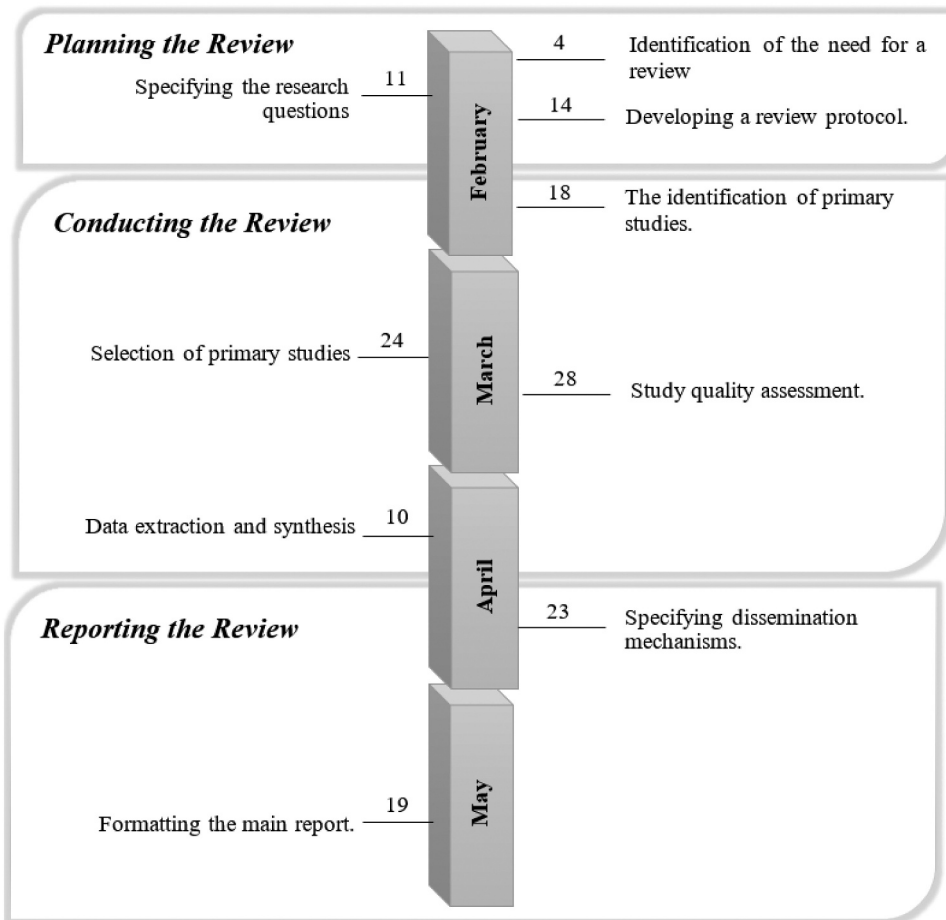


Figure 1. Timeline for review process of the study.

### Keywords for the search

The search keywords were selected according to the purpose of the article. Our search string looks for classroom management AND higher education, with synonyms or variants of both terms separated by OR operators, as follows:

*'classroom management' AND ('higher education' OR 'college')*

The search terms were searched in title, abstract, and keywords. Searches for the articles were conducted for the specific period of 2010 to March 2020.

### Selection of articles for inclusion in the review

In total, 97 articles were returned after screening and combining the results of the databases. Beyond the initial search parameters, a number of further criteria were specified to select appropriate studies for inclusion in the review. To be included in the review, articles had to be written in English or Turkish, available in full text, done in higher education and relevant to the focus of the study for addressing the question or sub questions of this SLR. Under these

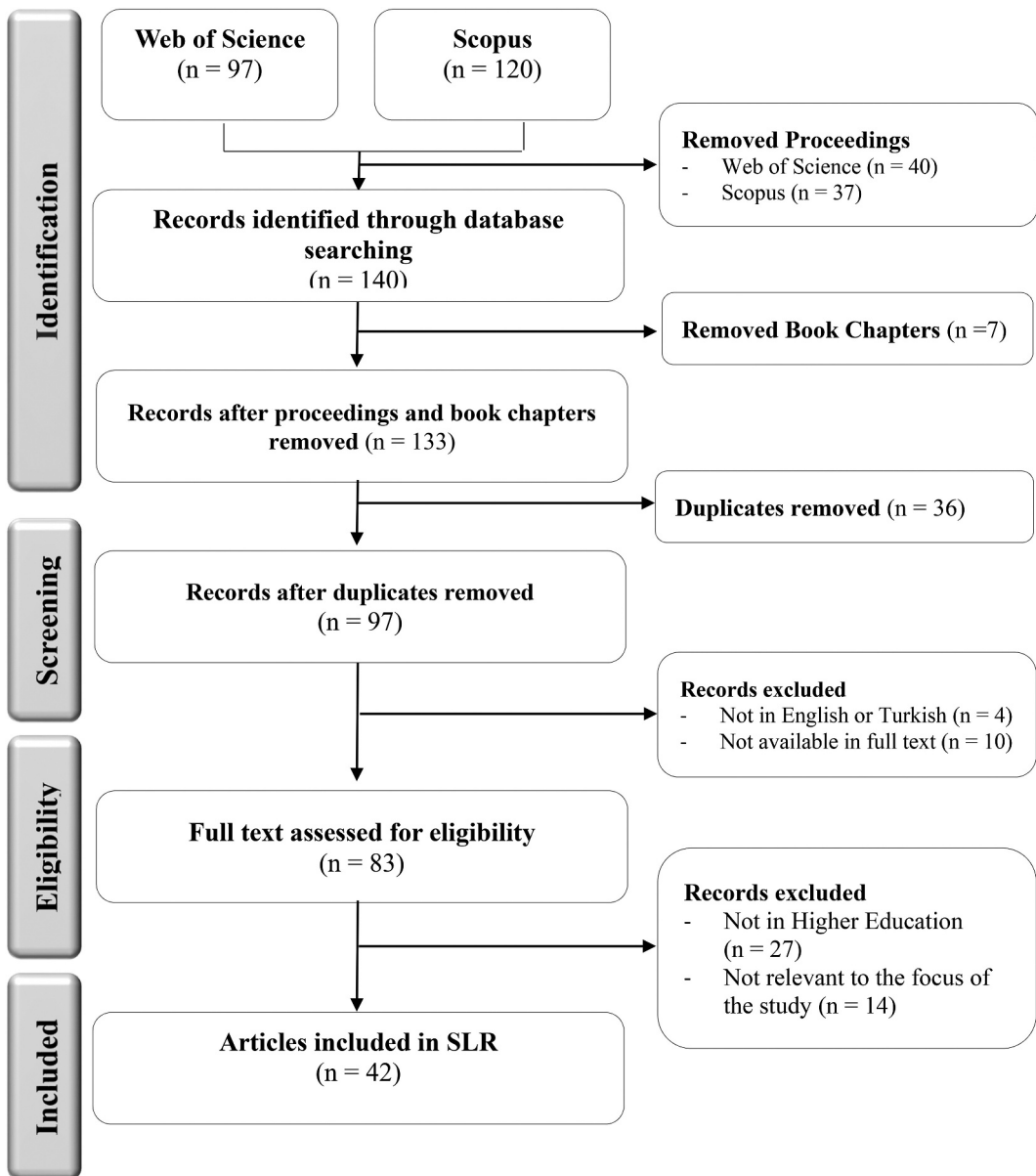


Figure 2. Flowchart of the systematic literature review process.

conditions, 42 articles met the inclusion criteria and were identified as relevant to the current review. A flowchart of the complete methods used to select relevant articles for the SLR is illustrated in Figure 2.

### Data extraction and analysis

Data extraction was initially conducted based on title, keywords, and abstract; it continued with a full-text analysis for the final set of 42 studies. The 42 articles meeting the inclusion criteria were coded using data extraction.

Researchers examined five selected articles as a pilot and implemented forms that facilitated and improved the data extraction process. They compared their forms and reached an agreement in the creation of a new form and then they used the created form for five more articles to be consistent and to increase the reliability of coding phase. The 42 articles that met the inclusion criteria were coded according to the type of journal, research method, participants, instruments and fields to define the included studies characteristics.

### Inter-coder reliability

To assess inter-coder reliability with respect to the coding of the articles, a subsample of 10 of the 100 articles was coded independently by the researchers. The inter-coder reliability of the coding was 0.90, indicating a high degree of agreement between the coders concerning the extraction of data from articles (Miles and Huberman 1994).

### Results

This section begins with a description of the study characteristics (i.e. year, country, method, number of participants, used instruments, field, and type of education) of 42 studies included in this review. After summarising the characteristics of the reviewed studies, it presents the findings concerning the research questions stated in the method section. The study results are presented in the order of the research questions. Appendix presents the summary, purpose, and results of the reviewed articles.

### Study characteristics

Figure 3 shows the distribution of articles between 2010 and March 2020. The number of publications, according to years, is different in each year. The lowest number of publications ( $n = 1$ ) is recorded in 2014, while the highest ( $n = 11$ ), is recorded in 2019. It is not possible to comment on 2020, because this review was done only until March of 2020. The trend of publication is expected to move into the future, considering the fact that the research area is important, emerging, active, and not yet exhausted.

The result reveals that research on CM has attracted the attention of researchers across the globe; there is at least one study from each continent except Antarctica. The majority of countries (63.2%,  $n = 12$ ) published only one article, while the U.S. has the maximum number (21.4%,  $n = 9$ ) of

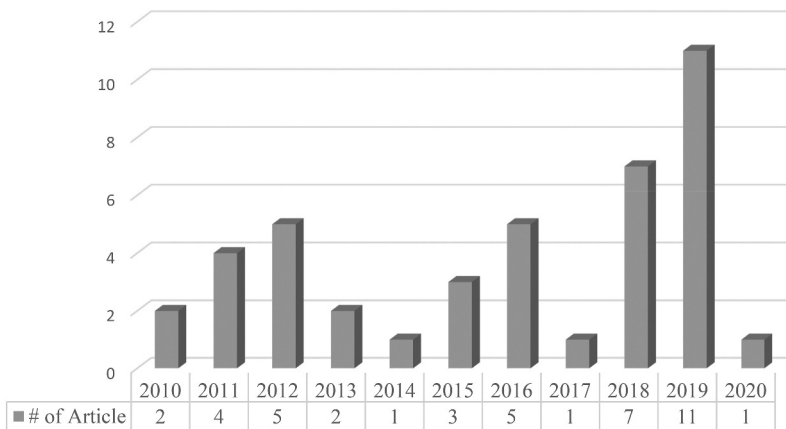


Figure 3. Distribution of included articles over the Years.



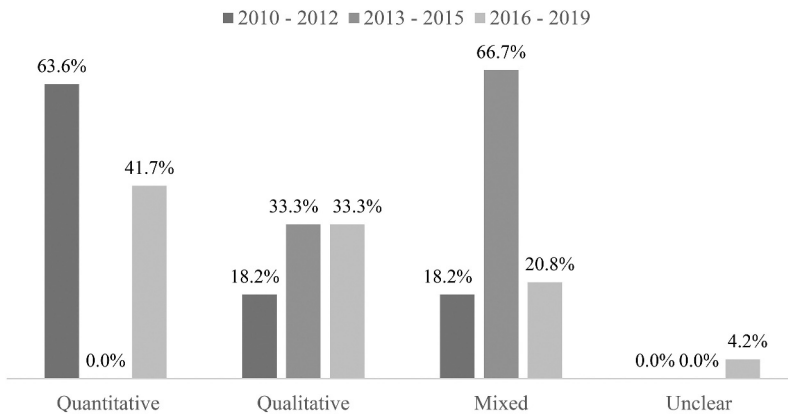


Figure 4. Distribution of research methods for 2010–2012, 2013–2015, and 2016–2019, respectively.

publications, followed by Turkey (14.3%, n = 6). Where the research was completed is not stated in five (11.9%) of the articles. Six of the studies were either literature reviews or general articles related to CM. One of studies was completed in more than one country.

47.6% (n = 20) of the articles are published in journals not indexed in SSCI, while 51.2% (n = 22) of the articles are published in ESCI or SSCI. Figure 4 shows that from 2010–2012 studies are mostly quantitative (63.6%), with 0.0% in 2013–2015, and 41.7% in 2016–2019. In 2013–2015, studies are mostly mixed (66.7%) (as compared to 20.0% in 2016–2019); they are qualitative in 33.3% of the studies (same as in 2016–2019). There is a decrease in the usage of purely quantitative methods in favour of more qualitative and mixed approaches.

Figure 5 shows that most of the studies were conducted with instructors (55.5%) and more than 90 participants (50.0%); the studies in which both instructors and students (17.5%) participated, and the number of participants were between 61 and 90 (10.0%) were the least preferred cases.

The review data shows that researchers mostly used questionnaires (28.6%, n = 12) to find answers for their research questions. Interviews (21.4%, n = 9) are the second most preferred instrument in the studies. 16.7% of the studies were utilised survey. Other types of instruments (such as student attendance, curriculum, written comments, videos, or not stated) were used in

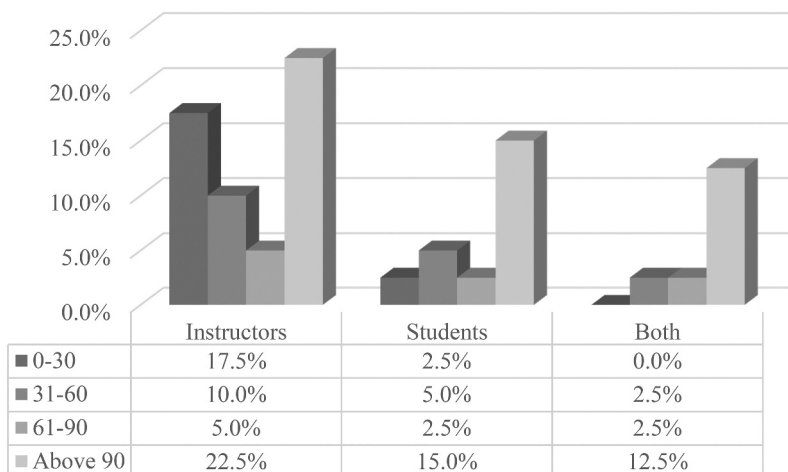


Figure 5. Distribution of participants.

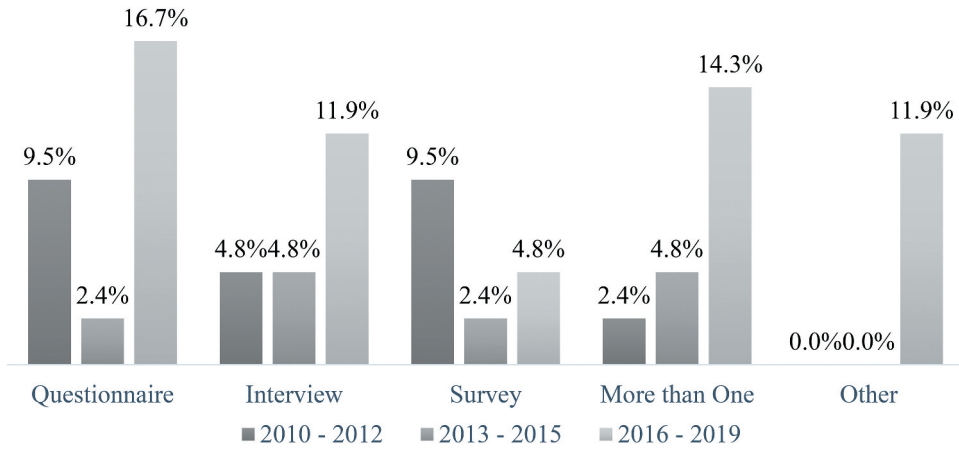


Figure 6. Utilisation of instrument for 2010–2012, 2013–2015, and 2016–2019, respectively.

11.9% of the studies. Figure 6 illustrates the use of instruments according to the year. Although between 2010 and 2013 the most preferred instruments were ‘questionnaire’ and ‘survey’, their use rates decreased drastically (from 9.5% to 2.4% in 2013–2015) in favour of using the ‘more than one’ instrument. The use of ‘interview’ remained the same (4.8%) between 2010 and 2015 and it increased to 11.9%. Between 2016 and 2019, studies started to use other instruments (such as student attendance, curriculum, written comments, and videos) with a 11.9% utilisation rate. ‘More than one’ instruments were used in 21.4% (same as the use rate of ‘interview’) of the studies. Many of the studies using more than one instruments used survey (66.7%), questionnaire (55.6%), and interview (55.6%), with other instruments.

Figure 7 shows the percentage of included articles that examine CM in higher education within the specified field. Most of the studies were done in ‘more than one field’, faculties (21.4%, n = 9) followed by the Humanities and Letters faculty (16.7%, n = 7); the Engineering, Economics, Administrative and Social Sciences, and Law faculties (2.4%, n = 1) are the least involved and least preferred fields. The Education faculty was the third most preferred field (14.3%, n = 6). We identified ‘more than one field’ as ‘all’ (including all fields: social, natural science, and engineering), natural science, social, engineering, and not specified. Social Science is the field that is included in all of the research which states the ‘more than one’ field. According to the review results, analysis of the distribution of the ‘more than one field’ and ‘field’ demonstrates that social sciences are the more interested, involved, and/or preferred fields related to CM research in higher educations.

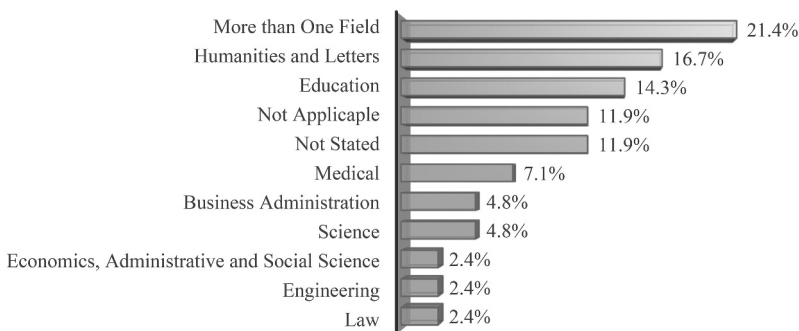


Figure 7. Distribution of fields.

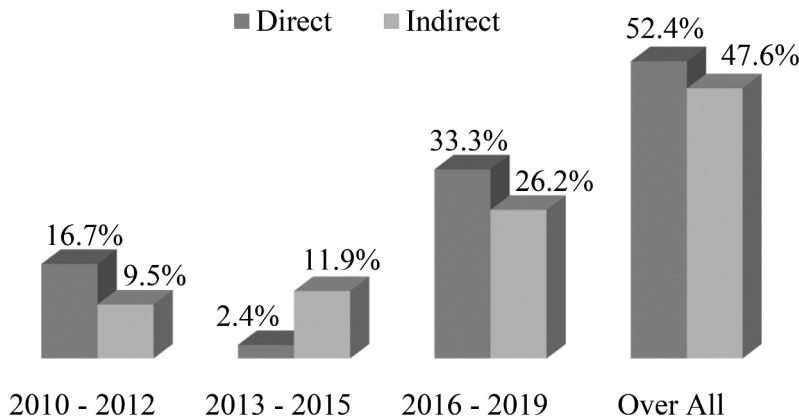


Figure 8. Distribution of relation with CM.

Figure 8 presents the percentage of included articles according to the relation of the study with CM in higher education. Except those done between 2013 and 2015, in all other years there were more studies directly related to CM. Moreover, the number of studies that examined CM related issues increased. Only two of the studies (5.0%) were about online CM, and both of them were directly related to CM.

### CM practices of students

The results of studies focusing on students are related to the perceptions of students in regard to the definition of CM, their instructors' CM models, the factors promoting effective CM, and common CM problems. There was only one comparison study found in the literature which focuses on the impact of CM.

The studies that focus on instructors are more detailed and specific. They concentrated on factors promoting effective CM, CM problems, CM in an online environment, CM and its relationship with various factors, comparison studies, and instructors' CM reactions.

According to the students, CM is managing and building a classroom environment, forming and applying classroom rules, and managing learners' behaviours (Huong and Tung 2019).

### CM models

According to Magulod, Capili, and Pinon (2019)'s study, the students classified instructors as autocratic, authoritative, and democratic. Autocratic instructors who use formal authority control, that is, use punishments rather than rewards to motivate students to cooperate and follow the instructors' wishes. They tend to control every element of the classroom activities; students have little or no involvement. Authoritative instructors have extensive verbal interactions with students. The students are aware that they can interrupt the instructor only if they have a relevant question or comment. This offers the students the opportunity to learn and practice good communication skills. Democratic instructors are characterised by the soft management of classroom activities that provide an environment where learners are free to express their feelings and needs. Under the democratic management style, students are always well informed about what is taking place in the classroom and, most importantly, learners are involved in most of the activities.

The students used labels for the instructors; some specific definitions were: 'autocratic instructor were Adolf Hitler and poker face; an authoritative instructor was strict (Boysen 2012) but motivating, disciplined instructor, rules-oriented, and serious'. The students used the following words to define

the democratic instructor: patient, facilitator, cool, motivator, approachable, and kind. They also expressed Laissez-faire model instructor is a 'permissive and a socially anaemic' one (Magulod, Capili, and Pinon 2019).

In another study (Martikainen 2019), students positively perceive instructors who are friendly and easy to communicate with, but negatively perceive strict, distant and indifferent instructors.

### ***Factors that promote effective CM***

According to the students, an instructor's personality and teaching qualifications are the keys to promoting CM. The features of the facilities (Boyaci 2011) are also positive influences. According to the studies, the instructors' use of rules and procedures (Huong and Tung 2019), their ability to create a democratic and friendly atmosphere (Boyaci 2011; Huong and Tung 2019; Magulod, Capili, and Pinon 2019; Shahzan, Gayathri, and Priya 2018), their use of active learning strategies, and their ability to set up the classroom environment was highlighted as promoters of effective CM. Students also mention that small class size and good facilities (Boyaci 2011) support good CM.

### ***CM problems as experienced by students***

The problems experienced in the classroom mainly originate from the students (Boyaci 2011; Tindell and Bohlander 2012), then instructors (Dinc and Gizir 2019; Şentürk and Oyman 2014; Tindell and Bohlander 2012), and rarely, the system (Metzger 2015). Incidents caused by students are laughing, talking without permission, using mobile phones, having a lack of respect, lacking in attendance. The problems related to instructors are a lack of CM knowledge, a low level of competency in classroom control, inconsistency with certain behavioural problems, late arrival to classroom, irrelevant teaching materials, and no with-it-ness. In the research, only one study (Metzger 2015) highlighted a problem related to the system, in which the coteaching approach caused confusion about who was in charge.

### ***Impact of CM***

According to the students, instructors' warm, positive, and enthusiastic nonverbal expressiveness is strongly related to a positive classroom climate, whereas negative nonverbal behaviour might damage the classroom atmosphere (Metzger, 2019). A lack of CM strategies (of instructors) has an impact on mobile phone use in class (Tindell and Bohlander 2012). Besides instructors' qualifications and personalities, the physical features of the classrooms also have an impact on CM. Large classrooms, bags, and barriers affect CM negatively.

### ***Comparison studies related to CM***

Just one study met the criteria for this area, and according to the students, native and non-native instructors are the same in terms of CM in English in a foreign language classroom (Alfehaid 2019).

### ***CM problems experienced by instructors***

The CM problems that instructors identified mainly originate from students (Ali, Hayat, and Sohaib 2018; Cheong, Shuter, and Suwinyattichaiorn 2016; Erişti, Polat, and Erdem 2018; Oruc 2011), then instructors (Cheong, Shuter, and Suwinyattichaiorn 2016; Foy 2017), and then the system (Foy 2017; Shin 2011). The problems they identified were a lack of respect to instructors, confrontations with instructors, and the use of mobile phones as well as chatting with friends, asking for permission to go out of the classroom, sleeping during teaching hours, talking out of turn, insulting other students, insulting the instructor, reading irrelevant materials, drawing pictures on desks or on papers, eating and drinking during lessons, and chewing gum. Instructors gave the

following reasons for these problems: inability to detect digital distractions, limited CM knowledge of a new faculty member, crowded classrooms, limited class time for disciplinary interventions, and late arrivals of instructors.

### ***Factors promoting effective CM***

According to the instructors, the instructors' personalities and teaching qualifications (i.e. Al-Shammari 2016; Cheong, Shuter, and Suwinyattichaiorn 2016; Erasmus and Fourie 2018) are important. Most of the studies highlight that effective personality traits (i.e. Alfehaid 2019; Ali, Hayat, and Sohaib 2018; Martin 2019; Xu, Li, and Curtis 2015) and CM skills instructors are: humour, good relationships with students, preparedness for lessons, ability to use of social media, patience, effective eye-contact, involvement of students in attendance protocol, use of policy and rules (Badrkhani 2020), strategic redirection (verbal, gestures, and walking around), use of discursive sanction, ability to ignore students' behaviours, use of rewards (no material, just a score), willingness to dismiss students from class, willingness to talk to students individually outside of class, and involvement of students in preparing rules. They also highlighted the use of active learning strategies (Auerbach and Andrews 2018) and quick response systems as promoters of effective CM. The studies state that some issues related to the system (Erişti, Polat, and Erdem 2018; Foy 2017; Hughes et al., 2019; Husband 2015) are the need for orientation programs for instructors and students and instructor training related to CM (especially for new faculty) as well as fewer students in classrooms. Based on the students' and instructors' perceptions, the factors that affect CM are given in Figure 9.

### ***Online CM and use of technology in the classroom***

There are also studies related to the management of online classrooms (i.e. Martin 2019; Robinia and Anderson 2010). According to the studies, instructors' self-efficacy is quite good in regard to managing the online environment. They state that the online environment promotes time management (Buenaventura and Ablaza-Cruz 2019) and allows one to easily keep track of students' skills (Demirli and Turel 2012) in a big classroom, which effects the management of the class.

### ***Impact of CM***

Seven of the papers focused on the impact of CM (Al-Shammari 2016; Erasmus and Fourie 2018; Howell and Buck 2012; Hughes, Huston, and Stein 2010; Kamarudin et al., 2016; Knox and Stone 2019; Salami 2011), and four of them (Al-Shammari 2016; Erasmus and Fourie 2018; Howell and Buck 2012; Hughes, Huston, and Stein 2010) found a positive relationship between CM and the academic achievement of students; they state that a positive classroom environment is needed for quality education. Students' behavioural problems effect their lives, starting with employability, so these behaviours should be curbed during their education, including at the university level. Besides the impacts of CM on students, interventions designed to improve instructors' CM skills may have a positive impact in reducing the stress levels of instructors. According to another study (Han, Yin, and Wang 2018), administrative support was negatively related to CM among the faculty of provincial institutions.

### ***Impacts of instructors' characteristics on CM***

The studies compare CM skills of instructors according to the type of colleges they work (Gayathry 2019), their gender (Han, Yin, and Wang 2018), their subject area, year of experience (Han, Yin, and Wang 2018; Magulod, Capili, and Pinon 2019; Oruc 2011) their education level, their marital status (Magulod, Capili, and Pinon 2019), the professional development program related to CM (Strickland-Davis, Kosloski, and Reed 2019), their ethnicity (Wei and Hendrix 2016).

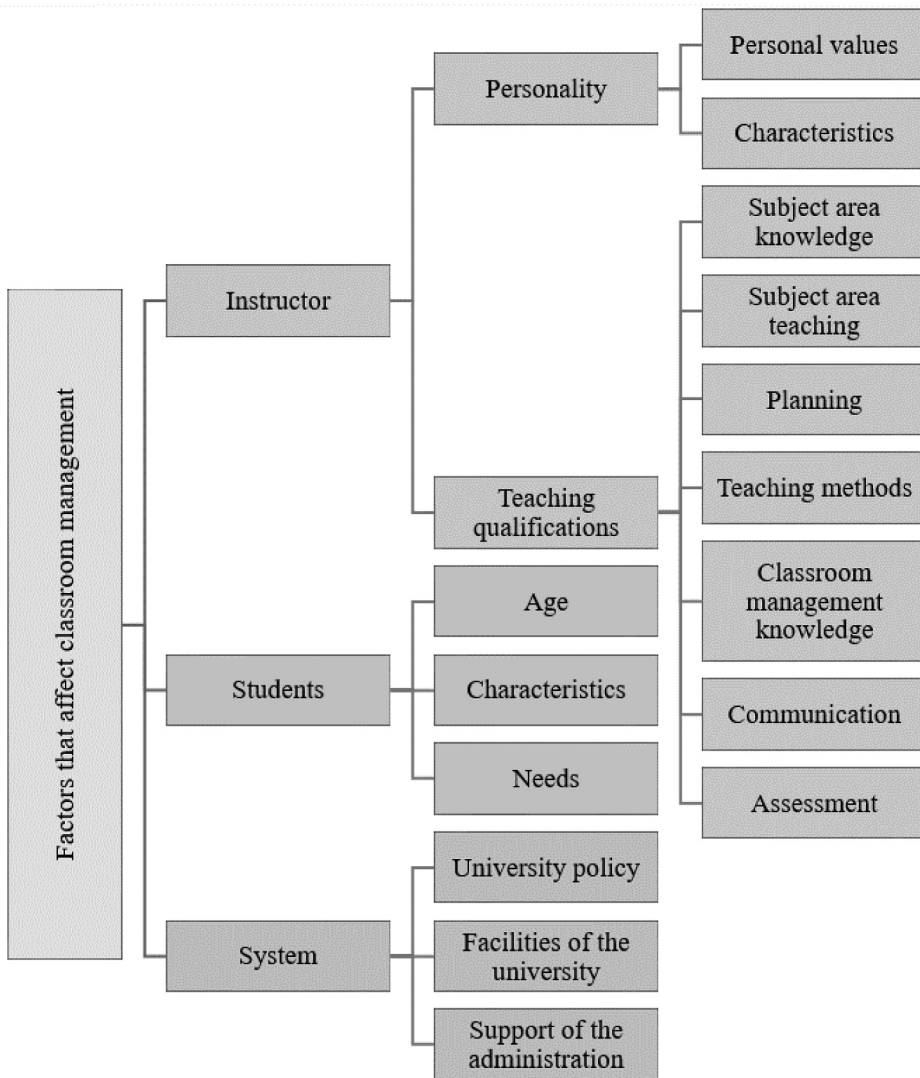


Figure 9. Factors that affect CM.

According to the results of the studies (Gayathry 2019), there was no difference between arts and science colleges and engineering colleges' instructors in terms of their CM skills. Private college instructors have better class control than the government college instructors (Gayathry 2019). Male faculty members score higher on efficacy for CM (Han, Yin, and Wang 2018). Teaching assistants score lower on efficacy for CM. English as a Foreign Language (EFL) instructors' perceived instructional strategies self-efficacy is much higher than CM. Instructors that have been teaching for more than five years are more likely to become authoritative than those who have less than four years of teaching experience (Han, Yin, and Wang 2018; Magulod, Capili, and Pinon 2019; Oruc 2011). Instructors who have higher educational qualifications show formal authority to manage the classroom. Single instructors show higher adherence to a democratic CM style compared to those who are married. (Magulod, Capili, and Pinon 2019). There is no difference between the instructors' perception of disruptive behaviours, frequency of occurrence, and their reactions in regard to their experience. No significant difference in scores for instructor efficacy in CM was explored before and

after professional development (Strickland-Davis, Kosloski, and Reed 2019). African American instructors pay more attention to modifying students' off-task behaviours than their white counterparts (Wei and Hendrix 2016).

### *Instructors' reactions to CM*

The student behaviour (Oruc 2011) that instructors most often ignore is sleeping during lessons, whereas insulting another student is the most disruptive. Instructors dismiss the student(s) from the classroom when they do not bring course materials to the classroom or when they are not punctual. The least popular reaction of the instructors was informing the administration when students insult the instructor and/or another student. The reactions of the instructors vary based on teaching style (Rao 2016).

### **Conclusion**

CM is an important component of teaching. It promotes the academic achievement of the students and is complex and related to many things. According to instructors and students, the main causes of CM problems are, in order, the students, the teachers, and then the system. Based on the reviewed articles, the factors that affect CM are: the instructors' personalities (personal values, characteristics) and teaching qualifications (subject area knowledge, subject area teaching, planning, teaching methods, CM knowledge, communication, assessment); the students' ages, characteristics, and needs; and the universities' policies, the facilities of the university, and the support of the administration.

Besides the factors that affect CM, according to a SLR of the articles, there are some implications for practice. Instructors (especially in the initial teaching years) and teaching assistants need training in CM to enhance the quality of education. Moreover, instructors should improve their teaching methodologies, such as incorporating instructional approaches that keep students active in order to decrease CM problems. Ignoring simple CM problems help the instructors keep classroom under control. Besides the listed implications for practice, there is a need for research related to CM at higher education in online teaching/learning environment.

### **Disclosure statement**

No potential conflict of interest was reported by the author(s).

### **Notes on contributors**

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