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FOREWORD

The Editorial Board of Acta Educationis Generalis in cooperation with independent peer reviewers have selected, approved, and prepared topical, interesting and valuable articles for you. In this issue, the international collective of authors is represented by experts from the USA, Slovakia, Turkey, UK, South Africa, Algeria, and Hungary. The authors of the published studies focusing on ten diverse fields applied various methods of research and provide readers with recommendations for practice.

Matthew Metzgar and Mary Jo McGowan - authors from North Carolina, USA - deal with the issues of diversity and intolerance of different viewpoints in university contexts in their study entitled 'Viewpoint Diversity at UNC Charlotte'. As they claim, recent surveys have shown that college campuses are becoming intolerant of different viewpoints, but colleges are expected to be a major place where different viewpoints are discussed and debated. The authors found out that many students are self-censoring their views in class. Moreover, there is often a reluctance to present honest viewpoints in the classroom. It is a topical problem present all around the world, not only in the USA.

Two authors from Slovakia - Pavol Lukáč and Viola Tamášová - focus on the issues of moral competencies, sports morality and upper-secondary school students' moral competencies, which can be impacted by leisure sports activities. The aim of their study entitled 'The Influence of Sports Leisure Activities on the Level of Moral Competence of High School Students' was to find out whether there is a significant difference in the achieved level of moral competence of secondary school students - between those who engage in sports in their free time and those who do not engage in sports activities. The results showed that leisure sports activities have an impact on the level of moral competence in upper secondary school grades.

Erinç Karataş, Ayşe Bağrıacık Yılmaz, Serçin Karataş, and Phil Banyard from the Turkish and the British university environments present their research study under the title 'Academics' Intentions to Use Open Educational Resources (OERs) in Professional Development'. They examined academics' open educational e-resources usage intentions for their professional development in two countries. Their findings show that academics working in Turkey had slightly higher e-resource usage than those working in the United Kingdom.

The issues of using summative and formative assessment are dealt with by Shelley Edwards from South Africa in the study 'One and Done, or a Bundle and Stumble? An Exploration of Assessment Methods in Undergraduate Science Curricula'. The purpose of their paper was to discuss the utility of either summative assessments or formative assessments (or both) in science teaching at university level. As she concludes, new category of assessment is needed - the integration of formative and summative assessment.

In the paper entitled 'Literature Review of Studies about Violence at School and Recommendations for Teachers', Gülçin Karakuş - an author from Turkey - focuses on the topic of violence in schools. Violence is a very complex and particular concept and it is difficult to make a precise definition, since acceptable and unacceptable behaviour patterns for each society vary. Violence is a global problem, solution depends on an integrated approach in which educators, parents and learners work together. The content analysis method was used to analyse 42 studies. As a result of the evaluation of studies on violence in schools, the themes of gender inequality, personal factors, school organization, and evaluation are reached. Suggestions for teachers on preventing violence in schools, as well as a list of issues to be paid attention to are discussed in the paper.

The ways of measuring quality of life by means of factorial analysis are presented by four authors from Algeria - Hayat Touati, Mohamed Guezgouz, Benkhaled Hadj, and Djamel Mokrani - in their study 'Using Factor Analysis as a Tool for Measuring the Quality of Life of University Students'. On the sample of 963 university students, they verified a tool (a scale) for measuring the quality of life of university students, including family life quality, social life quality, personal happiness, life satisfaction and mental health. The results of factor analysis showed a good validity and stability. The presented findings are interesting for readers.

Second chance education, with its specific position, content focus, target groups and organization, has become an essential part of educational systems not only in developing countries, but also in developed countries, because in every society, this issue is a current challenge for the educational reality. It is dealt with by an author from Slovakia - Eduard Lukáč - in his study 'Second-Chance Education in UNESCO Activities - Examples from History and Some Current Forms'. The paper analyses these UNESCO activities in the field of second-chance education, which allows individual target groups to obtain elementary education, respectively professional knowledge and skills for finding a job in the historical transformations as well as at present.

The issues of special education are focused on by Cem Aslan and Salih Cakmak in the paper entitled 'A Cross-Sectional Examination of the Written Expression Skills of Students with Low Vision, Visual Impairments, and their Sighted Peers'. They examined the written expression skills of students with low vision, visual impairment, and their sighted peers from the aspect of text cohesion, text coherence, text quality, text length, and writing time. The research sample consisted of 344 secondary school students who were divided into three groups - students with visual impairment, low vision, and their sighted peers. The research results showed that the arithmetic mean in students with visual impairment and in their sighted peers' text length and writing time differed statistically, as well as the averages in the fields of coherence level and text quality. The authors recommend carrying out further experimental research focusing on teaching writing strategies. According to them, teachers should organize activities to motivate students' writing, encourage them, and increase their interest. Also, technologies that will serve these students' better writing should be used.

Two authors from Hungary - Ágnes Klein and Tünde Tancz - in their paper 'Interaction Analysis in Nurseries' reviewed the qualitative aspects of communication with a focus on the presence of quality indicators, on the strategies that are encountered in influencing language acquisition in the interaction between children and early childhood educators. They examined the diversity, awareness and efficiency with which educators use communication tools and techniques in various pre-school education situations for children under 3 years of age. They conclude that the professional communication and competent language development activity of educators' results from the interplay of scientific-theoretical knowledge, implicit empirical knowledge, competence-oriented procedures.

The fields of classroom management and types of power used by teachers are discussed by Fatma Sadık and Hasan Nasırcı from Turkey in the study 'An Investigation of the Types of Power Used by High School Teachers in Classroom Management According to Teachers' and Students' Opinions'. According to students, teachers use charismatic power and coercive power at most in classroom management and they apply the power of understanding less. The authors recommend to use observations and student interviews to examine how teachers apply the types of power they use in classroom management in the classroom environment, their effects on the environment, and which type of power is used in which situations.

Dear Readers, we are presenting you the most topical issues in all types and on all levels of school - including adult education - in ten papers focusing on various fields of education, and provide you with recommendations for practice. We believe that you will find these studies interesting. On behalf of the Editorial Office, I wish you pleasant autumn and winter days.

*Viola Tamášová
Editor-in-Chief*

Viewpoint Diversity at UNC Charlotte

Matthew Metzgar - Mary Jo McGowan*

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Abstract:

Introduction: A number of recent surveys have shown that college campuses are becoming intolerant of different viewpoints. Part of the mission of any college should be to create a space where different viewpoints can be debated in a healthy, intellectual way. To gauge the campus climate at their own University, the authors deployed a survey to business students asking how comfortable they were sharing and responding to different viewpoints.

Methods: Business students were surveyed for their attitudes towards diverse viewpoints. The survey instrument has been used at other colleges to survey students for several years.

Results: A portion of students are censoring their views on controversial topics. There is often a reluctance to present honest viewpoints in the classroom.

Discussion: Faculty needs to be mindful of the classroom environment they create. Colleges should be a major place where different viewpoints are discussed and debated.

Limitations: Only business students were surveyed. There may be different outcomes for students in other majors.

Conclusions: These results suggest that many students are self-censoring their views in class. Faculty should be aware of this and create an environment where different viewpoints are welcome.

Key words: viewpoint diversity, teaching, business students.

* Matthew Metzgar, University of North Carolina at Charlotte, Belk College of Business, Charlotte, USA; mmetzgar@uncc.edu

Mary Jo McGowan, University of North Carolina at Charlotte, Charlotte, USA
mjshephe@uncc.edu

Introduction

A college campus should be a place for intellectual exploration. However, a number of recent surveys show that students are becoming increasingly reluctant to discuss controversial topics in class. For example, the 2021 Campus Expression Survey by the Heterodox Academy showed that 60% of students were hesitant to discuss at least one controversial topic.

The knowledge imparted in an academic setting is just one part of higher education goals. Perhaps more important is the sharpening of critical thinking. In other words, the classroom shouldn't teach you what to think. Instead, the academic experience should teach us how to think. Additionally, students should be learning how to respectfully disagree with one another. In a world of tweets, posts, and texts, this is a lesson easily forgotten. Teaching students how to think and how to respect others' thinking is an important tenet of democracy that universities have upheld for centuries.

The promotion of diversity in all its forms is a profoundly consensual idea in contemporary education, and with good reason. Diversity, in general, is associated with greater strength and vitality. This principle is true whether discussing genetic diversity, which helps prevent diseases, or the diversification of an investment portfolio, or the diversity of ideas.

The diversity of ideas and the interaction of ideas are central to the traditional idea of university campuses. Campus should be associated with thinking and the exchange of ideas through knowledge spillovers. Universities often advertise themselves as institutions created for the pursuit of truth. Progress comes when students and faculty challenge dogmatic ideas that have outlived their usefulness. The story of the theory of relativity replacing Newtonian physics is countless examples of a long-held truth challenged and replaced through critical thinking. But viewpoint diversity is more than just a boon to research and education. It encourages intellectual humility by fostering the atmosphere that there is no one acceptable viewpoint. Yet there is an oppressive lack of ideational pluralism among students and faculty all too often. Why does this matter? In our polarized society, many citizens feel absolute certainty in the validity of their opinions. This close-mindedness allows proponents to dehumanize ideological opponents. The genuine encouragement of viewpoint diversity can help heal our society and create a bedrock for a healthier civil discourse.

The purpose of this study is to analyze student viewpoint diversity at a large Southern public university. In order to foster viewpoint diversity and keep critical thinking traditions alive at universities, we need to know students' opinions and attitudes about their ability to express their viewpoints. For this study, students majoring in business were surveyed for their opinions on viewpoint diversity on campus. The results are presented below and discussed.

1 Overview

You will not find too many people who are ideologically opposed to viewpoint diversity in the classroom. And yet, it can be difficult to foster. First, we must remember that students are young and often insecure about their intellectual capabilities and social role within the peer group. A potential reason students are hesitant to discuss their views in class is the perceived negative comments from classmates (Larson, McNeilly, & Ryan, 2020). However, most surveyed students state that they would be open to diverse viewpoints in class. Therefore, students' perceived fear of the consequences of speaking out is not entirely realistic. This dynamic means creating a positive classroom environment for exploration is critical to make sure students' voices are heard.

Many initiatives have focused on the role of students in encouraging viewpoint diversity. For example, Heterodox Academy has a stated mission to "improve the quality of research and education in universities by increasing open inquiry, viewpoint diversity, and constructive disagreement." To encourage student viewpoint diversity, they have created a questionnaire and activity set for the people who are most influenced by the issue (Heterodox Academy, 2022).

This paper focuses on studying viewpoint diversity in the classroom. Students can join groups or interact online with like-minded individuals in our increasingly polarized society. While this may be enjoyable, this does not promote intellectual growth. If students are primarily discussing their views with like-minded peers outside of class, this will lead to more polarization and distortion. We view the classroom as a pivotal space to have students develop their individual views. Students can develop solid intellectual views that recognize diverse perspectives through debate and discourse. Through civil discussion, students can see different viewpoints and learn to seek common ground.

2 Literature review

Much of the literature on viewpoint diversity is provided by pressure groups of various sorts. One of the most common discussion points relating to viewpoint diversity is academia's alleged liberal or left-wing bias (Inbar & Lammers, 2012). However, there are counterclaims that this bias does not exist or it has little influence (Burmila, 2021). Unsurprisingly, these claims come mostly from right-wing scholars and advocates. However, there have been similar claims from the left that there is a tamping down on healthy criticism and dissent from orthodox opinions (Gordon, 2009). If so, there is no meaningful debate in the literature on whether viewpoint diversity is valuable and desirable. Instead, disagreements center on how severe the problem is empirically.

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A related body of work focuses on the importance of critical thinking in the classroom. While critical-thinking and viewpoint diversity are not the same, these elements are deeply intertwined and facilitate each other. Much like viewpoint diversity, there is a large amount of literature exhorting teachers to embrace critical thinking (Kamii, 1991; Murawski, 2014). Other literature on the classroom focuses solely on the debate in political science courses and the study of potential indoctrination of students by faculty. But these studies indicate that students support the need for freedom of speech and alternative viewpoints in the classroom (Rom, 2021; Woessner & Maranto, 2021). One issue with studies on ideology in the classroom is the focus on political science students. Studying political science introduces bias into studies because these students likely already have a base political belief before coming to the university. This study looks at business students to analyze how average students who may not be engaged in politics feel about viewpoint diversity. The debate, such as it is, is only over which measures are best suited to impart critical thinking tools to students.

Since our future research leaders come from the ranks of university students, an ideationally homogenous environment will have a material influence on future scientific advances. The absence of viewpoint diversity focuses on students' research questions and inquiries to similar avenues. Contrarily, it renders other questions and assumptions culturally taboo. That means that beliefs are held for their social capital rather than their ability to withstand scrutiny. Therefore, a lack of diversity allows false narratives to stand and does not allow for the possibility that stronger arguments exist outside the consensus (Inbar & Lammers, 2012).

The absence of viewpoint diversity in the classroom will also negatively influence the workforce. Employers consistently cite the ability to think critically as one of their primary criteria for hiring (Sanders, 2021). However, a lack of viewpoint diversity in the classroom means that students' assumptions are not materially challenged, and critical thinking skills will be correspondingly weaker. Indeed, employers often complain that young graduate applicants for jobs are woefully lacking in their critical-thinking skills (Gunawardena & Wilson, 2021).

Research has also shown that viewpoint diversity is a crucial component for developing cognition in first-year college students (Goodman, 2017). Increasing evidence shows that some colleges are becoming less tolerant to opposing viewpoints (Revers & Traunmüller, 2020; Delhez, 2020). Universities and students are increasingly putting forth a "greater good" argument for restricting free speech on campus (Sengupta & Blessinger, 2020). At the same time, many Universities are not including viewpoint diversity in their legal protections (Rozado, & Atkins, 2018).

These trends continue even though evidence mount that this limits the development of critical thinking (Fenton and Smith, 2019). Lack of political diversity can also limit progress in specific subjects, like psychology and sociology (Duarte et al., 2015; Haaga, 2020; Baehr, 2020). Research suggests increasing viewpoint diversity will help Universities fulfill their core mission of advancing knowledge (Whittington, 2020).

3 Survey procedure

An online survey was distributed in the fall 2021 semester to select students. This survey was created by the Heterodox Academy to study student opinions on viewpoint on diversity on campus (<https://heterodoxacademy.org/library/campus-expression-survey-manual/>). These results are compiled with results from other schools to produce the Campus Expression Survey mentioned above. The survey format was an online survey with a link sent via email. Students who completed the survey received a \$5 gift card. The survey was voluntary and not connected to the grades of any course. The results were anonymous and no individual student's data was released.

The survey link was sent to students in sections of two classes: Principles of Macroeconomics, a sophomore level required course for business majors, and Managerial Economics, a junior level required course for all business majors. There was no separation of results for students from these two classes.

The survey link was emailed to 834 students in total. From that, 87 students started the survey. Of those 87 surveys, 67 were fully completed and 20 were partially completed. Both completed and partial surveys were included in the analysis.

4 Results

Two surveys (A and B, respectively) were disseminated to students in an effort to gauge ideational diversity in the classroom, on campus and between peers (see Appendix for survey document and raw survey results). The surveys were subdivided into "blocks" of themes, such as empathy toward others with differing viewpoints, openness to new or different perspectives, and flexibility around personally-held viewpoints. 87 total participants were surveyed in total, although many did not ultimately complete the surveys in their totality. Blocks varied in length, ranging from 3 prompts at a time (e.g., Survey B - Block 8) to 18 (e.g., Survey B - Block 5). With a few exceptions when it came to straightforward demographic prompts such as questions about the participants' age or race, the standard format of measurement was a Likert scale. Participants were also asked questions about their family's income and provided with scales

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to indicate their level of coldness or warmth toward politically liberal or conservative people.

Before participating in the survey, respondents consented to answering approximately 51-71 questions about their perceptions of their college campus climate, acknowledged the confidentiality of their responses, and were provided with instructions allowing them to receive an optional Amazon gift card for \$5, if they wished to do so. Participants also agreed to provide thoughtful and honest answers to the questions in the survey and agreed to be 18 years of age or older. Both surveys showed that 100% of respondents lived in the United States and were full-time students. Of the respondents surveyed, 1 participant identified as American Indian or an Alaska Native, 16 identified as Asian, 7 identified as Black, 11 identified as Hispanic/Latinx, 6 identified as Middle Eastern, 1 identified as Pacific Islander, and 28 identified as White. 30 total respondents identified as men, 37 identified as women, and an overwhelming majority identified as straight, with only a handful identifying as gay, bisexual, or providing an alternate response such as “exploring.”

Survey A contained 10 blocks and 67 total questions/prompts and Survey B contained 6 blocks and 49 total questions/prompts. In Survey A - Block 2, participants were provided with 7 prompts around empathy and flexibility, with prompts such as: “When I'm upset at someone, I usually try to ‘put myself in their shoes’ for a while.” (Question 7) and “I believe that there are two sides to every question and try to look at them both.” (Question 4). Participants demonstrated an aptitude for empathy on the whole, with 45 percent of respondents claiming the statement “Before criticizing someone, I try to imagine how it would feel if I were in their place.” described them fairly well. A third of respondents responded that the statement “If I'm sure I'm right about something, I don't waste much time listening to other people's arguments.” described them a little (on a scale of does not describe me to describes me very well). To the prompt “I sometimes try to understand my friends better by imagining how things look from their perspective.” 20 out of 31 respondents claimed that the statement described them fairly well, with no respondents saying that the statement did not describe them, and 5, or 16 percent, claiming the statement described them very well. It appears based on the data that most students are empathetic to the rights of others to hold differing viewpoints, and most respondents find value in viewpoint diversity.

In Survey A - Block 3, participants were provided prompts around empathy, to which a Likert scale was also used to assess the full range of responses. Prompts included “I often have tender, concerned feelings for people less fortunate than me.” (Question 10) and “I would describe myself as a pretty soft-hearted person.” (Question 11). Question 10 yielded some variation, with less than 1 percent of respondents claiming the prompt “does not describe me,” around a

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fifth of percent of respondents claiming that the prompt described them a little, a quarter percent claiming the statement described them somewhat well, and nearly half claiming the statement described them fairly well, and less than 1 percent claiming the statement described them very well. Overall, the empathy block showed that a vast majority of participants expressed empathy toward others experiencing misfortune or pain, with participants who claimed that empathic statements did not describe them outliers. Most respondents fell somewhere in the middle, qualifying their statements by relating “a little” or “fairly well” to the prompts. Notably, participants demonstrated a sensitivity to external occurrences in Question 14: “I am often quite touched by things that I see happen.” by responding that this described them very well, fairly well, somewhat described them, described them a little, with no respondents saying that the statement did not describe them.

Table 1 provides an overview of the general level of student empathy.

Table 1

<i>General level of student empathy</i>	
<u>Survey Question</u>	<u>Average</u>
Before criticizing somebody, I try to imagine how I would feel if I were in their place.	3.2
If I'm sure I'm right about something, I don't waste much time listening to other people's arguments.	2.5
I sometimes try to understand my friends better by imagining how things look from their perspective.	3.9
I believe that there are two sides to every question and try to look at them both.	3.8
I sometimes find it difficult to see things from the "other person's" point of view.	2.1
I try to look at everybody's side of a disagreement before I make a decision.	3.7
<u>Scale:</u>	
Does not describe me (1)	
Describes me a little (2)	
Somewhat describes me (3)	
Describes me fairly well (4)	
Describes me very well (5)	

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In Block 4, flexibility around viewpoints and an ability to reconsider opinions was assessed. Participants were provided with prompts such as: “I recognize the value in opinions that are different from my own.” (Question 17) and “In the face of conflicting evidence, I am open to changing my opinions.” (Question 19). Overall, the results of the survey revealed quite a bit of variation not only in the respondents’ demographic makeup and identities, but in how comfortable they felt expressing their viewpoints on campus for fear of making others uncomfortable. In Block 9, respondents were asked questions about their specific experiences on campus. To Question 40, “Think about being at your college in a class that was discussing a controversial issue about Politics. How comfortable or reluctant would you feel about speaking up and giving your views on this topic?” out of 44 surveyed, 10 claimed they would be “very reluctant” giving their views. 15 claimed they would be “somewhat reluctant,” 12 would be “somewhat comfortable,” and 7 would feel “very comfortable.” Even though respondents find value in viewpoint diversity, there is still reluctance over expressing one’s own viewpoints.

The results of the campus climate module are presented in Table 2 below.

Table 2

Results of the campus climate module

<u>Survey Question</u>	<u>Average</u>
Giving your views on GENDER	2.0
Giving your views on POLITICS	2.6
Giving your views on RACE OR ETHNICITY	2.0
Giving your views on RELIGION	2.2
Giving your views on SEXUAL ORIENTATION	2.0
Giving your views on NON-CONTROVERSIAL TOPIC	1.6
<u>Scale:</u>	
I would be very comfortable giving my views. (1)	
I would be somewhat comfortable giving my views. (2)	
I would be somewhat reluctant giving my views. (3)	
I would be very reluctant giving my views. (4)	

In Survey B - Block 2, respondents were asked about their comfort level discussing controversial topics relating to identity in the classroom. When asked “How often does your college/university encourage students to consider a wider variety of viewpoints and perspectives?” (Question 72) revealed a substantial variation, with less than 2 respondents responding never, 1 student responded very rarely, 8 students answering rarely, 17 students answering occasionally, 12

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students answering frequently, and 3 students answering very frequently. This question in particular ought to be taken with a grain of salt, depending on how much students' preexisting belief and value systems align with those of the University. However, in trying to gauge ideational variation, the number of students responding never, very rarely, or rarely, should be noted as a potentially concerning point worth flagging for administrators especially given students' support for diversity of opinions.

Table 3 presents these results.

Table 3

Students' support for diversity of opinions

<u>Survey Question</u>	<u>Average</u>
The climate on my campus prevents me from saying things I believe because others might find them offensive.	2.5
The climate on my campus prevents some people from saying things they believe because others might find them offensive.	2.2
I am able to share ideas and ask questions without fear of retaliation, even if those ideas are offensive to some people.	3.3
Regardless of my point of view, I am treated as a valued contributor to conversations.	3.7
My college welcomes students and professors with a lot of different points of view.	4.2
My college encourages students and professors to interact respectfully with people whose beliefs differ from their own.	4.1
My college encourages students and professors to be open to learning from people whose beliefs differ from their own.	3.8
<u>Scale:</u>	
Strongly disagree (1)	
Somewhat disagree (2)	
Neither agree nor disagree (3)	
Somewhat agree (4)	
Strongly agree (5)	

The surveys revealed vast heterogeneity in a number of key areas, such as comfort around expressing beliefs others might find offensive on campus or feeling like a valued contributor to conversations. However, students tended to mostly agree that their college welcomed students and professors with a lot of different points of view. This, however, somewhat contradicts the finding that

many respondents felt that their university does not encourage students to consider a wide range of viewpoints and perspectives. Very few respondents indicated that they would be “very reluctant” to provide their opinions on controversial issues around sexual orientation, race or ethnicity, or religion however a considerable percentage indicated they would feel somewhat reluctant.

It can be interpreted as an encouraging sign that most participants appear to be open to engaging in uncomfortable conversations, and have indicated an openness to both changing their viewpoints and demonstrating empathy toward those with differing viewpoints. When it came to the question: “How important to your sense of identity is your political ideology?” (Question 63) 8 respondents said “very important,” 11 said “somewhat important,” 17 said “somewhat important,” and 3 said “not at all important.” Participants also claimed they had a low rate of interaction with other students on campus, probably due in a large part to the restrictions imposed by the Covid-19 pandemic. The imposition of at-home working and anxiety around in-person learning may discourage students from socializing as they would in other circumstances.

5 Limitations

Overall, the surveys were limited by respondents’ partial responses, the relatively small sample sizes and frequently conflicting results. Still, the surveys revealed some large and perhaps surprising variation when it came to feelings toward politically conservative or liberal people, with a huge degree of variation in the results. This would suggest students experience (although perhaps unknowingly) quite a strong degree of political diversity on-campus, although may feel uncomfortable discussing their political beliefs amongst one another, unless directly prompted to do so within classroom settings. For the most part, respondents indicated moderately high levels of empathy for others who were less fortunate and a willingness to view disagreements from multiple perspectives. To the prompt “I try to look at everybody’s side of a disagreement before I make a decision.” (6), most respondents claimed that they felt this statement described them fairly well. Two other notable areas where respondents experienced high levels of variation were in religious diversity and family income. Many respondents opted not to disclose their family’s income. Moving forward, it would behoove researchers to ask specific questions about what might be preventing them from engaging with others whose belief vary from their own and ensure that all respondents completed the entirety of the survey provided, rather than having mismatched sample sizes with only partial responses.

Conclusion

The variable responses from this survey indicate the need for more study on student's viewpoints as well as their ability to express their viewpoints in the classroom. Classrooms should be open areas of free expression where students learn from one another as well as from faculty members to be open to new ideas. Universities have long served the function as areas for intellectual exploration and knowledge transfers. Based on our research in this survey, students self-censor even while supporting the rights of others to express diverse viewpoints. Students also report a lack of encouragement for opposing viewpoints on campus. Taken together, it is possible that students self-censor due to a combination of insufficient institutional/university support and the fear of negative feedback from other students. This opens an opportunity for institutions to change the narrative and environment to foster more viewpoint diversity on campuses and in classrooms. Students appear willing, but the big question is, are universities?

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The Influence of Sports Leisure Activities on the Level of Moral Competence of High School Students

Pavol Lukáč - Viola Tamášová*

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Abstract:

Introduction: In the relationship between sports morality and the morality of everyday life, there are no relevant studies and researches to clearly demonstrate the direct connections between sports and moral behaviour. The aim of this study is to find out if there is a significant difference in the achieved level of moral competence of secondary school students - between those who engage in sports in their free time and those who do not engage in sports activities.

Methods: Quantitative research methods were used in the research, and for the purposes of expressing the level of moral competence of secondary school students, we used Moral Judgment Test (MJT). The MJT test expresses an individual's moral competence through the C-score. 181 pupils of various grades studying at secondary school took part in the research. To verify the normality of the distribution of the C-score variable, we used the Shapiro - Wilk test, and for hypothesis testing, we used the two- sample T-test to test the mean value at known mean values of the distribution. Significance levels are set at p value <0.05.

Results: The results of the test of significant differences for individual grades of secondary school are interpreted as the results of the analysis of the impact of sports activities on the level of moral competence. Sports leisure activities have an impact on the level of moral competence of students in the 4th grade.

Discussion: The research confirmed that sports leisure activities contribute to a higher level of moral competence measured by the MJT test and expressed by the C-score value as the age of the pupils increases.

Limitations: The research was limited to students of one secondary school.

Conclusions: The result of the research, based on statistical testing, was the finding that leisure sports activities have an impact on the level of moral competence in upper secondary school grades.

* Pavol Lukáč, DTI University, Department of School Pedagogy and Psychology, Dubnica nad Váhom, Slovakia; lukac@dti.sk
Viola Tamášová, DTI University, Department of School Pedagogy and Psychology, Dubnica nad Váhom, Slovakia; tamasova@dti.sk

Key words: moral competence, sport, sports morality, moral behaviour.

Introduction

Different areas of life show different ethical and moral images. Moral action is an action that affects other people directly, or in its consequences. The individual must be aware of the consequences of such actions and perceive them as serious ones. Therefore, in certain cases the action can be a moral action, but in another situation, it can be considered immoral (Tyrlik, 2004).

Sports practice is not excluded from the consequences of the athlete's moral behaviour and its consequences, because even within sports there are areas in which certain behaviour is unacceptable and is expected to be properly sanctioned, and in other areas, the same behaviour is acceptable, perhaps even recognized as necessary.

The second claim is justified by various goals for which such behaviour is acceptable, desirable and justifiable. Bredemeier and Shields (1995, as cited in Long et al., 2006) used the term judgement, which refers to the moral transformation that occurs during sports competition and which makes egocentric actions to achieve goals in sports acceptable and legal. Sports judgment is related to the moral atmosphere, which is influenced by the social circumstances in which the sport takes place. In competition, an individual, or a team, seeks advantages over competitors, which changes the athlete's usual moral judgment to be specific to the current sport.

Sports ethics is a special branch of applied ethics and a branch of the philosophy of sport that deals with specific ethical issues that arise during and around sports competitions.

Hosta (2007) distinguishes between sports ethics and general ethics, and claims that sports ethics is bound only in the world of sports. However, there are different opinions on the autonomy of sport in the professional literature, regarding whether sport is a specific field within life practices with its own specific sports ethics and what this ethics should be in relation to the general universal ethics. Sports ethics is the ethics that seeks universal ethical guidelines in the world of sports (Hosta, 2007). So we could say that sports ethics connects sports with universal ethics.

Sport ethics in everyday understanding represents the unwritten norms of behaviour of sports participants. An honest and correct relationship between sports participants is the basis of morality in sports. This means justice, principledness, respect for rules, honesty in front of others, and in front of oneself.

Sports ethics deals with various moral issues in sports, but also with those that are strictly specific and characteristic of a particular sport and reveal and problematize (no)moral practices, behaviour, actions, attitudes, habits, etc. (Škerbić, 2014).

Morality, which is studied by ethics as a philosophical discipline, is defined as "the actions and system of evaluation of an individual corresponding to certain norms of the given culture." It is based on the achieved truth, on the internalization of the basic morality of the given community." (Olšovský, 2011, p. 134)

Seknička and Putnová (2016, p. 14) also perceive a difference between these terms. They define morality as "a set of specific customs, norms, standards, ethical and cultural rules, or patterns that are required and expected from an individual who is, within the society, or continuously, identified as a good person."

Morality is not a static phenomenon. It changes as society changes, together with the demands it places upon an individual, in terms of a good person's characteristics. According to the above-mentioned authors, the benefit and functionality of moral action for society is thus taken into account.

Smrdu, Pinter and Hosta (2005, p. 4) explain that sports ethics can be understood in at least two ways:

- as "motivational attitude, competitive tension of athletes and desire to win", and on the other hand,
- as "the atmosphere that prevails among the participants (athletes, coaches, referees, spectators, etc.)."

In the philosophy of sport, the professional literature refers to sports morality as a complex phenomenon of sports "ethos." Sports morality involves athletes, coaches, referees and spectators in evaluating what is right and what is not. However, sportsmanship is part of a specific practice. It concerns standards of conduct, interpretation of regulatory rules (determine, for example, the extent to which we can use means to achieve a goal), prohibitions and penalties for breaking the rules. A thorough analysis of the origin and meaning of these rules shows that we solve moral problems from an ethical point of view (Hosta, 2007).

"Fair play has become synonymous with sports morality and for society it is becoming a motto of good relationships in general." (Hosta, 2007, p. 23).

"Fair play is the constant and unequivocal relinquishment of victory at any cost as a result of behaviour that follows from the moral values of an individual. It follows from one's inner belief that victory, as a result of fraud, or circumstances that would provide an unfair advantage, is no longer a true victory." (Charter of fair play, 1974, as cited in Smrdu, 2016).

Fair play is an internationally established concept that comes from sports. It is not only its essential element, but has become a universal philosophy based on

the principles of respect for others and respect for the rules in sports, but also in business and other areas with competitive efforts.

Smrdu (2016) states that the main characteristics of fair play is honesty (do not cheat during the competition, before or after it, do not lie to competitors or officials), fairness (do not violate the rules of the game, do not use doping), respect (self-respect, respect for other athletes, respect for referees , coaches, respect for fans, respect for written rules, respect for unwritten rules), responsibility (don't pretend to be hurt, don't look for excuses), friendship (competition on the field does not exclude friendship, on the contrary, friendship can grow from healthy competition, the team is more as the sum of individuals), sportsmanship (orientation in behaviour in accordance with mature social patterns, even if the system, or environment, supports alternative behaviour), solidarity (caring for one another), equality (equal conditions for all competitors, equal conditions during the competition, regardless of gender, race, religion, age, ability), excellence and enjoyment of sport (the contest is more important than the victory, it is necessary to look for enjoyment in training, game, etc.) and lack of aggression (aggression: rough play, intimidation, revenge, professional offenses, intentional injury of another athlete).

Moral competence and intelligence are a psychologists' long-sought bridge between moral attitudes or moral values on one hand and moral behaviour on the other. According to Lajčiaková (2008), moral competence is the ability of an individual to arrive at moral judgments on the basis of his/her internal principles and subsequently act in accordance with these opinions.

It defines moral competence as a sign that must be manifested not only in the thinking but also in the actions. It is seen in the literature that moral intelligence is evaluated as multidimensional (Yakut et al., 2021). Scientists consider moral intelligence in several sub-dimensions in their studies. Borba (2001): moral intelligence includes empathy, conscience, self-control, respect, kindness, tolerance and justice; Khampa (2019): honesty, respect, kindness, conscience and self-control; Öztürk et al. (2019): equality, empathy, moral intelligence, justice, tolerance, self-control and kindness; Bhagyalakshmy (2014), on the other hand, examined moral intelligence in several dimensions as empathy, conscience, self-control, respect, kindness, tolerance. In the studies conducted, empathy, conscience, self-control, respect and kindness are considered as common concepts for scientists. Baron-Cohen and Wheelwright (2004) define empathy as the individual's ability to spontaneously and naturally adapt to the thoughts and feelings of the other person. In terms of human relations, empathy is the ability to predict and understand the reactions of others (Keskin, 2014). Self-control is the ability to resist and suppress internal desires and external temptations that prevent individuals from pursuing long-term goals (Tangney et al., 2004). The capacity to exercise self-control (Napolitano & Job, 2018)

includes mental processes that enable individuals to suppress thoughts, feelings and behaviours that conflict with their personal goals (Baumeister et al., 2007). Individuals with high self-control tend to use more positive coping strategies than individuals with low self-control, and the use of these positive strategies increases life satisfaction (Li et al., 2016). Conscience is defined as a person's display of behaviours in accordance with his/her own belief world with his/her inner voice and the evaluation of these behaviours as right or wrong in the inner court. Kindness is an essential value for human survival and well-being. Research in this area shows that helping or sharing to benefit another person (i.e., pro-social behaviour) is not only beneficial for the goal of well-being, but also for oneself (Fritz et al., 2021).

A morally competent person therefore not only makes moral decisions but also acts morally. Her moral thinking will be reflected in her subsequent moral behaviour. For a better understanding of the issue of moral behaviour of secondary school youth (adolescents) from the point of view of developmental psychology, it is necessary to know the developmental phase in which they are, with an emphasis on those aspects of their development that affect values and moral judgment. Vágnerová (2013) refers to adolescence as a phase of searching for and creating one's own identity and thus value orientation as well. That is the time to take over full responsibility for one's own life, his/her behaviour, as well as their moral profile.

The starting point for conducting the research on the impact of sports activities on their moral competence has followed from the conflicting statements of various authors, e.g. Meltzer (2010) "the research has found a weak link between participation in sport and moral development, but sport can contribute to the moral development of children and young adults to some extent", Potgieter (2013) "the belief that doing sport in itself builds character and contributes to the development of moral behaviour does not have a solid empirical basis".

In the relationship between sports morality and the morality of everyday life, there are no relevant studies and researches to clearly demonstrate direct connections between doing sports and moral behaviour. Despite Smrdu et al.'s (2012) opinion that "moral judgment and moral behaviour in sports differ from the situations of everyday life", Pawlenka's (2010) statement that "situations specific to sports are also specific in relation to everyday life, being also subject to all principles of general ethics", are in contrast. Other prerequisites for the conducted research can be identified in the theory of the dual aspect of moral action (Klimecki, Vuilleumier, & Sander, 2016). In this theory, moral competence is defined as "the ability to make decisions and judgments that are moral, that is, based on internal moral principles, and to act in accordance with these decisions" (Lind, 2009, p. 34), and that moral competence can be measured by the MCT methodology (Souza & Hutz, 2013).

Sports ethics is the realization of the sports event within the limits determined by the written and unwritten rules, far from the understanding of "winning against all odds" regardless of the conditions. Competing in order to make their skills superior within the framework of values both preserves the spirit of sports and provides the excitement inherent in sports. If the rules are not followed, the suspicion that may arise about the sport can cause everyone who actively or passively participates in the sport to move away from the sport. For this reason, the concept of sportsmanship gains importance in the existence and continuation of sports.

Based on the above mentioned theoretical contexts, we focused our research on monitoring the level of moral competence of secondary school students. When verifying our assumptions, we were interested in the existence of a significant difference in the achieved level of moral competence between groups of pupils differentiated by the use of leisure activities and age (year of study). We assumed that secondary school students who engage in sports leisure activities and secondary school students who do not do sports, as well as students from different secondary school grades, will not differ significantly in the obtained score of moral competence. The main goal of the conducted research was to determine the level of moral competence of adolescents through the research methods of the MJT test, to verify whether sports leisure activities have a positive effect on the level of moral competence and moral judgment.

1 Methods

1.1 Research sample

The research sample consists of students from the Secondary Vocational School of Engineering in Žilina -Slovakia (SVSE). They are students who attend grades 1 to 4. Two groups of students from all grades were involved in the research, namely students who engage in sports activities regularly and for a long time, as well as the students who do not engage in sports, or only occasionally. The research sample was obtained in the school year 2021-2022 using group interviews. We tried to maintain the approximate number of boys and girls. 181 secondary school students voluntarily participated in the research, and information about the students is shown in Table 1.

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Table 1

Division of the research group of pupils according to grades and leisure activities

<i>SVSE</i>	<i>Sports leisure activities</i>		<i>Leisure activities outside of sports</i>		<i>Together</i>	
<i>Žilina</i>	<i>N</i>	<i>%</i>	<i>N</i>	<i>%</i>	<i>n</i>	<i>%</i>
1st year	23	28.05	30	30.30	53	29.28
2nd year	18	21.95	28	28.28	46	25.41
3rd year	26	31.71	23	23.23	49	27.07
4th year	15	18.29	18	18.18	33	18.23
Together	82	100.00	99	100.00	181	100.00

1.2 Data collection tools

As a data collection tool, the MJT test was used to assess the level of moral competence of our respondents. At the beginning of the test, there are detailed explanations about the purpose and importance of the research provided, and a voluntary participation button is added too. Data are collected from students who read the information provided and agree to participate in the research. A key element of the test is the solution of two moral dilemmas: the doctor's dilemma and the workers' dilemmas. Each dilemma is assigned 12 arguments representing individual Kohlberg levels of moral reasoning, which justify the motives of the participant's actions (6 arguments defend the participant's action and 6 condemn the participant's action). The respondent expresses his/her degree of agreement or disagreement with the actions of the main participant on a scale (- 4; 4). The MJT expresses an individual's moral competence through the C-score, which reflects the respondent's ability to argue based on moral principles. The C-score takes on values of 0-100, with a score of 0-9 being low, 10-29 medium, 30-49 high and above 50 very high. The higher the value of the score, the more consistently the respondent achieves a higher level of moral competence and makes decisions when solving moral dilemmas.

Cronbach reliability coefficient Alpha was calculated as 0.78 for the general scale, which we can consider a satisfactory value in terms of the internal consistency of the arguments defending and condemning the main participant's actions.

1.3 Data analysis

By means of the Shapiro-Wilk test, we tested the normality of the distribution of all dependent variables of the research sample. We evaluated the results of normality testing of dependent variables (C-score).

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Table 2

Normality of distribution - Experimental and control group 1st grade

<u>Shapiro-Wilk Test</u>		<u>Shapiro-Wilk Test</u>	
<u>Experimental group</u>		<u>Control group</u>	
W- stat	0.947159	W- stat	0.959794
p -value	0.353162	p -value	0.410391
alpha	0.05	Alpha	0.05
normal	yes	Normal	Yes

Table 3

Normality of distribution - Experimental and control group 2nd grade

<u>Shapiro-Wilk Test</u>		<u>Shapiro-Wilk Test</u>	
<u>Experimental group</u>		<u>Control group</u>	
W- stat	0.90935057	W- stat	0.955702
p -value	0.09754406	p -value	0.29371
alpha	0.05	alpha	0.05
Normal	yes	Normal	Yes

Table 4

Normality of distribution - Experimental and control group 3rd grade

<u>Shapiro-Wilk Test</u>		<u>Shapiro-Wilk Test</u>	
<u>Experimental group</u>		<u>Control group</u>	
W-stat	0.9636173	W-stat	0.955839
p-value	0.5152748	p-value	0.409992
Alpha	0.05	Alpha	0.05
Normal	yes	Normal	yes

Table 5

Normality of distribution - Experimental and control group 4th grade

<u>Shapiro-Wilk Test</u>		<u>Shapiro-Wilk Test</u>	
<u>Experimental group</u>		<u>Control group</u>	
W-stat	0.907477409	W-stat	0.949993
p-value	0.144833929	p-value	0.456414
Alpha	0.05	Alpha	0.05
Normal	yes	Normal	yes

Tests of normality of the dependent variable C-score for all groups in individual years show a normal distribution of the dependent variable C-score.

2 Findings

In this part of the research, we test the relationships between variables and examine the effects of independent variables - sports activities on the level of moral competence expressed through the C-score from the MJT test.

Formulation of hypotheses:

$$H_0 - \mu_1 = \mu_2$$

There is no significant difference between moral competence expressed by the value of C-score between students who do sports and those who do not do sports in one grade of secondary school at the significance level of 0.05.

$$H_1 - \mu_1 < \mu_2$$

Doing sports increases the level of students' moral competence expressed by the C-score at the significance level of 0.05.

To test the hypotheses, we used the T-test for two independent samples for the mean value of normal

μ-Excel-program division - Real add-on Statistics.

Table 6

Results of testing pupils in the 1st to 4th grades

<i>T-test, Alpha 0.05</i>	<i>p-value</i>	<i>t-value</i>	<i>M1</i>	<i>M2</i>	<i>Sig</i>
1st year	0.349	0.389	31.33	29.45	Well
2nd year	0.106	1.257	16.82	13.04	Well
3rd year	0.163	-0.987	14.53	18.41	well
4th year	0.030	-1.910	17.17	86.36	yes

The results of the T-test show that in the first three grades of the sample group of secondary school students, there are no significant differences in the distribution of the level of moral competence of secondary school students of the experimental and control groups at the level of statistical significance of 0.05. The results of the T-test in the fourth grade of a sample of secondary school students show a significant difference in the distribution of the level of moral competence of high school students of the experimental and control groups at the level of statistical significance of 0.05.

3 Discussion

The aim of the research was to determine the impact of sports leisure activities on the level of moral competence of secondary school students. In the research, we paid attention to determining the moral competence of students of different ages in secondary school. Based on the aim of the research, the following hypothesis was established. Students from the secondary school sample who are engaged in sports leisure activities and students who do not do sports, as well as students from different grades, will not differ significantly in the obtained C-score of moral competence.

Based on statistical testing, it is clear from the research results that the hypothesis was confirmed in the first three grades of secondary school and the p-value was higher than the level of significance (1st grade p-value=0.349; 2nd grade p-value=0.106; 3rd grade p-value=0.161). We have found that leisure sports activities do not have a significant impact on the level of moral competence of pupils in the first three monitored grades.

The hypothesis was not confirmed for 4th grade students where the p-value was lower than the level of significance (p-value=0.030). Leisure sports activities have an impact on the level of moral competence in this group of students.

When interpreting the results, the limits of the research must be taken into account (the sample is from only one secondary school, intervening variables and theory).

The results of the research showed that leisure sports activities have an impact on the level of moral competence of secondary school students, mainly in higher grades. The stated conclusions of the research are consistent with similar studies carried out so far on the measurement of the moral competence of pupils and students in that the level of moral competence changes with age.

In the Czech Republic, Slováčková (2001) dealt with a similar issue and represents probably the first research in the field of student morale at the Faculty of Medicine. To carry out the research, the author used the adopted MJT methodology (Lind, 1985). She applied the Slovak modified version of the test of moral judgments (Lajčiaková, 2003; 2004).

The following main conclusions emerge from the above mentioned research. Moral competence among Czech students decreases significantly during their medical studies (with increasing age and academic year) and increases insignificantly among foreign students. Students' moral attitudes do not change during their medical studies.

The results of our research basically correspond to the results of a similar research by Klimešová (2007), which dealt with the relationship between moral competence and life satisfaction of secondary grammar school students. For research purposes, the author chose the MJT methodology (Lind, 1996). The results obtained by the author and statistically processed show the low

significance of the relationship between satisfaction with life and the moral competence of the respondents. The perception of subjective satisfaction among secondary grammar school students is not related to moral competence. The above mentioned research further confirmed that men and women do not differ in moral competence scores. According to the findings, gender does not belong to the determinants affecting moral competence.

Kaliská and Kaliský (2014) published conclusions from the test of moral competence with the aim of its pilot verification with the intention of using it in determining the effectiveness of pedagogical intervention programs aimed at the development of moral qualities of personality.

Reliability in terms of internal consistency and test -retest stability of the results achieved by the Slovak version of the MUT test was verified on a deliberately selected sample of university students of ethics education (N=63) and teachers of ethics education from practice (N=51). The statistical analysis showed a sufficient degree of reliability of the MCT test, and when assessing the differences in the level of moral competence between students and teachers of ethics education, surprisingly, no significant differences were found.

The results of the research confirm that sports ethics (the internal morality of sports) affects the general ethics and moral judgment of a secondary school student and his moral qualities measured by the level of moral competence. However, the influence of leisure sports activities is manifested in the upper grades of secondary school.

Conclusion

Due to its nature, sport provides enormous opportunities for social interactions, and since children and youth often enter the sports environment, sport has a quite fundamental influence on their socialization in society. " ...sport, among other things, supports the development and strengthening of identity and, consequently, social integration." (Slepička, Hošek, & Hátlová, 2006, p. 99). Any physical activity develops an individual's whole personality, not just his physical condition, and therefore sport has an impact on an individual's psyche and on how his/her ranking of values will look like. Sport entails the necessity to develop sports habits (regular regimen, time management, body care), which are the basis of healthy physical and mental development and an active lifestyle.

Although sportsmanship is the concept used in sports activities today, it is actually expressed as the basic moral judgments that are based on tolerance, respecting the sports environment, desiring to win properly, rejecting illegal manipulative activities (Zaki, 2014). The aim of sportsmanship behaviour is to reflect the fact that sport is a game by exhibiting more fair play behaviour rather than increasing violence in competitions (De Waal & Preston, 2017). In this context, athletes should stay away from unfair, non-fair play and ugly actions

against their opponents with the motivation to win or gain, and they should respect victory and defeat (Feezell, 1986). Sportsmanship includes sincerity, tolerance, honourable behaviour, courage, showing kindness, empathy, respect for the ideas of others, trust and generosity (Keating, 2007; Maranges et. al, 2021).

The key contribution of the research is the findings that students of individual grades of secondary schools differ in their level of moral competence depending on sports activities. The increase in the level of moral competence is manifested in the higher grades of secondary school. This means that older students achieve a higher level of moral competence than the younger ones.

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Academics' Intentions to Use Open Educational Resources (OERs) in Professional Development

***Erinç Karataş - Ayşe Bağrıacık Yılmaz - Serçin Karataş -
Phil Banyard****

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Abstract:

Introduction: Open educational e-resources (OERs) are one of the informational resources that are openly available to all. Open educational e-resources provide learners with free access to high-quality educational content and materials. Learners should be able to use, read, adapt, and share these resources freely. In this study, we aimed to examine academics' open educational e-resources usage intentions. We also tried to understand behavioral differences by collecting data from two different countries: Turkey and the United Kingdom.

Methods: The study employed a cross-sectional approach, which is one of the quantitative research designs. In cross-sectional studies, several variables (characteristics, behavior, attitude, etc.) are measured simultaneously. Data were collected using a questionnaire based on the quantitative research paradigm. In order to address the research problem, the two researchers of the current study developed this questionnaire based on field expert opinion, a literature review, and from the researchers' experiences. The questionnaire was initially developed in Turkish and then translated into English. In the current study 67 participants from Turkey and 18 from the United Kingdom have answered all the items of the questionnaire.

Results: In this study, the academics were found to be more inclined to use existing resources (81.39% for Turkey, 72.72% for the United Kingdom) than to generate e-resources of their own (47.67% for Turkey; 50% for the United Kingdom). The frequency for the usage of open educational e-resources for Turkey is 97 and 6 for the United Kingdom. The frequency number of open educational e-resources per participant from the United Kingdom averaged as less than one. Similarly, academics did not find beneficial the use of social media

* Erinç Karataş, Ankara University, Ankara, Turkey; ekaratas@ankara.edu.tr
Ayşe Bağrıacık Yılmaz, Aydın Adnan Menderes University, Aydın, Turkey;
ayse.yilmaz@adu.edu.tr
Serçin Karataş, Gazi University, Ankara, Turkey; sercin@gazi.edu.tr
Phil Banyard, Nottingham Trent University, Nottingham, UK; phil.banyard@ntu.ac.uk

(frequencies for Turkey and the United Kingdom is 136 and 45) and video-hosting sites (frequencies for Turkey and the United Kingdom is 93 and 31). We can see that the academics expressed benefitting from e-resources whilst preparing new content ($\bar{X}_{TR}=1.12$, 82.09%; $\bar{X}_{UK}=0.78$, 77.78%, respectively) or enriching current content ($\bar{X}_{TR}=1.25$, 88.06%; $\bar{X}_{UK}=0.94$, 83.33%, respectively); engaging existing content ($\bar{X}_{TR}=1.10$, 80.60%; $\bar{X}_{UK}=0.89$, 72.23%, respectively) or for preparing interactive course content ($\bar{X}_{TR}=0.73$, 74.63%; $\bar{X}_{UK}=0.94$, 83.33%, respectively). The participant academics from Turkey generally reported finding e-resources to be useful in the long term ($\bar{X}_{TR}=1.13$, 83.59%), and think that they will contribute to their interdisciplinary studies ($\bar{X}_{TR}=0.81$, 71.64%). Like the academics in Turkey, academics from the United Kingdom reported finding e-resources to be useful in the long term ($\bar{X}_{UK}=0.67$, 66.67%). The academics from both countries stated that if they had more time ($\bar{X}_{TR}=1.13$, 80.59%; $\bar{X}_{UK}=1.11$, 83.34%, respectively), and if e-resources were customized more according to their needs ($\bar{X}_{TR}=0.61$, 64.18%; $\bar{X}_{UK}=0.44$, 55.56%, respectively), and they had a basic level of technology literacy ($\bar{X}_{TR}=0.76$, 68.66%; $\bar{X}_{UK}=0.89$, 68.34%, respectively), they would likely use and benefit from e-resources more frequently.

Discussion: Being familiar with open educational e-resources positively affects attitudes towards open educational e-resources; therefore, academics should be encouraged to become better acquainted with the development of open educational e-resources. However, academics are ready to use and develop open educational e-resources. Managers could help to incentivize academics in this regard. In the current study, open educational e-resources preferences seem quietly low. We can especially say that the academics from the UK stated that they rarely use open course materials to learn something. It may be necessary to increase the general awareness of academics about OERs for social media and video-hosting sites as they are among the less preferred OERs. In short, the habits of academics to use OERs can vary culturally. When we compare the results for the two countries, we can say that academics from Turkey have a more positive view of using e-resources for learning purposes compared to those from the UK. Academics from both countries find the use of e-resources useful in the long term, but especially participants from the UK have neither positive nor negative opinions (approximately 50%) about utility perceptions in terms of means of working interdisciplinary, contributing their career, getting certificates, enhancing their professional recognition, making different them from their colleagues, and increasing their level of professional satisfaction. When the necessary conditions are met, academics tend to use e-resources more, and they do not overestimate the problems they face, such as the language barrier.

Limitations: As one of the limitations of the current study, the data collected from the United Kingdom was considerably less than that collected from Turkey. Despite periodic reminders having been sent out with regards to the data collection form to academics working in the United Kingdom, only 41 instructors intended to answer the form and only 18 of those gave answers to all items of the questionnaire.

Conclusions: This research study has shown that academics both intend to and utilize educational e-resources (including open educational e-resources) for the purposes of their own professional development; however, the results of the study have also revealed the need to increase usage more widely in this area. The current study has shown that academics working in Turkey had slightly higher e-resource usage than those working in the United Kingdom. Additionally, it can be said that the open educational e-resources usage intentions of the academics from Turkey was higher as well. Whilst the results of this study are not generalizable due to the limited sample size, academics' open educational e-resources usage intention is a promising topic of study for the future. Furthermore, it is clear that educational e-resources could be more widely employed for the purposes of professional development, regardless of the country or level of education.

Key words: open educational resources, higher education, academics' professional development, educational e-resources.

Introduction

Providing access to learning regardless of age and position in society, with the use of new information and communication technologies, emerges as a priority at every stage of life and brings new possibilities (Simándi, 2018). One of the most important skills that 21st-century individuals are expected to possess is the ability to use information technologies in order to research, evaluate, organize, and relate qualified information that is necessary for them to know from a wide variety of informational resources available via the Internet (P21, 2019). Open educational e-resources (OERs) are one such informational resources that are openly available to all, and can be utilized as a good solution to meet the increasing informational needs of today's individuals.

The term OERs was first defined by UNESCO as, "The open provision of educational resources, enabled by information and communication technologies, for consultation, use and adaptation by a community of users for non-commercial purposes" (UNESCO, 2002, p. 24). OECD (2007) then defined OERs as, "digitized materials offered freely and openly for educators, students, and self-learners to use and reuse for teaching, learning and research" (p. 97). Therefore, anyone can legally and freely access, copy, use, adapt, and re-share material from OERs (UNESCO, 2019).

Openness includes two important aspects: free availability, and as few restrictions as possible. When trying to reach or use an open resource, there should be no technical, financial, or legal permission barriers encountered (Hylén, 2006). OERs provide learners with free access to high-quality educational content and materials, and learners should be able to use, read, adapt, and share these resources freely (Hylén, 2006; Willems & Bossu, 2012).

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However, Pawlowski and Bick (2012) stated that not all OERs are altruistic or non-commercial, and accordingly, they have considered the term as freely accessible resources but for educational purposes only.

Emergency Distance Education, which was exercised widely in response to the COVID-19 pandemic, deeply affected all segments of society, and especially affected were students and educational instructors. For institutions that were unprepared for distance education or had little or no prior experience, OERs were seen as a means for such institutions to freely access important support materials for direct use by their stakeholders. During this period, many institutions such as UNESCO and Creative Commons opened calls and organized websites to prepare OERs that could be shared with those in need (Creative Commons 2020; OER4Covid 2020). In addition, institutions such as digital libraries and publishers that offered paid access to their digital content changed their services in order to support public access to OERs and to other resources during the initial pandemic lockdown period, with numerous materials made available free of charge (Schaffhauser, 2020).

As a broad term, “learners” includes not only enrolled students, but also any individuals who are willing to learn. People from any profession might take advantage of OERs as a learner for the purposes of driving their own personal and professional advancement. In the published literature, it is possible to locate various research studies based on the use of OERs by those employed in many fields.

Kitching, Winbolt, MacPhail, and Ibrahim (2015) conducted a study with managers and other high-level clinical and executive staff. According to the researchers, staff and managers were seen as cautious about the use of social media for the purposes of professional development. Social media offer certain advantages such as contemporary information that is delivered rapidly and in varying formats yet has several obstacles such as issues surrounding the credibility of information, potential misinterpretation, sector demographics, and time constraints. Many of the study’s participants preferred formal e-learning platforms to web-based social media applications.

Academics involved in the teaching profession can utilize OERs for the purposes of both their own professional development and also for teaching purposes. In their research, Manca and Ranieri (2016) applied a questionnaire to academics throughout Italy, and determined that academics of any age used social media for both personal and professional purposes, and that it was the academics rather than teaching practitioners who used social media for these dual purposes.

Ozdemir and Bonk (2017) conducted a study on the use of OERs in professional development and education. The researchers aimed to determine Turkish teachers’ awareness of OERs, and their perceptions of the opportunities and difficulties in using such resources in teaching. The researchers collected data

through both questionnaires and interviews. At the end of their study, they determined that the time required to search for, select, edit, and apply OERs presented enormous challenges in their usage.

Donelan (2016) also determined that lack of time is an obstacle to the use of OERs for business or professional purposes. According to the study conducted with academics from the UK's Open University, the factors that motivated academics to use social media were stated as the encouragement of colleagues, self-development, maintaining networks, and widening networks. The more academics saw the positive outcomes of social media usage including career progression, the more motivated they were to use social media.

One of the social media platforms that can make use of OERs is Twitter. Carpenter and Krutka (2015), in their study conducted with K-16 teachers, found that teachers used Twitter for professional development rather than communication with other teachers or with their families. Twitter enables teachers to access novel ideas and to maintain their awareness regarding current innovations, trends, and advantages in education; especially those related to educational technologies. In addition, teachers can reach their colleagues with similar or new ideas via Twitter.

Tour (2017) determined how teachers use personal learning networks for professional development by working in-depth with three teachers. As a result of the study, it was seen that teachers used personal networks for information acquisition, aggregation, cooperation, collaboration, reflection, and for socialization. The researcher of the current study is of the opinion that in order to provide education through digital technologies, teachers should continue to maintain their professional development and that this is possible through personal learning networks. Prestridge (2017) found that teachers are using the existing knowledge instead of contributing to co-created knowledge within online professional development platforms.

Anderson, Gaines, Leachman, and Williamson (2017) examined the opinions of faculty members towards OERs. According to their study, faculty members had certain concerns about the quality, sustainability, and availability of OERs. Similarly, Hylén (2006) stated that faculty members were willing to share their resources, yet stated that they worried about how this could be done without losing their rights (Hylén 2006). In fact, whilst academics may not be far off from the usage and development of OERs, they may need some encouragement in this respect. For example, Todorinova and Wilkinson (2020) gave academics OER production courses in return for financial incentives and found that such courses were successful. However, they also determined that the incentives provided could be increased, and that the faculty members should be better supported by both their institutions and their libraries in developing OERs.

Anderson, Gaines, Leachman, and Williamson (2017) stated that in cases where the use of OERs as course content alone is insufficient, academics may think that OERs can be used at least to meet the supplemental material needs of their students. In addition, instructors need to continuously improve and update themselves in professional terms, and OERs offer a wide range of opportunities to faculty members as well as everyone else. Therefore, it is considered necessary to examine how well instructors are aware of these types of resource, and to study their thoughts on using them.

Zancanaro, Todesco, and Ramos (2015) examined 544 studies that were based upon OERs in a bibliometric study. According to the results of their research, the number of studies conducted in the field of OERs is increasing rapidly on an annual basis. The institution that has made the biggest single contribution to this increase has been the UK's Open University. Although the Netherlands and Spain follow the UK, it has also been observed that Anadolu University, a Turkish University and one of the world's largest open universities with more than three million students, was not included in the scope of their study. However, since 2006, the Turkish Academy of Sciences (TÜBA) has pioneered studies regarding OERs in Turkey. Although these recent studies may still lag behind the rest of the world, systematic studies continue to be conducted in many Turkish universities besides Anadolu University (Baysal, Çakır, & Toplu, 2015). The major motivation for the researchers of the current study was to research academics' usage intentions of OERs. In addition, the aim was also to compare the usage intentions of OERs of academic colleagues in two different countries based on two of the world's largest open universities.

1 Method

This section presents information about the research model, research sample, data collection tools, and data collection process of the study.

1.1 Model

The study employed a cross-sectional approach, which is one of the quantitative research designs. In cross-sectional studies, a number of variables (characteristics, behavior, attitude, etc.) are measured simultaneously (Büyüköztürk, Kılıç-Çakmak, Akgün, Karadeniz, & Demirel, 2011). Cross-sectional studies can be defined as an observational study that collects data on a particular subject from different participants at the same time (Cohen, Manion, & Morrison, 2013; Knowland, Purser, & Thomas, 2015). In the current study, data were obtained from participants in different countries, and the existing situation was revealed without need for manipulation.

1.2 Data collection tool

In order to address the research problem, the two researchers of the current study developed a questionnaire based on field expert opinion, a literature review, and from the researchers' experiences. The questionnaire was initially developed in Turkish and then translated into English for application in the two target countries. First, the questionnaire was translated from Turkish to English by two of the study's researchers, who are both Turkish. This translation was then checked by two English native subject-matter experts. The controlled questionnaire was then translated back into Turkish by two experts who spoke English as near-native speakers, but whose mother tongue was Turkish in accordance with the measurement tool adaptation rules. The back-translation result was then compared to the original version of the Turkish form. Since the meanings of the items were found to be similar, it was decided that the English version of the questionnaire was fit for use. The data collection tool was prepared electronically, and then sent to the academics who formed the study group of the current research. The questionnaire consists of two parts: in the first part, there are questions about the status and frequency of using OERs for educational purposes; in the second part, there are 42 items in 5-point Likert-type regarding the intention of academics to use OERs.

1.3 Sample

Data were collected from academics working in the UK and in Turkey. The sample was determined through an appropriate sampling method, which was based on time, money, location, and the availability of the location or respondents (Merriam 2015; Patton 2014). In total, 86 responses (89%) were received from Turkey, and 22 (54%) from the UK. Data were collected using the same method during the same period in Turkey and also in the UK. However, whilst 41 academics in the UK answered the questionnaire, only 22 completed all the questions given in the first part of the questionnaire. Meanwhile, data loss for the Turkish sample was limited to only 11 participants for the first part. So, Tables 1-13 are presented according to 86 responses from Turkey, 22 responses from the UK. However, since there was no inferential analysis included in the study, the difference between the number of participants in each country was considered not to pose a problem in terms of the data analysis. Distribution of the participants by country is shown in Table 1.

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Table 1

Distribution of participants by country

<u>Country</u>	<u>f</u>	<u>%</u>
Turkey	86	79.6
UK	22	20.4
Total	108	100.0

When Table 1 is analyzed, we see that 79.6% of the academics that participated in this research lecture in Turkey, and 20.4% lecture in the UK. Table 2 presents the distribution of the participants according to their university.

Table 2

Distribution of participants by university

<u>Country</u>	<u>University</u>	<u>f</u>	<u>%</u>
Turkey	Gazi University	40	37.0
Turkey	Ankara University	13	12.0
UK	Nottingham Trent University	11	10.2
UK	St Mary's University	4	3.7
Turkey	Necmettin Erbakan University	3	2.8
Turkey	Aydın Adnan Menderes University	2	1.9
Turkey	Kırşehir Ahi Evran University	2	1.9
Turkey	Hatay Mustafa Kemal University	2	1.9
Turkey	Karadeniz Teknik University	2	1.9
Turkey	Kırıkkale University	2	1.9
Turkey	Bozok University	2	1.9
UK	Newcastle University	2	1.9
Turkey	Ordu University	2	1.9
UK	University of Worcester	2	1.9
Both	Others ¹	18	0.9 (x18)

A total of six universities from the UK and 26 from Turkey contributed to the research. As researchers, we shared the questionnaire on our social media accounts. In addition, the UK-based researcher also distributed the questionnaire via e-mail. When compared to the UK, a greater number of academics from Turkey contributed to the study (see Table 2), which may be linked to the majority of researchers in this study being based in Turkey.

¹ Contributors with one participant: 16 universities in Turkey and 2 in the UK.

2 Findings

2.1 Online teaching experience

Table 3

<i>Online teaching experience (Yes/No)</i>			
<u>Country</u>	<u>Yes</u>	<u>Total</u>	<u>%</u>
Turkey	38	86	44.19
UK	12	22	54.55

Table 4

<i>Online teaching experience by country (average in years)</i>		
<u>Country</u>	<u>\bar{X}</u>	<u>SS</u>
Turkey	5.13	4.61
UK	5.80	6.43

When Table 3 is examined, the online teaching experience of academics working in the UK (54.55%) was seen to be slightly higher than those in Turkey (44.19%). However, when asked how many years the academics had been teaching online, the average of the two groups was much closer together (see Table 4).

2.2 Experience in utilizing/developing e-resources for educational purposes

Table 5

<i>Experience of utilizing and developing e-resources for educational purposes (Yes/No)</i>				
<u>Experience</u>	<u>Country</u>	<u>Yes</u>	<u>Total</u>	<u>%</u>
Utilizing	Turkey	70	86	81.39
	UK	16	22	72.72
Developing	Turkey	41	86	47.67
	UK	11	22	50.00

Table 6

Experience in utilizing and developing e-resources for educational purposes (average years)

<u>Experience</u>	<u>Country</u>	<u>\bar{X}</u>	<u>SS</u>
Utilizing	Turkey	9.26	5.89
	UK	9.60	6.20
Developing	Turkey	6.85	5.78
	UK	6.91	5.72

When Table 5 and Table 6 are analyzed together, it can be seen that, when compared to the study's participants from the UK, those working in Turkey benefit more from e-resources; however, approximately half of the participants from both groups have some experience in the development of e-resources. Notably, the experience of the participants in using e-resources was shown to be much more than their e-resource development experience. When we look at the number of years of utilization and development of e-resources, it can be seen that no significant difference exists between the groups. Additionally, it can be said that the groups' experiences of benefiting from e-resources are greater than their e-resource development experience, which may be interpreted as the academics gain experience of using e-resources before developing e-resources.

2.3 Experience of open course materials

Table 7

Using open course materials (Yes/No)

<u>Country</u>	<u>Usage status</u>		<u>%</u>	<u>Usage time (years)</u>	
	<u>Yes</u>	<u>Total</u>		<u>\bar{X}</u>	<u>SS</u>
Turkey	57	86	66.28	4.93	2.76
UK	9	22	40.91	3.67	1.15

Table 8

Number of open courses followed for educational purposes

<u>Country</u>	<u>\bar{X}</u>	<u>SS</u>
Turkey	4.74	7.81
UK	1.86	3.05

According to Table 7, the academics based in Turkey used open course materials more and for longer than those in the UK. Looking at Table 8, it is seen that the average number of open courses followed by academics in Turkey is higher.

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However, it cannot be said that the percentage of OER usage by academics in both groups was high. The open course materials platforms used by the academics are given in Table 9.

Table 9

OERs used by country

<u>OERs</u>	<u>Country</u>				<u>Total</u>	
	<u>Turkey</u>		<u>UK</u>		<u>f</u>	<u>%</u>
	<u>F</u>	<u>%</u>	<u>f</u>	<u>%</u>		
MIT Open Courseware	28	28.87	1	16.67	29	28.16
TÜBA OERs	23	23.71	0	0.00	23	22.33
WikiEducator	9	9.28	2	33.33	11	10.68
UNESCO	9	9.28	0	0.00	9	8.74
OECD	8	8.25	1	16.67	9	8.74
OER Handbook	2	2.06	0	0.00	2	1.94
Coursera	2	2.06	0	0.00	2	1.94
METU OCW	2	2.06	0	0.00	2	1.94
Other ²	18	14.42	2	33.33	20	47.75
Total	97	100.00	6	100.00	103	100.00

The questionnaire included a number of suggested OERs, namely MIT Open Courseware, Hewlett Foundation, OECD, UNESCO, Cape Town Declaration, WikiEducator, OER Handbook, OER Commons, TÜBA (Turkish Academy of Sciences) OERs, plus participants were able to add other OERs themselves. When Table 9 is examined, it can be seen that the three most utilized OERs were MIT Open Courseware, TÜBA OERs, and WikiEducator. Those OERs platforms with a frequency of one were grouped in Table 9 under the title of “others.” Whilst 86 participants from Turkey stated a total of 97 OERs ($X^- = 1.13$ OERs), 22 from the UK stated just six OERs ($X^- = 0.28$ OERs). Although Coursera is actually a massive open online course (MOOC), two of the participants described it as an OER. Looking at the average in general, we can also say that the OERs followed by the participants are diverse. However, in comparing Table 11 and Table 13, it can be said that the academics from the UK use OERs much less than social media platforms and video-hosting sites.

² OER Commons, 4 Turkish Universities’ OERs, 5 private and public Turkish institutions’ OERs, 2 MOOCs Elsevier, AIMS LMS, some audio and video materials from various resources, Hewlett Foundation, Cape Town Declaration.

2.4 Social media experience

Table 10

Using social media for education (Yes/No)

<u>Country</u>	<u>Yes</u>	<u>Usage status</u>		<u>Usage time (years)</u>	
		<u>Total</u>	<u>%</u>	<u>\bar{X}</u>	<u>SS</u>
Turkey	37	74	50.00	7.27	3.61
UK	6	22	27.27	4.73	2.28

According to Table 10, the academics from Turkey have been using social media for educational purposes more and for longer than those in the UK. This situation is similar to that reported for open course materials (see Table 7). It can be said that the level of using social media for educational purposes was low for both groups.

Table 11

Social media sites used by country

<u>Social Media Platforms</u>	<u>Country</u>					
	<u>Turkey</u>		<u>UK</u>		<u>Total</u>	
	<u>f</u>	<u>%</u>	<u>f</u>	<u>%</u>	<u>f</u>	<u>%</u>
Facebook	23	16.91	9	20.00	32	17.68
Academia.edu & Google +	24	17.65	5	11.11	29	16.02
ResearchGate	21	15.44	7	15.56	28	15.47
Twitter	16	11.76	9	20.00	25	13.81
Wikipedia	21	15.44	2	4.44	23	12.71
LinkedIn	11	8.09	8	17.78	19	10.50
SlideShare	11	8.09	3	6.67	14	7.73
Instagram	6	4.41	1	2.22	7	3.87
Edmodo	2	1.47	0	0.00	2	1.10
Publon	1	0.74	0	0.00	1	0.55
Yammer	0	0.00	1	2.22	1	0.55
Total	136	100.00	45	100.00	181	100.00

When compared to Table 9, it can be seen that the range of social media sites used for educational purposes was considerably wider. It is especially striking that the frequency of OERs stated by academics working in the UK was six, whilst the frequency of social media platforms stated was 45. It is understandable that the use of social media, which is an integral part of daily life today, was considerably higher. As indicated in Table 9, the limited usage of OERs suggests that it may be necessary to increase the general awareness of academics about OERs.

2.5 Video-hosting sites experience

Table 12

Using video-hosting sites for education (Yes/No)

<u>Country</u>	<u>Yes</u>	<u>Usage status</u>		<u>Usage time (years)</u>	
		<u>Total</u>	<u>%</u>	<u>\bar{X}</u>	<u>SS</u>
Turkey	58	70	82.86	7.14	3.15
UK	10	20	50.00	7.10	3.78

According to Table 12, academics in Turkey use video hosting sites more than academics in UK. The average number of years of their usage of these sites for educational purposes was similar for the two groups. However, when interpreted together with the other findings of the research, it is seen that the participants use video-hosting sites more than OERs and social media platforms.

Table 13

Video-hosting platforms used for educational purposes by country

<u>Video-hosting Platforms</u>	<u>Country</u>				<u>Total</u>	
	<u>Turkey</u>		<u>UK</u>			
	<u>f</u>	<u>%</u>	<u>f</u>	<u>%</u>	<u>f</u>	<u>%</u>
YouTube	58	62.37	10	32.26	68	54.84
Dailymotion	17	18.28	17	54.84	34	27.42
Vimeo	15	16.13	2	6.45	17	13.71
Lynda.co	1	1.08	1	3.23	2	1.61
MEB EBA*	1	1.08	0	0.00	1	0.81
Panopto	0	0.00	1	3.23	1	0.81
TEDx	1	1.08	0	0.00	1	0.81
Total	93	100.00	31	100.00	124	100.00

* Education Information web platform: Turkish Ministry of National Education

When Table 13 is examined, it can be seen that the most used video-hosting sites are YouTube, Dailymotion, and Vimeo. Academics in the UK use Dailymotion more than YouTube, but YouTube is more frequently used by academics working in Turkey, which may just relate to cultural habits.

2.6 Academics' intentions to use online educational resources for professional development

To get data for academics' intentions to use online educational resources for professional development, the second part of the questionnaire was applied. When the data are examined, we see that only 67 participants from Turkey and

18 from the UK answered all the items in the second part of the questionnaire. In Table 14, we compared the intentions of academics in the UK and Turkey to use OERs for the purposes of professional development. Questions as shown in Table 14 were asked to the academics in random order. The questions are grouped and interpreted accordingly, as well as their answers used to achieve a total score used to help interpretation. As the questionnaire consists of 5-point Likert-type 42 questions for the second part, we give -2 points to Strongly Disagree; -1 to Disagree; 0 points to Neither agree or nor disagree; 1 to Agree and 2 to Strongly Agree. So average point for every item is 0. Since the participation rate of the items coded as agree and strongly agree are high, the percentages of these two values are added together while giving the percentages, and similarly, the percentages of the two values encoded as disagree and strongly disagree are also summed.

2.6.1 Collaboration and communication

Based on the results, we can say that both the majority of academics from Turkey ($\bar{X}_{TR}=1.18$, 88.06%) and the vast majority of academics from the UK ($\bar{X}_{UK}=0.67$, 66.67%) use educational e-resources for cooperation and communication with their colleagues. However, we can also say that academics from Turkey seem abstaining to take the initiative in undertaking new studies or projects with colleagues they met through educational e-resources ($\bar{X}=-0.07$, 32.84%). We can say that most of the academics from the UK ($\bar{X}_{UK}=-0.61$, 66.66%) have more negative views on the usage of the educational e-resources for cooperation and communication with their colleagues. In Table 5, we see that academics are mostly benefiting (for Turkey 81.39% and for the UK 72.72%) from these resources rather than developing (for Turkey 47.67% and for the UK 50.00%) educational e-resources themselves.

2.6.2 Learning

Academics from Turkey frequently make use of e-resources when learning a new topic ($\bar{X}_{TR}=1.48$; 92.54%); accessing a topic or subtopic ($\bar{X}_{TR}=1.27$, 88.06%); learning a new topic in a structured way ($\bar{X}_{TR}=1.25$, 86.57%); improving their technological knowledge and skills using educational e-resources ($\bar{X}_{TR}=1.21$, 88.06%); improving their field-specific knowledge and skills ($\bar{X}_{TR}=1.12$, 92.54%); and acquiring new knowledge and skills about areas other than their specialism ($\bar{X}_{TR}=1.09$, 85.08%). The academics from the UK just frequently make use of educational e-resources to access a topic or subtopic ($\bar{X}_{UK}=0.94$, 83.34%). However, the academics both from Turkey and the UK disagreed with the idea that new skills and knowledge cannot be gained through e-resources ($\bar{X}_{TR}=-0.82$; 71.64%, $\bar{X}_{UK}=-0.67$, 66.66%, respectively). When we compare the results for the two countries, we can say that academics from Turkey have a

more positive view of using e-resources for learning purposes compared to those from the UK.

2.6.3 Teaching

Academics also use e-resources to improve their teaching; academics from Turkey have tendency to use e-resources in observing how their colleagues teach ($\bar{X}_{TR}=0.81$, 77.61%) and have the idea that using educational e-resources changes their academic perspectives ($\bar{X}_{TR}=0.60$, 65.67%). In addition, according to Turkish academics benefiting from e-resources increases the teaching motivation ($\bar{X}_{TR}=0.55$, 64.18%). Academics from the UK have positive idea that using educational e-resources changes their academic perspectives ($\bar{X}_{UK}=0.28$, 66.67%). When the items in this heading are examined, it can be said that especially the academicians in the UK do not have a distinctly negative or positive approach.

2.6.4 Preparing course content

In terms of developing course content, which is one of the dimensions of teaching, we can see that the academics benefit from e-resources while preparing new content ($\bar{X}_{TR}=1.12$, 82.09%; $\bar{X}_{UK}=0.78$, 77.78%, respectively) or enriching current content ($\bar{X}_{TR}=1.25$, 88.06%; $\bar{X}_{UK}=0.94$, 83.33%, respectively); engaging existing content ($\bar{X}_{TR}=1.10$, 80.60%; $\bar{X}_{UK}=0.89$, 72.23%, respectively) or for preparing interactive course content ($\bar{X}_{TR}=0.73$, 74.63%; $\bar{X}_{UK}=0.94$, 83.33%, respectively). When the items under this heading are examined, the percentages being higher than the other headings can be interpreted as a natural result of content preparation.

2.6.5 Utility perception

The participant academics from Turkey in this study generally reported that they find e-resources to be useful in the long term ($\bar{X}_{TR}=1.13$, 83.59%), and think that they will contribute to their interdisciplinary studies ($\bar{X}_{TR}=0.81$, 71.64%). Like the academics in Turkey, academics from the UK reported that they find e-resources to be useful in the long term ($\bar{X}_{UK}=0.67$, 66.67%). In general, under this heading, academics from both countries find the use of e-resources useful in the long term, but especially participants from the UK have neither positive nor negative opinions (approximately 50%) about utility perceptions in terms of means of working interdisciplinary, contributing their career, getting certificates, enhancing their professional recognition, making different them from their colleagues, and increasing their level of professional satisfaction.

2.6.6 Obstacles and enablers

The academics from both countries stated that if they had more time ($\bar{X}_{TR} = 1.13$, 80.59%; $\bar{X}_{UK} = 1.11$, 83.34%, respectively), and if e-resources were customized more according to their needs ($\bar{X}_{TR} = 0.61$, 64.18%; $\bar{X}_{UK} = 0.44$, 55.56%, respectively), and they had a basic level of technology literacy ($\bar{X}_{TR} = 0.76$, 68.66%; $\bar{X}_{UK} = 0.89$, 68.34%, respectively), they would likely use and benefit from e-resources more frequently. According to the Turkish academics, the fact that e-resources are paid is not considered as a major obstacle ($\bar{X}_{TR} = -0.93$, 73.13%). While the academics from the UK preferred not to use e-resources prepared in a language other than their own ($\bar{X}_{UK} = 1.22$, 77.77%), the academics from Turkey consciously used resources prepared in a foreign language ($\bar{X}_{TR} = -0.42$, 53.74%). The reason for this may well be that academics whose native language is English have no need for resources in other languages due to the large number of e-resources available in English. It is seen that the common views of the participants under this heading from both countries, when the necessary conditions are met, they tend to use e-resources more, and they do not overestimate the problems they face, such as the language barrier.

3 Discussion

In this study, the academics were found to be more inclined to use existing resources (81.39% for Turkey, 72.72% for the UK) than to generate e-resources of their own (47.67% for Turkey; 50% for the UK). Prestridge (2017) also determined that teachers tend to use existing resources rather than collaboratively produce online resources. However, Guo, Zhang, Bonk, and Li (2015) found that academics with previous online tutoring experience placed less emphasis on the challenges of developing OERs. Being familiar with OERs also positively affects attitudes towards OERs; therefore, academics should be encouraged to become better acquainted with the development of OERs.

Guo, Zhang, Bonk, and Li (2015) stated in their study that the factors that encourage academics to use OERs are not sufficient. However, academics are ready to use and develop OERs (Nkuyubwatsi, 2017) and MOOCs (Ab Jalil, Ma'rof & Omar, 2019).. Managers could help to incentivize academics in this regard; however, Kitching, Winbolt, MacPhail, and Ibrahim (2015) determined that managers are cautious about the usage of e-resources for professional development. Todorinova and Wilkinson (2020) offered financial incentives to academics in order to develop OERs and identified certain positive effects from offering such an incentive.

In the current study, OERs preferences seem quietly low. The frequency for the usage of OERs for Turkey is 97 and 6 for the UK. We can especially say that the academics from the UK stated rarely using open course materials to learn

something, so much so that the frequency number of OERs per participant averaged as less than one. Similarly, academics did not find beneficial to use the social media (frequencies for Turkey and the UK is 136 and 45) and video-hosting sites (frequencies for Turkey and the UK is 93 and 31). Chugh, Grose, and Macht (2020) also determined that academics used social media mostly to disseminate their own research and for personal reasons, but that most of the academics did not use social media for teaching purposes. Similar results were obtained in the current study.

Social media can contribute to the recognition of academics (Mazurek, Górska, Korzyński, & Silva 2020), and academics' usage of social media for personal reasons and for their own professional development is one of the results encountered in the published literature (Manca & Ranieri 2016). Still, the use of social media for teaching purposes by academics could be increased significantly. On this, Mustafa, Taha, Alshboul, Alsalem, and Malki (2020) determined that 83.9% of medical students used the YouTube platform for learning purposes.

If academics had a basic level of technology literacy ($\bar{X}_{TR}=0.76$, 68.66%; $\bar{X}_{UK}=0.89$, 68.34%, respectively), they would likely use and benefit from e-resources more frequently. Conversely, according to Atenas, Havemann, and Priego (2015), the educational value of Open Data appears to be an important component of research and scenario-based activities, where its distribution can improve communication and digital literacy and support the development of critical, analytical, collaborative and civic skills. Therefore, as the OER of Open Data, it can enable cooperation, discussion and participation mechanisms with local communities for their global citizens. The effect of having a lack of time, as was determined in the current study, has also been demonstrated in other studies (e.g. Donelan 2016; Ozdemir & Bonk 2017). However, COVID-19 has actually revealed the potential of OERs in saving academics considerable time, with OERs frequently used to maintain education during the COVID-19 period (Bozkurt, Jung, Xiao, Vladimirschi, Schuwer, Egorov et al., 2020; Zhou & Li 2020).

Conclusions, limitations and suggestions

This research study showed that academics use and intend to use educational e-resources (including OERs) for the purposes of their own professional development; however, the results of the study have also revealed the need to increase usage more widely in this area. In addition, academics make more use of existing resources and shy away from cooperation and the potential production of their own OERs. As stated in the literature, it would be useful to encourage academics in this regard.

The current study has shown that academics working in Turkey had slightly higher e-resource usage than those working in the UK. Additionally, it can be said that the OERs usage intentions of the academics from Turkey was higher as well. Whilst the results of this study are not generalizable due to the limited sample size, academics' OER usage intention is a promising topic of study for the future. Furthermore, it is clear that educational e-resources could be more widely employed for the purposes of professional development, regardless of the country or level of education.

One of the limitations of the present study is that the data collected from the UK is considerably less than the data collected from Turkey. Despite periodic reminders having been sent out with regards to the data collection form to academics working in the UK, only 41 instructors answered the form and only 18 of those gave answers to all items of the questionnaire. Therefore, the current research could be repeated with a larger sample in order to increase the generalizability of the research results.

Increasing the awareness of academics about the positive aspects of educational e-resource use may be beneficial. In addition, academics can be trained on educational e-resource usage and development. By following the works and projects of academics using educational e-resources, they may be rewarded as a means to encouraging other academics. Finally, since we consider that the usage of OERs has increased due to the COVID-19 pandemic, we recommend that the current study be repeated based on more current data.

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One and Done, or a Bundle and Stumble? An Exploration of Assessment Methods in Undergraduate Science Curricula

*Shelley Edwards**

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Abstract:

Introduction: Assessment, historically, has been done in a summative manner in post-secondary education (HE). Whilst useful for the purposes of grading and assessment of competency, there is also increasing pressure from post-secondary education institutions to meet certain standards in terms of education quality and graduate numbers, putting pressure on teachers to produce evidence of students' level of understanding and thus putting a greater emphasis on the use of summative assessments. The formative assessment approach for student learning is preferable in some fields, but how useful is this format for the science subjects?

Purpose: To discuss the utility of either summative assessments or formative assessments (or both) in science teaching at university level.

Methods: Exploration of the literature involving teaching science in university undergraduate courses (i.e., no formal search criteria).

Conclusions: A new category of assessment is needed - the integration of formative and summative assessment.

Key words: summative assessment, formative assessment, post-secondary education, science subjects.

Introduction

Assessment has historically been done in a summative manner, with the prolific use of class tests during a course and examinations at the end of a course. In post-secondary education, especially, examinations carry a large weight relative to the rest of the course evaluations. In essence, summative assessments are a reification of a student's total understanding of a subject. This proclivity to use

* Shelley Edwards, Rhodes University, Department of Zoology & Entomology, Grahamstown, South Africa; s.edwards@ru.ac.za

high-stakes testing has been described as an addiction (Lucido, 2010) and has led to a general emphasis on obtaining the ‘right’ grade rather than an emphasis on the student learning process (Lucido, 2015). Pinning the success of a student’s career on only one opportunity to shine places a large amount of stress on students to demonstrate their understanding in written form, and inevitably forces them to cram as much information as possible into their brains before exams, ultimately leading to students ‘spotting’ and stressing to the point of drawing blanks. While education seems to be on an unending treadmill to ‘reform’, this leads to an overuse of high-stakes testing (Engel, 2013). Angela Engel (2013) writes that “Reformers tend to accept the traditional methodologies and underlying assumptions of education, and advocate for change that supports these understandings. They commonly assume that what can be measured has the most value and promote high-stakes testing, performance pay, and a nationalized curriculum and assessment tool for every student.” The recent trend in post-secondary education is to allocate a larger proportion of the marks towards more formative assessments, with the idea that learning of the material is done in a more interactive manner that provides opportunity for peer-assessment. It also provides a platform for assessment that does not only require the students to show their understanding through writing and during practical sessions. In the scientific fields, this is likely more useful, as a student must have a good background understanding of theoretical concepts and also be proficient in relevant laboratory or field techniques for their discipline. Thus, here I will explore the pros and cons of having a summative assessment of the student’s knowledge at the end of a course, and the pros and cons of including more formative assessments that are scaffolded, building to a final knowledge base of both theoretical and practical/technical proficiency.

1 Summative assessment and formative assessments

“Assessment for learning is any assessment for which the first priority in its design and practice is to serve the purpose of promoting pupils’ learning.”
(Black et al., 2002)

Assessment of university coursework was initially done orally (in Europe from around the Middle Ages), and around the mid-1800s written examinations became more prevalent (Russell, 2002). This model of assessment persists today in many universities, likely due to the relative ease of grading and the need to judge student understanding for accreditation purposes. However, summative assessment tests the mastery of knowledge and does not necessarily facilitate student learning (Wiliam & Black, 1996). Assigning homework is a way for the teacher to assess the student’s understanding before the final examination, and

although research on whether homework enhances the student's understanding has been around since the early 1900s, no consensus exists regarding whether assigning homework improves a student's grade (Cooper et al., 2006; Trautwein & Köller 2003). In 1967, Michael Scriven coined the terms 'summative' and 'formative' assessment, and around the mid-1980s, research into whether formative assessment is a more effective way of facilitating learning took off, with Sadler (1989; 1998) providing a theoretical framework for formative evaluation. Originally described by Scriven as a way to assess the effectiveness of a curriculum, formative assessment purpose has changed to include a way to assess the student's knowledge and to facilitate learning, rather than just testing the level of understanding, as suggested by Benjamin Bloom in 1969 (Bloom 1969; Wiliam 2006; Yorke 2003).

The function and structure of formative assessment in schools has been developed in a number of papers by Wiliam and Black (Black, 2003b,c; Black et al., 2003; Black & Wiliam, 1998; Wiliam, 2000; Wiliam et al., 2004; Wiliam & Black, 1996), and Torrance and Pryor (1993; 1998; 2001), and in post-secondary education by Boud (1995) and Cowan (1998). A few reviews have explored the development and usage of both types of assessment (e.g., Taras, 2005; 2008), and it is now accepted that formative assessment is useful for evaluating a student's understanding before final judgement for grading. The fundamental difference between formative assessment and summative assessment is that formative assessment is dialogic (Yorke, 2003) and results in a more collaborative engagement between student and teacher with regards to the student's learning and understanding of the course material (Wood, 1987, p. 242). Additionally, the purpose of formative assessment is "developmental rather than related to measurement" (Yorke, 2003). Formative assessment provides an opportunity for deliberate practice, which enhances long-term acquisition of knowledge and skills (Campitelli & Gobet, 2011). Inherent in the structure of formative assessment is the idea that feedback is provided to facilitate learning, and not as a memorandum of mistakes made. The feedback needs to be formulated in such a way that gaps in knowledge can be identified, and ideally guidance as to how to bridge the gap between the level of the work being assessed and that of the required standard (Taras, 2005). Additionally, feedback given during formative assessment can help to develop working memory (in school children) or enhance working memory performance (in undergraduate students), which is useful for the shaping and development of skills and abilities necessary in order for a student to become an expert in their discipline (Cowan, 2014). An extensive review of formative assessment provided evidence that formative assessment is effective (Black & Wiliam, 1998) and previous studies surveyed students regarding how they valued organized formative assessment

sessions, the results of which indicated students valued the sessions highly (Carroll, 1995; Rolfe & McPherson, 1995; Vaz et al., 1996).

When deciding on the type of assessment to utilize in teaching, the criteria and goals of the assessment will be led by the intended function of that assessment (Scriven, 1967, p. 41; Taras, 2005). An understanding of the intended outcome of the assessment is needed and thus criteria should be clear to the teacher and the student, in order for the student to perform at their best. Without a context for why such content is being taught, students tend to merely perform the task and do not engage fully with the content. The ideal situation occurs when there is a positive deferred effect on learning (retention and application of previously acquired knowledge to new content), a concept discussed by Boud (1995), termed ‘consequential validity’.

In terms of workload, however, having only a single summative evaluation at the end of the course requires only studying and learning for that one evaluation opportunity, whilst some formative assessments necessarily require continuous work during the course. If students are taking multiple courses simultaneously (as is common in university degree courses), students may become overloaded and overwhelmed (Lucido, 2010; Chapter 7). On the flipside, US college students in the 21st century are no longer spending as much time on their academic coursework, compared to those in 1961 (Babcock & Marks, 2011) - a decrease likely attributed to better education production technologies, or to a change in the job market expectations for college graduates, or changes in the payer of post-secondary education, necessitating students to work whilst studying to be able to afford tuition.

The question remains, however, which assessment method enhances student learning, and ultimately to the production of competent graduates (Marks, 2022; Tamášová, 2022). One summative assessment opportunity may provide some information about the competency of the student in terms of their ability to retain information and communicate their knowledge in written form, but in modern-day science fields this particular skill is one of many required for a graduate to be considered a competent scientist. Thus, the inclusion of formative assessment (though in limited numbers to reduce potential overload in students) in undergraduate programs is imperative to provide students with the necessary practical and verbal skills for their future careers.

2 Assessments in post-secondary education science teaching

The distinction between formative and summative assessment lies fundamentally in determining the extent to which the student has achieved curricular objectives (Bloom et al., 1971), though the distinction remains quite fuzzy (Yorke, 2003). Whilst formative assessment in post-secondary education in the sciences has been increasingly incorporated into the syllabus in recent years, many

assignments in post-secondary education science classes, although presented in a formative manner by providing feedback during the learning process, are also summative in nature (these assignments are marked and these marks count towards the final mark for the student). This use is often due to teachers refusing to employ only formative techniques in their assessments (Black et al., 2003, p. 31), and secondly because the marks obtained from the summative portion of the assignments are used as evidence for student learning progression (Taras, 2001, p. 610). Therefore, there is an aspect of both types of assessment inherent in the assignments given. Due to the high stress and pressure that students are under in a science course, if the assignments are not for marks, many students either do not produce the work to the best of their ability, or in fact do not do the work at all. This kind of behaviour from students lends itself to the operant behaviourist way of learning (Skinner, 1974; Osborne & Dillon, 2010). If done in specific ways, formative assessments do allow for feedback and for students to verify that they are on the right track, or to pat themselves on the back in a continuous fashion.

Osborne and Dillon (2010) explored the background and underlying attributes of good practice in science teaching very well, so I will not explore that further here. However, I will highlight a few salient points regarding the teaching of science in post-secondary education.

As with any field, as new information and knowledge is acquired in various scientific fields, so too does the science curriculum in post-secondary education institutions. The value of science to society has increased over the last few decades, with many aspects of our lives becoming totally reliant on technology, and thus the roles and responsibilities of science teachers have changed in response (Dillon, 2002). New challenges faced by science teachers include the disparate level of understanding of scientific concepts by students taught at secondary schools from differing backgrounds. Compounding the difficulties inherent in teaching students with differing levels of acquired scientific knowledge is the decline in the level of interest in the key science and mathematics studies. High Level Group on Science Education (2007, p. 2): “In recent years, many studies have highlighted an alarming decline in young people’s interest for key science studies and mathematics. Despite the numerous projects and actions that are being implemented to reverse this trend, the signs of improvement are still modest. Unless more effective action is taken, Europe’s longer-term capacity to innovate, and the quality of its research will also decline. So, in introducing this chapter, we note that science teachers are tasked, throughout the world, with a set of almost Herculean challenges: make science lessons interesting; inspire pupils with wonder and excitement; increase the flow of scientists, entrepreneurs and technicians of tomorrow; and ensure that citizens and consumers understand the risks and benefits of modern science.” There

appears to be a discordance between increasing value of science in society (and therefore the increased need for more scientists in industry) and the number of students interested in pursuing a career in science. In developed countries especially, science as a subject is still not hugely popular in secondary schools (Osborne & Collins, 2000; Osborne & Dillon, 2008), largely due to the negative attitudes towards the subject (Osborne & Dillon, 2010; Osborne et al., 2003).

Teaching science in post-secondary education has changed from an attitude of lecturing to students, to facilitating the science student's learning. "Shifting pedagogic perspectives have been the major surface feature of the changes in discourse of science education in the metropolitan countries of the old imperial powers. Generally, we have moved from transmission views to more constructivist views. Older views of science as an empirical, inductivist enterprise with access to a knowledge base of an independent reality have been gradually eroded and replaced by newer constructivist views. These are not unitary (Solomon, 1994), but multiple. However, they all share a concern for the student's knowledge base as being idiosyncratic and biographical." (Monk & Dillon, 1995, p. 317).

Contrary to the humanities fields, the teaching of science necessarily needs to incorporate the tenets of the scientific method, namely:

1. Asking questions, predicting, and hypothesizing.
2. Observing, measuring, and manipulating variables.
3. Interpreting results and evaluating evidence.

This means that the teaching of science must involve assessments that are not purely written but are also applying knowledge and skills in practice. The major change was in terms of a shift towards more investigatory practical work than had previously been the case; students were encouraged to undertake experiments in a more exploratory manner (Osborne & Dillon, 2010). However, while historic science teaching focussed strongly on the teaching of the scientific method, in recent years the face of scientific investigation has changed (Bauer, 1992), emphasising the fact that scientists do not share a "common approach to logically deducing the knowledge that they derive about the world" (Osborne & Dillon, 2010). This idea of a shared 'scientific method' began with scientists in the first half of the twentieth century employing "logical positivism as a description of the method of science which saw the ideas of science as being logically deducible from observational statements" (Osborne & Dillon, 2010).

As technology changes, and the needs of the global community evolve, so do the methods employed in scientific investigation - a physicist investigating black holes in space will not employ the same type of scientific methodology as a zoologist in the field classifying species. In light of now almost disparate fields of science emerging and evolving, the teaching of science in post-secondary education likely needs to be tailored to the field of knowledge being taught, but

also incorporate assessments that are relevant to that field and to provide the skills development for the production of a competent science graduate at the end of the degree. Key skills developed during undergraduate science courses should include the ability to apply previous knowledge to novel situations (not just regurgitation of previous knowledge), creative thinking, and the ability to self-teach skills and knowledge (such as computer programming). It is a difficult task for a lecturer or supervisor in the post-secondary education setting to teach current knowledge to student, but with the understanding that the facts that they are teaching are likely to become obsolete or invalidated in subsequent years. Additionally, to know that our students will likely be using technology that we cannot yet imagine, means that we must be mindful of developing our students' ability to teach themselves new skills and programs. Given that it has been estimated that scientific knowledge is growing by a factor of 10 every 50 years, about half what science teachers are presenting as fact in their classrooms today will be wrong or obsolete in half a century from now (Arbesman, 2012). These are phenomenal statistics that further emphasises the need to teach our students not just the facts of the field of study, but how to keep up with changing (and improving) technology and how to teach themselves new knowledge. Whilst school science focusses on the processes of collecting data and analysing them, science teaching in post-secondary education shifts the focus to training the student scientist to learning how to develop explanatory models of the material world (Gilbert & Boulter, 2000). Thus, the shift in post-secondary education science teaching, starting in the mid-1980s, has moved from rote-learning of an enormous amount of science facts to facilitating new approaches that focus on the processes of science (Donnelly & Jenkins, 2001; Hodson, 1990).

2.1 Skills development in the sciences

Much of scientific investigation in industry currently requires a particular set of skills, not just a theoretical understanding of scientific concepts, but knowledge of e.g., laboratory techniques to obtain data. The use of formative assessment may be more crucial for the development of these skills, as some techniques could be dangerous if not done correctly. If a student is merely taught a technique during class, and then assessed summatively as to whether they can perform that technique or not, they may walk away from their degree with only a cursory understanding of the process. A worrying example would be if a medical student graduated with a medical degree only knowing 50% of their work - I certainly would not want to be treated by such a doctor! So, that was an extreme example, and one that would not happen (there are very stringent pass-levels for medical doctors), but my point stands - the student needs to know how to do the techniques well enough so as not to be a danger to themselves or others in their future career by performing that particular technique incorrectly. The use of

formative assessment in science teaching is, therefore, crucial so that the teacher may gauge the student's level of understanding of the processes and facilitate the development of the requisite skills set for a particular field.

One set of skills that may be taught inherently when using formative assessment is the ability to work in a group; a necessary skill in the modern scientist. Another skill inherent to being a scientist is time-management; managing a semester- or year-long project is important for learning how to balance responsibilities and workload in a student's life. Summative assessments do not provide the opportunity for group work, nor for developing time-management skills needed in the modern workplace. Additionally, while summative assessment can test the student's understanding of a skill, there is no space for feedback and learning from mistakes made. Thus, the student, having written an exam, will leave the course with a potential misunderstanding or even knowledge of incorrect methodology, as it was not corrected, only assessed for correctness.

Practical work has been employed in many post-secondary education science curricula as a way to teach practical skills requisite to a particular discipline. These forms of classes have been touted as the best way to teach techniques, and a form of teaching that cultivates a passion and a motivation to continue with studying science (though this has been contested by Abrahams & Millar, 2008). Practical work is "any science teaching and learning activity in which the students, working individually or in small groups, observe and/or manipulate the objects or materials they are studying" (Osborne & Dillon, 2010), and may include activities based on secondary sources of data (Lunetta et al., 2007). Although practical sessions are marginally more effective in improving students' learning over textbook-oriented alternatives (Atash & Dawson, 1986; Bredderman, 1983; Shymansky et al., 1983), they are useful in developing skills for more technical sciences (e.g., chemistry, zoology, entomology, biochemistry, microbiology) and certainly for the more applied sciences (e.g., biological control of invasive species, forensic science). Indeed, school students that participate in more 'hands-on science' during practical classes have been seen to perform better academically (Stohr-Hunt, 1996). Thus, the use of practical work greatly increases students' understanding of concepts and develop skills necessary for the modern scientist (including hopefully instilling the development of objective reasoning in the student), but having this as the only type of formative assessment in a science course may not be enough.

3 Effectiveness of formative assessment in science undergraduate classes

Formative assessment, in the context of classroom teaching pedagogy in order to develop learning as a learning goal (Black, 2003a,b,c; Wiliam, 1994; Wiliam, 2000a,b), is an assessment process (Taras, 2005; Torrance & Pryor, 2001; Wiliam & Black, 1998) as opposed to summative assessment, which is more of a judgement assessment. The process inherently involves contact between the teacher and student, with learning being facilitated through interactive activities. Such activities can yield good results, done well, but on their own are insufficient, and feedback is required from a product produced by the student. Formative assessment is only effective, therefore, if the feedback received contributes to the student's learning (espoused by Harlen & James, 1997). Due to this, many teachers structure formative sessions to include a summative assessment component, in order to provide feedback on the product (be it written work, an oral presentation, or another type of activity). The trend in science teaching is to use a combination of formative assessment and summative assessment (Taras, 2005), either because teachers essentially refuse to separate the two (Black et al., 2004) or because combining the two types of assessment is actually useful (Taras, 2001). Much of the resistance to incorporating formative assessment into traditional lectures can be attributed to the amount of time it would take to restructure lectures and classroom setups, even though formative assessment has been shown to be effective in improving learning outcomes with engineering students (Fisher, Zeligman, & Fairweather, 2005). Pedagogical strategies that have been proposed to enhance students' learning are, however, not discipline specific (Pascarella & Terenzini, 2005), and active and collaborative teaching can improve learning outcomes in STEM disciplines (Kuh et al., 2005, 2007). As learning is not necessarily an individual activity (Osborne & Dillon, 2010), formative assessment encourages verbal communication of knowledge and is useful in identifying knowledge gaps. Relatively recently, undergraduate students were asked whether their grade should reflect not only their performance, but also the effort that they put into the course (Tippin et al., 2012). The study showed that students, on average, thought that effort should constitute around a third of the grade. Grading the effort that a student put into an assignment is difficult, however, and a summative assignment structure would not enable the teacher to assess the effort (e.g., hours spent studying or researching the topic), only the performance of the student for that particular assignment. Although Bloom originally suggested that formative assessments would be less effective if they are graded (Bloom, 1969), a purely formative assessment is not preferred by students, as they feel as if their performance or effort is not rewarded (through grades) and may not participate as fully as when the assignment was graded (Zinn et al.,

2011). Finally, effort spent does not necessarily equate to competence, and in subjects where incompetence could lead to dire consequences (e.g., incompetence in a pharmacist could lead to incorrect dispensation of medicine), the aim of an undergraduate course must be to assess competence, not amount of effort put into a task.

4 Challenges to the use of formative assessments

Formative assessments require time; time for preparation by the teacher and the student, time for the engagement during the exercise, and time for reflection on the content presented during the exercise. For students that are enrolled in multiple classes, the expectation to participate in many formative assessments during each week may result in overwhelm and inevitably results in poor retention of knowledge. There is also the danger of teachers potentially ‘spoon-feeding’ students the knowledge that they require, and not allowing them to develop their own research and studying ability, but rather just leading them through the course. The structure of the formative assessments needs to, therefore, be carefully considered. There is also increasing pressure from post-secondary education institutions to meet certain standards in terms of education quality and graduate numbers, putting pressure on teachers to produce evidence of students’ level of understanding and thus putting a greater emphasis on the use of summative assessment (Yorke, 2003). Coinciding with these pressures to graduate greater number of students each year, the ratio between staff and students is growing in post-secondary education globally, leading to less individual attention being given to students. The demands on academic staff members have also increased, with roles and activities additional to teaching being added to their time (i.e., research outputs, generation of funding, community engagement and intra-institutional administration) (Yorke, 2003). These additional demands on academic staff have resulted in less time being devoted to teaching activities. Formative assessments have, therefore, been deemed as ‘time-intensive’ and therefore have not been incorporated as extensively into post-secondary education science curricula as they could have been.

Conclusions - New type of combined assessment proposed

I propose a new category of assessment is needed - the integration of formative and summative assessment, highlighted in the website for Education Services Australia, entitled ‘Formative use of summative assessment’ (http://www.assessmentforlearning.edu.au/professional_learning/formative_use_of_summative_assessment/formative_landing_page.html). As with many binary systems that were established in the past, many of these systems are being

updated to reflect current knowledge of that system and are being presented as a 'spectrum' of states. The use of only summative assessments has been shown to not be useful to facilitate student learning effectively, and the use of only formative assessment does not allow for post-secondary education institutions to produce an index of the level of the student's understanding (and also produce statistics for attainment standards). Thus, a use of both types, often both types in single assignments, is increasingly being used in post-secondary education science classes. Not only does the formative use of summative assessments allow for facilitated learning, but it improves the self-esteem of low achievers who may perform badly in summative assessments (Harlen & Deakin Crick, 2002) and it improves student performance (Hattie, 1999). Incorporating group-work and practical aspects into a curriculum and integrating an element of self-assessment into the formative assessment exercises, can promote a student's responsibility for their own learning and also provide an element of self-reflection of their knowledge level (Fairweather, 2008). The use of a combined approach to assessment may result in less time needed for preparation by the teacher (one of the biggest deterrents of using formative assessments for teachers), improved learning on the part of the student, and opens up a space within the classroom to bolster students' confidence in their performance level. While this concept of combination is not a new one, it is certainly an area of teaching pedagogy that requires further study, especially in the teaching of the sciences in post-secondary education.

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Literature Review of Studies about Violence at School and Recommendations for Teachers

Gülçin Karakuş*

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Abstract:

Introduction: Violence is a very complex and particular concept and it is difficult to make a precise definition, since acceptable and unacceptable behaviour patterns for each society vary according to social norms, time and value judgments of what harms that society. School violence results in students' loss of concentration, poor academic success, bunking of courses, and depression. Violence is a global problem, solution depends on an integrated approach in which educators, parents and learners work together. Considering negative consequences of violence, reduction or even prevention of violence at school will not only increase quality of education and training, but also support education process to become more productive. The aim of this review is to examine studies on school violence in literature, to determine causes of violence at school and present suggestions for solutions. This type of study may also have the potential to shed light on future work on violence in schools. For this reason, the purpose of this study is to examine the studies on violence at school and to present a review on violence prevention.

Purpose: The aim of this study is to examine the studies on violence at school in the literature and to compile the measures that can be taken to reduce violence in line with the recommendations stated in these studies. Violence is defined psychologically or physiologically as the unintentional negative action or force.

Methods: Considering the criteria of the study as a result of the preliminary examination, 66 articles were excluded and 42 articles were included in the study. Content analysis method was used to analyse the studies. First of all, data were coded and themes were formed. In order to confirm themes and codes researcher and a co-observer studied together.

Conclusions: As a result of the evaluation of studies on violence at school, the themes of gender inequality, personal factors, school organization and evaluation were reached. In studies conducted to prevent violence in the educational environment, it is stated that it is important to listen to students, to value students, to understand them, to provide a democratic environment in the school, to take measures in accordance with the different dynamics that direct the school, and to

* Gülçin Karakuş, Ministry of Education, Turkey; karakusgulcin@gmail.com

establish a strong bond between the school and the society and stakeholders. Suggestions of studies to prevent violence at school are explained in the themes of understanding, teachers' dedication, acting together, collecting, recording data, early intervention, teacher training programs, positive school environment, improving students' personal skills.

Key words: violence at school, students, literature review.

Introduction

Violence is a very complex and particular concept and it is difficult to make a precise definition for violence, since acceptable and unacceptable behaviour patterns for each society vary according to social norms, time and value judgments of what harms that society. Years ago, for disciplinary penalties, a kind of teacher violence in the classroom was considered as normal, but today it is not acceptable (Twemlow, Fonagy, & Sacco, 2004). In general, violence can be defined as deliberate application of physical force to another person or group and ultimately causing physical or psychological harm. Hamby (2017) also defines violence as premediated, undesirable, unnecessary and damaging behaviour. In another definition it is defined as the use of physical force to hurt "expressing it with anger emotion, intense quarrelsome, angry and often destructive action or power", "distorting, violating, hurting by disrespecting important issues" (Korkut, 2004). In line with its definitions, violence, which countries have worked hard to solve for many years, is a crucial problem caused by problematic behaviours, a broad and difficult concept to limit to a specific definition (Zulu, Urbani, Van der Merwe, & Van der Walt, 2004; Cawston, 2015). For instance, it would be insufficient to describe physical behaviours that only disturb a person as violence. Emotional violence, psychological violence, spiritual violence, or cultural violence are also considered as types of violence.

Violence has existed in human life for a long time. Its negative effects are seen in many parts of the world. Every year many people are exposed to problems caused by violence. Today, violence is encountered everywhere, from our living spaces, to business environment, from educational environment to social media (Dahlberg & Krug, 2006), moreover, it is unfortunately common in schools and school violence damages social support among students, school climate, management and policy (Astor, Benbenishty, & Estrada, 2009; Piotrowski & Hoot, 2008). Students' fear of violence decreases their academic performance, causes psychological problems, such as loss of attention and depression, and it also decreases their desire to learn (Le Roux & Mokhele, 2011).

For society to have a solid structure in future, today, schools must be peaceful environments and free from violence. The basis for this can be achieved through

restorative justice. Justice starts with paying attention to human rights, different cultures and individual differences. Separating students as bad students and good students, judging or humiliating students for their misbehaviour are practices of past education systems and are not useful anymore (Cavanagh, 2008). Each student is a different individual and there are different reasons for students' violent behaviour. The focus should be on the importance of determining factors that predispose to violence in educational environment rather than preventing violent behaviour after it occurs.

Each country takes precautions to prevent violence at school within its own means. Schools have different characteristics, such as their location, economic opportunities, social structure, and physical space, in this context, socio-cultural dimension, political and economic dimensions of violence prevention at schools should also be taken into consideration. So different applications or different measures are in question. Unfortunately, investments to prevent violence are not sufficiently paid in many countries' budgets. Although countries' policies state that they have made decisions in this direction, it is clear that needed care is not shown in practice (Parkes, 2016).

School violence results in students' loss of concentration, poor academic success, bunking of courses, and depression. Violence is a global problem, solution depends on an integrated approach in which educators, parents and learners work together. Students, educators and learners should be informed about types and forms of school violence, teachers should courage students to inform authorities about for instance bullying behaviour, the number of the security personnel should be increased, and corporal punishment should not be used by teachers to prevent school violence (Ncontsa & Shumba, 2013).

Nowadays, it is extremely critical to stop violence that negatively affects human life in many ways and to take fundamental measures. First of all, it is essential to know causes of violence in educational environment. It would not be valid to say that there is only one reason of violence at schools, all reasons are interconnected and affect each other (Leinhardt & Willert, 2002). In this context, teachers have many responsibilities as the closest witnesses of violence. Teachers are worried about violence increasing in schools and think that they are losing their authority, they also have deficiencies and different practices. Teaching in an environment of reluctant students, disciplinary problems, and disrespect for teacher makes the profession difficult. Teachers can be seen as the first witnesses of violence at school, as a filter to reduce these behaviours, yet, they cannot be seen as solely responsible for solution. Teachers, family, guidance service and school administration are all responsible for this issue (Blaya, 2003). Furthermore, school violence increasing day by day prevents productive education at school in targeted ways. Since teachers have problems in allocating time to education at

school due to their efforts to prevent violence (Yavuzer, Gundogdu, & Dikici, 2008).

Violence at school can actually be detected from parts of it as an iceberg. However, these visible aspects need to be recognized. Some of the reasons affecting violence can be listed as dominator value system, an overemphasis on negativity, and the pervasiveness of bullying. Dominator values are supported by violent sports, such as football, wrestling and hockey shown on televisions. Emphasis of negativity occurs when students constantly focus on negative thoughts and remain attached to negativity towards themselves and the world (Weinhold, 2000). One reason of this is media (Osler & Starkey, 2005; Piotrowski & Hoot, 2008). Society and students show a tendency to violence because media share violent events and extreme examples (Brown & Munn, 2008). Continuous broadcasting of violence on television and in press may cause students to perceive and adopt violence and bullying as normal. It will be supportive for media to be more careful about violence and to fulfil their responsibilities regarding the prevention of violence.

Schools sometimes blame students for violence, some schools define themselves as machine, others as a community. Some schools remain silent in case of violence. Schools' coping with violence depends on their organizational practices. (Watkins, Mauthner, Hewitt, Epstein, & Leonard, 2007). There are different balances of power in schools (socio-economic characteristics, authority, race and disability), that conduct schools (Dunne, Humphreys, & Leach, 2006; Blaya, 2003). Accordingly, school rules and different norms also cause behavioural changes. In struggling with violence, schools need a connection between difficulty and solution depending on its potential and opportunities (Watkins, Mauthner, Hewitt, Epstein & Leonard, 2007).

Violence cannot be tolerated and exaggeration of violent incidents results in a fear to spread in this direction. This fear also causes people not to go to places where violent incidents are common. Due to not wanting to go to places where there are violent incidents, disconnections occur in society. Even teachers can stay away from families with a tendency to violence. Teachers think that their inability to communicate with students' families has a negative effect on preventing violence (Smith & Smith, 2006).

Considering all these negative consequences of violence, reduction or even prevention of violence at school will not only increase quality of education and training, but also support education process to become more productive. In this study, the aim is to examine studies on school violence in literature, to determine causes of violence at school and present suggestions for solutions. In this study the reasons and suggestions of school violence are handled together. This type of study may also have the potential to shed light on future work on violence in

schools. For this reason, the purpose of this study is to examine the studies on violence at school and to present a review on violence prevention.

The research problems of this study are:

- What are the reasons of violence stated in literature?
- What are the suggestions to prevent violence emphasized in literature?

1 Methodology

This review aimed to examine studies about violence at school and recommend suggestions for solutions. Data were collected in 2020-2021 school year. Studies on violence in schools are published mostly in journals of sociology, psychology, medical, health and behavioral sciences. Due to the psychological and sociological dimensions of violence, studies on violence in education have been published in different journals. However, since the aim of the study is basically the suggestions of violence and solution in education, studies related to other fields are not included in this study. As a result of the search using “violence, school and education” keywords, many studies were found in literature. Inclusion and exclusion criteria for selecting the studies were determined. In choosing studies, the undermentioned criteria were taken into consideration. The studies should:

- be related to the violence at school keywords;
- be published in English;
- be published between 2000 and 2020;
- include suggestions for preventing violence;
- be empirical or theoretical;
- have full texts available;
- have an original structure;
- be published only in educational journals.

Studies were not included if they:

- had some moral and religious considerations (since this review was based on solely educational recommendations);
- included reflection of family violence at school;
- aimed to evaluate education policies for political purposes;
- involved individual armament or harmful habit (since both cases have individual and psychological features and fall outside the purpose of this study);
- reflected police records and reports;
- were research reports or final reports of studies;
- were published as a book or book chapter.

In Table 1 databases and number of studies were shown.

Table 1

Databases and number of studies

<u>Name of the database</u>	<u>Number of studies identified</u>
ResearchGate	27 studies
Tandfonline	20 studies
Sage	14 studies
Wiley Online	7 studies
Google Scholar	5 studies
Springer	5 studies
JSTOR	4 studies
Science Direct	3 studies
Routledge	3 studies
APA Psycho Net	3 studies
Taylor Francis	2 studies
Elsevier	2 studies
Semantic Scholar	2 studies
ACA	2 studies
ProQuest	1 study
Emerald Research	1 study
Academia	1 study
ERIC	1 study
AJOL	1 study
Science and Education	1 study
Library Iated	1 study
Love Publishing	1 study

Considering the criteria of the study as a result of the preliminary examination, 66 articles were excluded and 42 articles were included in the study. 45 articles were excluded from the study because the content of the journals they published was not suitable for the research purpose. 10 articles were published because of the feature of report, 1 article was family-oriented, 2 articles were not appropriate for ethic reasons, 1 article was published from the thesis, 3 articles were crime-oriented, and 2 articles were removed because the full text was not available. Figure 1 showed study selection process.

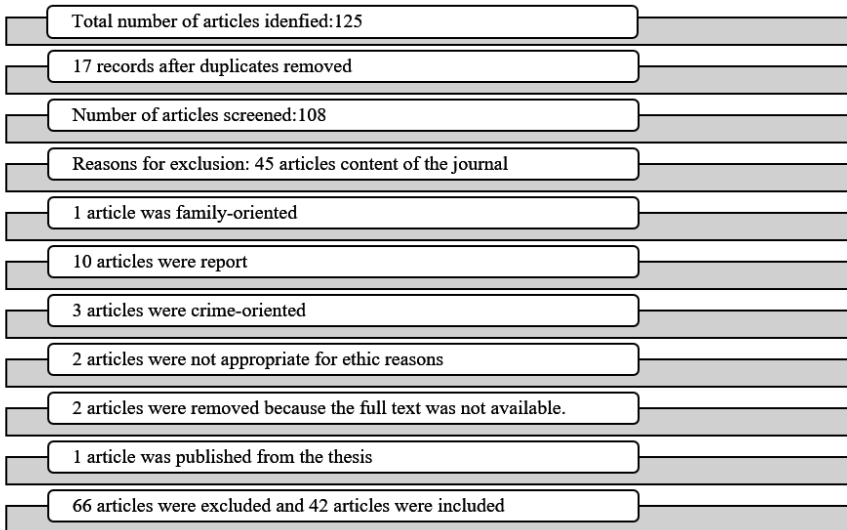


Figure 1. Flow chart of study selection procedure.

In this study content analysis method was used to analyse the studies. First of all, data were coded and themes were formed. In order to confirm themes and codes researcher and a co-observer studied together for reliability as suggested in literature (Lincoln and Guba, 1985; Glesne, 2012). Themes and codes were formed and inter-rater agreement were calculated. The reliability formula determined by Miles and Huberman (1994) was used to determine the inter-rater agreement of researchers.

$\text{Reliability Percentage} = \frac{\text{Agreement}}{\text{Total Agreement} + \text{Disagreement}} * 100$

The coherence of the researcher and co-observer was calculated as 82%. The coding was accepted as reliable since the result obtained exceeded 70 % (Miles & Huberman, 1994). The study was carried out in accordance with predetermined steps and in an impartial manner. While analysing the studies in the literature, care was taken to avoid the personal perspectives of the researcher and the co-observer. The author's opinion is included only in the conclusion and discussion sections.

2 Results

The studies in the literature are gathered under two main themes: reasons of violence at school and suggestions to prevent school violence. Gender inequality, personal factors, school organization and assessment are classified as reasons of violence. Understanding, teacher's dedication, acting together, collecting, recording data, early intervention, teacher training programs, positive school environment, improving students' personal skills are classified as suggestions to prevent school violence. Table 2 shows themes and studies about violence at school.

Table 2

<i>Distribution of studies and themes</i>			
Themes	Codes	Stated in studies	Frequency
Reasons for Violence	Gender Inequality	V2; V13; V17; V19; V23; V46; V58; V84; V70; V85; V92; V89	12
	Personal Factors	V3; V12; V13; V50; V58; V60; V70; V85; V102	9
	School Organisation:	V13; V70; V72; V102; V105; V107	6
	Assessment	V13; V70; V84; V105; V107	5
Suggestions to Prevent Violence	Understanding	V2; V13; V48; V50; V70; V89; V105; V106; V107	9
	Teachers' Dedication	V2; V12; V31; V48; V72; V73; V78; V85; V97	9
	Acting Together	3, 12, 48, 58, 71, 73, 105, 108	
	Collecting Recording Data, Early Intervention	V4; V15; V31; V64; V65; V72; V96; V97; V102	9
	Teacher Training Programs	V32, V46, V70, V71, V72, V103, V105	7
	Positive School Environment	V15; V19; V24; V31; V46; V50; V58; V65; V69; V70; V71; V73; V75; V102; V104; V107	16
	Improving Students' Personal Skills	V73	1

2.1 Reasons for violence in schools

As a result of the evaluation of studies on violence at school, the sub-themes of gender inequality, personal factors, school organization and assessment were reached.

2.1.1 Gender inequality

A literature review of studies indicates that one of reasons for school violence is gender. Violence in schools depending on gender may depend on unequal treatment of women in general, social injustice and social inequalities in society. Some other reasons can be gender-specific jobs and also norms determined on both genders (Dunne, Humphreys, & Leach, 2006; Dupper & Meyer-Adams, 2002; Parkes, 2016; Harber, 2002; Yavuzer, Gundogdu, & Dikici, 2008). Cowie (2000), in his study on gender difference, stated that it is difficult to give boys roles for instance they are desperate for, and this creates a problem for boys since it is against macho values. So culturally, overlooking violence of boys, inequalities in disciplinary practices, together with stress and anxiety cause violence at school (Barnes, Brynard, & De Wet, 2012). Girls and boys are different in nature, but it should not be considered reasonable for anyone to engage in violence because of this difference. Teachers' acceptance of differences in form of boy or girl behaviour as natural supports gender inequality. For example, acceptance of behaviours such as boys fighting or girls mocking each other cause inequality (Dunne, Humphreys, & Leach, 2006). The fact that girls sit in front rows and boys in back rows in classrooms can be an indicator for boys to be more dominant in class control. These all can be reasons why violence at school is more common among boys than girls (Fuchs, 2008; Yavuzer, Gundogdu, & Dikici, 2008; Cowie, Hutson, Jennifer, & Myers, 2008; Brown & Munn, 2008; Chen & Astor, 2008).

Another reason may be under-recognised form of gender-based violence. Compared to studies on violence due to ethnic and social reasons, the same attention is not paid to gender-based violence (Munn, Johnstone, Sharp, & Brown, 2007; Osler & Starkey, 2005). Gender-related violence cannot be considered separately from other forms of violence. Since, as other forms of violence, gender related violence also leads to undesirable consequences. For instance, girls' participation in education process is negatively affected due to gender-related violence (Parkes, 2016). In order to solve this problem, first of all, it should be noticed and then actions should be taken in favour of girls. Although negative results are noticed and some measures are taken in some countries, regional differences are evident. Understanding and resolving violence as a problem is more difficult, in undeveloped countries compared to developed countries because in undeveloped countries it is difficult to notice violence in all its dimensions. So, lack of awareness of gender-related violence, also prevents noticing and recording it (Munn, Johnstone, Sharp, & Brown, 2007; Parkes, 2016; Brown & Munn, 2008).

2.1.2 Personal factors

Another reason for school violence may be personal characteristics of students such as age, mood, and psychology (Parkes, 2016). There are many students in the same schools with different backgrounds; some students are older than others, some live in relatively larger families, and most of them live with single parents. Also unemployment and insufficient income, and no real commitment to teaching and learning can be affective for violent behaviour (Parkes, 2016).

The most obvious indicator of a student's future behaviour is his past behaviour. For example, a student who showed anti-social behaviour in the past is likely to do so in future (Morrison & Skiba, 2001). Teacher needs to know characteristics of students and reasons of violence. Understanding individual characteristics of students with a tendency to violence will make it easier to prevent violence. Students who are identified as having a tendency to violence can communicate with their teachers face to face and express their own feelings and thoughts in violence prevention training programs (Piotrowski & Hoot, 2008).

Youth disaffection is another personal reason for school violence. In a school environment injustice and inequality lead to youth disaffection and violence (Osler & Starkey, 2005). Family environment in which violence is experienced can cause student to feel guilty and worthless at school, to be depressed, to have difficulty in focusing, to feel anxious and consequently to show a tendency to violence (Le Roux & Mokhele, 2011). Some common student features who had violence tendency are; not wanting to attend school, low self-esteem, family structure, academic failure, difficulty in social adaptation, and exposure to violence, irritable personality, past discipline issues, bad habits, and cultural features (Yavuzer, Gundogdu, & Dikici, 2008). Moreover, some students personally may not want to be involved in a conflict situation and they only monitor events. This is called as bystander. Bystander means remaining silent in case of a fight or a problematic situation. Twemlow, Fonagy, and Sacco (2004) centralize bystander effect of violence at school as being unresponsive to violence at school increases violence when students watch violent fight or mockery. However, if students around give a reaction to violence, this reaction may decrease violence. A much worse situation is not only to remain spectators, but to cover fight area with arms in order to prevent intervention. Some students may want to watch violence by doing this. Similarly, in an environment where one teacher is violent to a student, other teachers being silent is an example of bystander effect for their students.

However, Piotrowski and Hoot (2008) also state that bystanders have a great negative effect in preventing violence. The reason for this can be that bystanders may be afraid of being in the centre of violence (Le Roux & Mokhele, 2011). Or in some other situations students may not be aware of what they can do to resolve conflict. Violence and bullying are somehow connected personal factors

and at school these two problems should never be regarded as normal and indispensable precautions should be taken (Piotrowski & Hoot, 2008; Cowie, Hutson, Jennifer, & Myers, 2008).

2.1.3 School organisation

Students who do not obey school rules or oppose administration may be the basis of violence at school (Goldstein, 2005). However, these students may not do this deliberately. Students' failure to obey school rules may not be to oppose authority or cause trouble, but that rule may have negative consequences for them. For example, the reason why coats are not hung on corridors may be that coats are at risk of being stolen in corridors, rather than not following this rule. On the other hand, disciplinary penalties for preventing violence at school can lead to negative consequences, social isolation and more violent acts (Osler & Starkey, 2005). For example, suspension and expulsion processes, in particular, can direct students to violence (Yavuzer, Gundogdu, & Dikici, 2008). So, student may feel excluded and differentiated depending on such disciplinary penalties. A student who feels separated from other students due to the punishments he or she has received may feel anger and tend to be violent. Furthermore, some discourses and practices that may cause racial discrimination (due to ethical reasons) can also be cause of violence at school (Morrison & Skiba, 2001).

Unfair, random, incomprehensible and unclear rules (Edwards, 2001; Gable & Van Acker, 2000) are among reasons why students do not obey school rules. It is also essential for children to acquire resilience skills because with the help of these skills, they can cope with difficulties, solve problems, have critical and creative thinking skills, and gain autonomy. Schools are moral communities, but they should release student to a certain extent, individual freedom is a basic condition for a student. Schools should be democratic, independence and social values should run together. Then students can feel that they belong to school and do not resist.

Yavuzer, Gundogdu & Dikici (2008) summarizes reasons for school violence as unfair practices, feeling of not being safe at school, freedom for students, large student group, structurally bad look, lack of security measures, school building size, social feature of school, less educational program options, less activities that can be done after school, low social environment.

2.1.4 Assessment

Assessment procedures are one of reasons for school violence (Harber, 2002; Yavuzer, Gundogdu, & Dikici, 2008; Osler & Starkey, 2005; Edwards, 2001). Standard, rule-oriented, test-oriented, oppressive and problematic schooling systems increase violence at school, as they classify students (Goldstein, 2005).

Traditional tests and score oriented schools lead to violence, however, students want to study in a different and comfortable educational environment, and tests are a pressure for students. And they also negatively affect students (Edwards, 2001). Traditional assessment is mostly depending on pen and paper exams, or multiple choice and true false questions which gives limited options and exposes low level cognitive skills. They cause anxiety and just give snapshots of students' knowledge. For example, using portfolios instead of them is more relaxing for students in terms of grading (Edwards, 2001). In an environment where alternative assessment methods are used instead of traditional assessment methods, student gains self-esteem and thus becomes more optimistic.

2.2 Suggestions to prevent school violence

Suggestions of studies to prevent violence at school are explained in the themes of understanding, teachers' dedication, acting together, collecting, recording data, early intervention, teacher training programs, positive school environment, improving students' personal skills.

2.2.1 Understanding

Dunne, Humphreys, and Leach (2006) suggest that precautions to prevent gender violence should have multiple dimensions. A holistic and systematic understanding should be created and all components should be taken into account. Community culture and traditional factors should form basis of these dimensions. Investigating causes of violence in depth, drawing public's attention to this direction, and making efforts to inform society will also help to prevent violence. Since school is an institution that shapes society and gives citizenship awareness, first of all it is decisive to be determined to prevent violence in society (Le Roux & Mokhele, 2011).

Secondly students' emotional and developmental needs should be taken into account as well as their academic progress (Leinhardt & Willert, 2002). Beyond grading, teachers should look into eyes of students, listen to them carefully and make them feel valued. Moreover, the psychologist or guidance service of school should provide a cohesive environment and support different students to live together in harmony (Yavuzer, Gundogdu, & Dikici, 2008). Psychologist should determine group dynamics and organize interpersonal relationships (Edwards, 2001).

Talking to students, listening to them, caring about what they think can reduce violence. It is essential for adults to listen to what students are saying, not to make decisions for them, but respond to their needs. Talking about problems, approaching problems from a realistic perspective can prevent violence behaviour (Goldstein, 2005).

In order to prevent violence at school, developing teacher-student interaction should also be seen as a helpful mean. Teacher is primarily responsible for supporting social and psychological development of students and for accessing education in a safe environment. For this reason, teacher should be a role model for students. Students may not be the only victims of violence at school. Violence at school can be directed not only at student but also at teacher from time to time. The reason for this is expressed by students as they think that teacher is not valuing them and insulting them. So teacher should value and care for students (Chen & Astor, 2008).

Harber and Sakade (2009) propose peace education as an alternative solution to prevent violence. Peace education means finding a common solution that everyone can approve, without hurting anyone, in the process of dealing with conflict, understanding oneself and friends, respecting each other, communicating and cooperating. Peace education prevents aggression and supports positive relationship. In their study Harber and Sakade (2009) state that students obey rules they have set themselves more. Taking the opinions of students in determining school rules can ensure that students obey rules. In case of conflict, asking a question about what happened instead of a punitive attitude, allows student to see problem. A students can also understand the reason of the problem in this way. However, teachers' not knowing what peace education is and their excessive workload and some school administrations' concerns about hierarchy and authority also prevent this situation. Schools need to be listening schools and listen to students. Listening to students' opinions and suggestions and paying attention to them is impressive in preventing violence. Involving young people in decision-making process will reduce violence in schools (Osler & Starkey, 2005).

2.2.2 Teachers' dedication

Teachers' dedication to education, training and to students will be useful in preventing violence at school. They need to establish a strong bond with society, generate ideas and take responsibility to ensure school safety. Teachers must support student's emotional and social development as well as academic. They should know how to deal with violence and bullying, establish a collaborative work environment and be in constant communication with all participants, follow school procedures and disciplinary work, and strive to reduce violence at school with a community-based education approach (Leinhardt & Willert, 2002). Moreover, Teachers should be collaborative and educative rather than authoritarian, and establish dialogue in classroom environment (Cremin & Guilherme, 2016).

Bullying is a factor that is harmful in every environment in society and increases violence at school. However, here teachers should pay attention to the fact that

there are differences between bullying and peer conflict. Bullying includes harm and is a long-lasting, challenging concept. Peer conflict, on the other hand, is a situation where mutual relationship is valued, which can be resolved by communication, resulting from students' inability to express their ideas. Teachers should know difference and act accordingly. Providing teachers with conflict resolution training, providing students with anti-bullying training, and providing a violence preventive environment can help to prevent violence in schools (Weinhold, 2000).

In order to reduce violence, teachers should know student, their families, the characteristics of society they live in and share information about themselves, be an interactive teacher, not a lecturer, do not label student, ask for help from their colleagues in case of problems, talk about what can be done with a group of students in solving the problem and making a decision together (Cavanagh, 2008; Piotrowski & Hoot, 2008). They should not punish students. Punishment of teachers or beating students in schools gives message that discipline is provided by bullying (Dunne, Humphreys, & Leach, 2006). For this reason, teachers should approach student with love and compassion and take urgent precautions beforehand when they realize that there is a tendency to violence (Piotrowski & Hoot, 2008; Gable & Van Acker, 2000). Teacher can identify root cause of school violence when s/he understands student's perspective on event. Students state that their violent behaviour is done deliberately and in an aggressive manner. So teachers need to detect their knowledge of violent behaviour (Gumpel & Meadan, 2000; Piotrowski & Hoot, 2008). Moreover, Restorative practices can be done to prevent violence at school. This can be achieved with peacekeeping practices in classroom. Teachers should prepare activities where students can communicate well, reduce their prejudices, and understand lessons better (Cowie, Hutson, Jennifer, & Myers, 2008).

2.2.3 Acting together

School personnel, home and community can solve violence together (Edwards, 2001; Twemlow, Fonagy, & Sacco, 2004). Leinhardt & Willert (2002) suggest forming a social harmony for preventing violence at schools. All stakeholders, members of community, all participants, educators and society in a collective effort for safe and productive learning should be informed and included. Connecting people makes communities safer. Distribution of tasks, giving responsibilities, sharing power and authority can be helpful. All individuals, including students, should be responsible for safety of school, and they should be assigned duties in this direction (Twemlow, Fonagy, & Sacco, 2004). Meetings or discussions can be arranged for this purpose. The involvement of all individuals in the process, participation of students, families and teachers in discussions, talking about problems and asking for opinions about school will

ensure prevention of violence at school. Furthermore, including all members will help create a comprehensive and systematic approach (Parkes, 2016) however, it is vital to provide in-depth training to administrators, staff and whole team about violence and how to solve problems when violence occurs at school, all individuals in that environment are affected (Blaya, 2003). Violence education programs can be implemented for families and students also. With the help of these programs connection will be stronger. Violence can be solved more or less by communicating. People can understand each other and process will be completed more easily. More information on subject, more training, a more in-service training process and a global approach are required to prevent violence (Piotrowski & Hoot, 2008).

The fact that authority is under the control of only school administrators causes a trust problem. The thought that only school administrators can solve a problem, and prejudice that teachers and students are insufficient in solving problems cause problems to increase. However, removing control from authority, such as school administration, will reduce violence as it will result in sharing of duties and responsibilities (Cavanagh, 2008).

Moreover, Nekvasil, and Cornell (2012) suggest that threat assessment teams can be used to prevent violence in schools. Teams can follow threats, encourage students to report these threats to school administration, and take crucial precautions accordingly (Edwards, 2001).

2.2.4 Collecting, recording data, early intervention

Reddy, Borum, Berglund, Vossekuil, Fein, and Modzeleski (2001) suggest three methods to prevent violence. First one is profiling which means forming hypothesis about students most likely to have violence. Some features of students may be helpful for profiling such as physical, demographic or personal characteristics. Second one is guided professional judgement; clinical assessment checklist including risk factors of violence and the last one is automated decision making; deciding risks depending on empirical researches such as asking questions about potential violence behaviour. Reddy, Borum, Berglund, Vossekuil, Fein, and Modzeleski (2001) also focus on threat assessment approach. It is an investigative, information gathering process with the help of questions to find violence risk. These questions focus on status of students, such as unusual behaviour, evidence of violent behaviour, mental cognition, individual's potential for harm and student's environment that might increase or decrease violent behaviour.

Similarly, Hayden (2009) emphasizes that early childhood data can provide clues about what kind of an individual a student might become in his later life. In this context, examining early childhood periods can help to identify potential violent tendencies. Gumpel and Meadan (2000) indicate that as grade level increases,

tendency to violence increases. Monitoring behaviour problems, special educational need and mental health issues can be a guide to identify students who may show violence. It will be useful to follow features of disruptive behaviour, offensive language, bullying and other forms of aggression (Hayden, 2009).

Reddy, Borum, Berglund, Vossekuil, Fein, and Modzeleski (2001) claim that as a result traditional approaches fall short in determining tendency to violence, a fact-based approach is required to research and assess risk of violence in schools. Threat assessment approach can be a good first step in identifying and evaluating risks posed by violence in schools. Empirical knowledge on violence is not used in schools. The most useful approach to understanding and preventing school violence is to use empirically derived information about the antecedents, motives, ideas, communication and planning behaviours of all known perpetrators of school violence.

Cremin and Guilherme (2016) also suggest cameras and states that violence incidents can be followed by placing cameras at school entrances. Monitoring, preventing and timely intervention of minor violent incidents occurring in school will prevent larger violent incidents that may occur in future and will enable students to orient their academic life (Meyer-Adams & Conner, 2008).

Monitoring students and using intervention strategies should be reviewed and developed to identify and prevent violence in schools. Examining places where students fear violence more carefully and in detail, encouraging upper grades to become models for lower grades can be beneficial. If each teacher is given monitoring tasks in certain areas of school, students will avoid violence. Teachers' monitoring of students in this way will be more beneficial at primary school level compared to secondary school, indicating that violence prevention behaviours can be detected at an early age (Astor, Meyer, & Pitner, 2001).

Whether a student with a disciplinary problem or showing a misbehaviour will have a tendency to violence in future can be predicted (Morrison & Skiba, 2001). Individual characteristics of student, aggressive reactions or problematic behaviours, or presence of a hyperactive nature, and a violent environment in their family may be indicative. Although not a definitive indicator, careful monitoring can help identify students with violence tendencies. As a result, early detection and monitoring of student behaviour will provide reliable and consistent estimates for preventing school violence (Gable & Van Acker, 2000; Smith & Smith, 2006).

2.2.5 Teacher training programs

Providing teachers with training programs to prevent violence at school can be advantageous (Yavuzer, Gundogdu, & Dikici, 2008; Morrison & Skiba, 2001). These programs should also be for multiple domains instead of individual

domains. Studies show that participating in such programs is helpful for teachers. Teachers can learn what they can do in an environment with violent behaviour and how to solve violence. Not only teacher but also all school staff should be provided with potential school violence prevention training (Edwards, 2001).

These programs should be implemented in schools, in such prevention programs equality, continuity, understandable practices, should be implemented with all staff and teachers about violence prevention issues (Algozzine & McGee, 2011). In addition, more in service training activities will be effective in preventing violence. Teachers can share their experiences at staff meetings. By talking about different events helps understanding student's behaviour in classroom and reason of violence (Munn, Johnstone, Sharp, & Brown, 2007).

Teacher training programs should focus on both changing student behaviour and the social contexts from which behaviour problems arise. These contexts are school climate, social environments, or family. Teachers must be prepared for interventions including therapy-based contexts (Gable & Van Acker, 2000). So in-service training can prevent different applications of teachers, support their professional development and minimize cultural and social differences (Blaya, 2003).

2.2.6 Positive school environment

Another way to prevent violence in school is to create a positive school culture and climate. Intervention process in violent incidents should be organized in a way that is appropriate for culture and school climate and provides a smooth transition (Dupper & Meyer-Adams, 2002). Thus, schools can be safe shelter areas for students. In such an environment, teacher, student administrator, family, staff will be psychologically happy and they will feel belonging to that community. Violence at school should be followed up even at low levels. Staff must play their part in preventing violence. For this purpose, meetings, discussions and creative activities can be organized and training can be given to school personnel on both class and school basis. Focus should be on warmth, tolerance and positive response. A peaceful and justice oriented school environment must be created (Goldstein, 2005; Čopková, 2020).

Positive school environment supports student's learning, helps them focus on lessons, and ensures that student is comfortable in a social environment (Jull, 2000; Le Roux & Mokhele, 2011; Şahin & Tabak, 2020). What needs to be done is to change school structure dominated by prejudices, inequality and rule-oriented practices to prevent violence with available information (Parkes, 2016). Another method of preventing violence and having a positive school is peace-making. Peace making deals first with cause of problem because knowing the cause of incident enables effective planning of solution and education. It is significant to teach students critical thinking skills, to approach events with a

holistic perspective, and not to categorize students in any way. Students need to respect and understand each other in order to avoid violence. For example, doing problem solving activities in collaborative groups will provide a harmonious atmosphere and ability to respect individuality (Cremin & Guilherme, 2016). When students learn to respect each other and their different thoughts, a sense of honesty, tolerance, unity and solidarity will occur at school and violence will be reduced (Parkes, 2016). Establishing a dialogue in a democratic environment will be effective in dealing with conflict, transforming that institution into a peaceful environment psychologically, culturally and structurally. Thus, school will develop over time and become a safe place for students and teachers (Cremin & Guilherme, 2016).

Yavuzer, Gundogdu, & Dikici (2008) express factors that negatively affect school environment as follows; personal characteristics of school administrators; negative approach towards student at school and his / her family, difficulty in controlling student's negative behaviour, not supporting student's education, lack of communication, a nervous management style. Cavanagh (2008) states it is important for all staff at school to display acknowledging, celebrating, mentoring, and honouring behaviours. Creating safe learning environment helps reducing violence at schools (Munn, Johnstone, Sharp, & Brown, 2007). Supporting staff, reducing the number of students in classrooms, funding solutions for students displaying problem behaviour, developing support services for parents and pupils would be helpful. Better learning results better behaviour, so better behaviour prevents school violence. Also communicating, a strong school policy, discussing discipline issues in details, involving parents, community and students, respectful school climate, supporting colleagues about students with problem behaviour are the necessary precautions for school violence.

If the student's perception of physical environment is negative, it is more likely to show aggressive behaviour and not follow rules. Negative emotions also negatively affect student's attitude towards school and education (Meyer-Adams & Conner, 2008). This situation requires psychosocial environment of school to be suitable for student. If there are high level violent incidents in society where school is located, there are too many violent incidents in that school. Low level violent incidents occur in regions with less violence. Therefore, the environment in which students' live affects violence events at school (Astor, Benbenishty, & Estrada, 2009).

School is a strong organization, it has a mission, it is bound to its philosophy. Moreover, school is also responsible for lowering violence at school. The administrators of such schools are strong leaders. They can direct staff, students and families towards school's goals, form educational philosophy of school depending on safety and mission of school. They are aware that school can

change student first and then society. In line with academic mission of school, principal inspires all individuals, motivates them and makes necessary organizations. In a peaceful school environment, all staff, teachers and families become aware of social purpose of the school (Astor, Benbenishty, & Estrada, 2009).

The relationship between the school and the society should be strengthened. Schools should have safety plans, peace and tranquillity education should be given, activities should be created to increase students' motivation and morale, students' problem-solving skills should be developed with groups, and teachers should be informed about how these new skills can be developed (Harber, 2001). Astor, Benbenishty, and Estrada (2009) state that cultural elements, beliefs, ideologies, holidays, symbols can be used to make a school a safe environment and reduce violence.

The zero tolerance principle can also be effective in creating a positive school organisation. Zero tolerance means that all students are equal under the same conditions, they should benefit from equal social and academic opportunities, and school facilities should be provided equally accessible to all students (Jull, 2000). Zero tolerance implies that social justice should be applied to each student and no individual characteristics should affect these practices. So students who do not obey school rules should not be tolerated (Jull, 2000; Le Roux & Mokhele, 2011).

However, unlike Jull (2000) and Scott, Nelson, and Liaupsin (2001) state that zero tolerance policies, metal detectors, or video camera recordings are not enough to prevent violence in schools. Violence tendency is a predictive structure and starts with academic failure. Especially students with financial difficulties start school at a lower level of readiness compared to other students. Despite education provided, they cannot reach the level of students with a better financial situation. In this context, it is important that teachers get to know the students and take measures to increase academic success. Teaching rules and regulations with a proactive teaching will be effective for desired behaviour. Thus, when social status of the student increases, students will avoid unwanted student behaviour.

Schools that resist violence seek solutions for violence problems. In such schools, there is staff training, continuous monitoring and reviewing of violence against student behaviour they are dealing with it including discipline procedures. Curriculum has anger management applications and teachers take care of their students outside the classroom. Students coexist with their age groups, and younger students are not in environments where upper classes may disturb them. In this context, what schools should do are deeply focusing on communication of students in their social environment, taking a solution-oriented

stance in the face of a difficult situation; to be aware of their role and influence in problem solving (Watkins, Mauthner, Hewitt, Epstein, & Leonard, 2007). As a conclusion Le Roux and Mokhele (2011) state that determining educational goals and making efforts towards these goals, carrying out educational activities regularly and in an organized manner, monitoring the attendance of students to course, conducting goal-oriented studies, establishing connections with community in region where school is located, taking measures for school security, and giving students responsibility and feeling of accountability, providing training to staff to get out of conflict can be helpful. Similarly, Morrison, and Skiba (2001) suggest applying good practices, listening multiple voices in case of conflict, and following new improvements should be considered. In preventing violence all participants must be in process yet basically it is the duty of the school to make a realistic assessment in order to prevent violence, to make suggestions on how to educate young people to build a positive future, as well as to meet all their needs (Hayden, 2009). This creates a comprehensive and systematic approach is indispensable in preventing violence (Blaya, 2003).

2.2.7 Improving students' personal skills

Human relations should also be considered in schools. Teachers and staff should have relationships that include appreciating, supporting, valuing and encouraging each other. The student should value teacher, be welcoming, and support individual development. In addition, psychological harm caused by violence should be realised, student who misbehaves should know how to apologize. Teachers' support for students to gain the habit of apologizing will be effective. Students must learn to respect students from different cultures or personality traits in their classrooms. At this point, older students can model for younger students or even become buddies. Moreover, gaining conflict resolution skills of students in schools is essential. Since students who lack this skill are insufficient to solve problems they encounter in future in social life or marriage life (Cavanagh, 2008).

Conclusion

In this study, research on violence at school were examined and reasons and suggestions were presented as themes. In the study, one of reasons for violence is gender inequality in the society and it is important to solve this inequality problem in preventing violence. It has been determined that violence may depend on personal characteristics of student, valuing student as an individual and getting to know student and his/her personality traits can help in taking necessary steps. In addition, every school has different dynamics. Taking measures in accordance with these dynamics can solve problems related to

school organisation. Finally, traditional assessments create pressure on students. However, alternative assessment methods will be more effective as they reflect individual differences. In order to end violence at school, another result obtained in the study is that all individuals, staff, administration, teachers, parents should act together, implementing education programs can be effective. Moreover, monitoring and recording students' behaviour to predict violence is also important. Considering the importance of early detection, future studies can investigate the symptoms of violence at earlier ages, differences according to school types, and content of teacher training programs.

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Using Factor Analysis as a Tool for Measuring the Quality of Life of University Students

*Hayat Touati - Mohamed Guezgouz - Benkhaled Hadj -
Djamel Mokrani**

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Abstract:

Introduction: The aim of this research is to design a tool (a scale) for measuring the quality of life of university students and to copy down its validity, use and reliability on six-dimension academic achievement: it touches family life quality, social life quality, personal happiness, life satisfaction and mental health.

Methods: 963 male and female students from the Faculty of Social Sciences, Department of Psychology, for the academic year 2018/2019 were exposed to the application of the model (factor analysis) and the reliability coefficient was reached by using Roland and Kettmann equation (.773) and Spearman-Brown (.776) and Cronbach's Alpha (.629).

Results: The feedbacks show that this tool for measuring 'Quality of University Student Life' is characterized and described as a good degree of stability.

Discussion: When using "factor analysis" tool, we conclude that the exit dimensions focus on two basic axes: the first axis related to public health, quality of education, Family life, life satisfaction, and mental health. The second one consists of the quality of social life and personal happiness. Since these results have given a good degree to some extent, we were commended for working in favour of this tool (a scale) to judge the life quality of university students majoring in psychology faculty at the university.

Limitations: The research and the questionnaire of the tool were applied to a group of psychology students at the national level which includes 963 male and female students with a percentage of 23.98%.

* Hayat Touati, Abdelhamid Ibn Badis University, Faculty of Social Sciences, Mostaganem, Algeria; hayet.touati@univ-mosta.dz
Mohamed Guezgouz, University Center, Department of Physical Education and Sports, Elbayedh Algeria; m.guezgouz@cu-elbayadh.dz
Benkhaled Hadj, Abdelhamid Ibn Badis University, Institute of Physical Education and Sports, Mostaganem, Algeria; hadj.benkhaled@univ-mosta.dz
Djamel Mokrani, University of Mostaganem, Institute of Physical Education and Sports, Mostaganem, Algeria; djamel.mokrani@univ-mosta.dz

The questions of this tool were tested on a sample of 963 students at the national level who were randomly chosen from various disciplines of master's degree in psychology. Research was conducted during the academic year 2018/2019.

Conclusions: The targeted instrument designed in this research which is "the factor analysis" has achieved a good validity and stability and has driven to two basic scales.

Key words: factorial structure, measurement, quality of life.

Introduction

In many ancient researches on psychological behaviour have shown different variables connected with many disorders and damages originated from individuals in their incapability and inefficiency when analysing themselves and their circumstances (Baltes & Heydens-Gahir, 2003; Sauter, Murphy, & Hurrell, 1992), the development of society and its difficulties, and the progression of individual and social interaction and interference that cannot be changed nor stopped (Shanahan et al., 2022). Nevertheless, psychologists around the globe, with the assistance and support of the National and International Conference on Psychiatry and Social Perversions (NICPM) (Unger, 2004), plus the getting to know people and teach them the most essential life skills and behaviour, preparing them, especially the younger next generation, to face the challenges and solve problems in life within themselves, others and surrounding people (Belkadi, Othman, Mohamed, Abdelhafid & Mohamed, 2015). For Baltes (2003), psychological issues within individuals support them to avoid them until what is known as positive psychology has appeared, which works on the positive aspects and focuses on the strengths of individuals to use them and treat and heal weaknesses and disorders accompanying it (Baltes & Heydens-Gahir, 2003; Sauter et al., 1992).

Within the same idea, Hermenaau (2015) studied the fact that psychologists have neglected for a long time the positive features of personality, and all attention was on the negative aspects, until the time came and appeared in the field of positive psychology which is defined as the study of quality of life and what is related to it has dimensions and many prospects (Hermenau, Eggert, Landolt, & Hecker, 2015), variables which means derives, and training programmes. Similarly (Frisch, 2005; Huebner, Suldo, Smith, & McKnight, 2004a), it indicates that there are a great number of psychologists who have been working on positive subjective experiences and personality features, succeeded to develop many new ways to improve the quality of life, make life valuable and meaningful, and avoid pathological symptoms that occur when life is meaningless (Lane, 1994; Rodrigues et al., 2020; Sprangers & Schwartz, 1999)

also it is mentioned that the word of quality of life is one of the domains of psychology which plays an major role in researching, developing and improving human behaviour and leads to the contribution to achieving or not achieving the quality of the environment that surrounded the person and the services that are offered to him (Diener & Suh, 1997; Felce & Perry, 1995; Benbernou, Bennama, Belkadi, Boukchiche, & Koutchouk, 2022; Hofstede, 1984; King, Dordel, Krzic, & Simard, 2014).

In the same idea Frisch (2005), said that the concept quality of life is one of the contemporary terms in the domain of psychology, which focuses on what is known as positive psychology, which was introduced for the first time to the academic studies in psychology in 1998. So, the scientific study of the emotions, feelings and positive personality traits of persons and institutions has begun, all leads to the contribution to the well-being achievement, happiness and life enjoyment (Diener & Chan, 2011; Diener, Oishi, & Lucas, 2003; Sarvimäki & Stenbock-Hult, 2000). For this it has a strong relation with individual's highest degree of life satisfaction, plus reaching happiness and above all a higher level of quality of life, which the World Health Organization (Organization, 2001) has defined it as "the individual's awareness" of his situation in life in the context of the culture and the value systems in which believes and the extent to which this corresponds or does not match with: his goals, expectations, values, and interests related to his physical health, psychological state, level of independence, social relations, personal beliefs, and his relationship with the environment in general. Thus, the quality of life in this sense refers to the individual's subjective evaluations of his life circumstances (Hofstede, 1984).

In addition to this, there is a link between the individual in terms of his internal personal entity that is shown on his judged external behaviour (Chrara, Raoui, Belkadi, Hocine, & Benbernou, 2018; Markus & Kitayama, 1991). Here we can make relation between a person's personality and his points of view of the life issues and his reactions and feedbacks to life situations the negative one or the positive. Reactions are based on his beliefs, points of view, ideas and ideological cultural composition and background. This discrepancy and distinction between individuals are due to their view of this thing on one hand, and on the other hand, its personal, cultural and ideological composition. This is why, our interferences and decisions must be flexible in the presentation and had a balance in the analysis of issues when disagreeing with the others. To solve the problem, we should respect for the opinions, ideas and points of view of others. This is applicable to every person living in the society, and the majority are intellectual people who undertake training sessions based on curricula and programmes that have aims and objectives, these goals must be embodied through a well-constructed plan that is planned systematically taking into consideration the elements that we have mentioned (Belkadi, Mokhtar, Abdelkader, Mohamed, &

Othman, 2019). These training programmes work in university training so that the students in the final stage of entering the world of work. We must nurture in it the spirit of initiative, courage and a positive spirit, that is to say, that the student enjoys a quality of life that meets their psychological, spiritual, mental, environmental and social needs through providing them with knowledge, instilling positive trends, developing life skills, and enjoying them inside and outside the university in its present and future, by utilizing the capabilities of the university institution, family and society. In the same idea, he noted that the quality of learners' lives is affected in many sides, through the quality of the school environment, the quality of education, the quality of family life, the quality of health care, and the quality of community life, and that the intelligences are used to solve the problems of daily life, and in the academic field, and that these intelligences (Adel & Mohammed, 2017). It can help the individual to deal with life situations and understand them from many points of view (Benhammou et al., 2021; Diener et al., 2003). And the quality of life, as we mentioned, varies with the change of individuals and the situations in which they are in, it is the life enjoyment, and this is the individual's feeling of satisfaction, happiness and well-being. At the end, it is to live a life free of behavioural, psychological and health disturbances and anxiety. It is to feel secure, stable and comfortable so that he serves himself and the environment, in which he lives (Benchehida et al., 2021; Diener & Chan, 2011; Huebner et al., 2004a; Lane, 1994).

The concept quality of life has been tackled from various and multiple aspects such as health, psychological, social, economic, academic, and religious and other domains (Sarvimäki & Stenbock-Hult, 2000). As for the scientific research level, it is a relatively new concept, as lot of studies connected to quality of life have been done and differed in terms of its importance and purpose (Lane, 1994; Sarvimäki & Stenbock-Hult, 2000; Sprangers & Schwartz, 1999), ages and conditions related to individuals, including mental, psychological and other health and academic achievement sides, some of which emphasized on knowing the degree of quality of life for university students (Al-Qaisy, 2011; Becker & Luthar, 2002; Gillespie, Walsh, Winefield, Dua, & Stough, 2001; Huebner, Suldo, Smith, & McKnight, 2004b; Markus & Kitayama, 1991), which found and agreed that there is a difference in the degree of quality of life within the students sample and a discrepancy between its dimensions (domains). There are those who related it to many other variables, including the study of Al-Qaisy (2011) in which they marked that with regard to the students' life quality in the educational domain, it is important to mention a series of criteria and indicators that the tasks and procedures aiming at developing and achieving the educational aspect flow into. Hence, it is necessary to know a lot of elements affecting the educational process for university students (mental and mental abilities, physical

capabilities, skill capabilities, orientations and ambitions, as well as motives and personality (Anwar & Louis, 2017; Leong & Ahmadi, 2017; Mohammed, Bachir, Eddine, & Adel, 2018; Peytcheva-Forsyth, Yovkova, & Aleksieva, 2018).

Measurement of quality of life is highly connected to accurate and exact knowledge of the changes that make it up, depending on the person's field and it's interests and likes, as well as the needs of the profession he works on or the domain he occupies (Diener & Suh, 1997b; Hyde, Wiggins, Higgs, & Blane, 2003; Mohammed, Mokrani, & Belkadi, 2019; Wehmeyer & Schwartz, 1998), that confirmed the highly degree measure of the quality of life which depends on the accurate description of the good life, and consequently, the students' perceptions of the quality of life affects their academic performance (studies), and their motivation to achieve and achieve their subjective and objective aims, and this stage is considered (Belkadi, Alia, & Mohammed, 2020; Hyde et al., 2003). These are the most essential educational stages that affect students' views of life quality, as they prepare to join various professions, marriage and family stability (Daugherty & Funke, 1998; Golde & Dore, 2001; Sheehan, Sheehan, White, Leibowitz, & Baldwin, 1990; Sheehan et al., 1990). Thus, it is noticed that delving into any field is a definite loss if we do not know it and we should study it deeply to make the appropriate arrangements to delve into it. Here, it comes with adulthood by preparing it for the world of work, so we must know the variables of training, the variables of the environment, and the variables of the world of work (profession), working them all together, we can achieve it from all sides and at all levels. Lastly we can come with the extent of the interdependence and interrelation that exists between the quality of life and life skills (Belkadi et al., 2015). When an person can solve a life situation issue, he inevitably surely feels happy and psychological comfort, therefore his skill and abilities in overcoming life's problems gave him a feeling of comfort and strength of character and personality, and thus positive happiness (Abdelkader, Madani, Adel, & Bouabdellah, 2018; Diener & Chan, 2011). There are various studies that have related the idea of life skills and quality of life, taking into consideration the research of Stanford Ruben and others. Its aim is to assess changes in life skills and quality of life sorting from rehabilitation services for the disabled. Through the study of Behroz-Sarcheshmeh, Karimi, Mahmoudi, Shaghaghi, and Jalil-Abkenar (2017) the effect of training of life skills on social skills of high school students with intellectual disabilities was examined. Moreover, we have noticed that within the bound limits of our knowledge, the lack of studies and researchers that combined the two variables, especially among university students (Yassin Zenati, Belkadi, & Benbernou, 2021). Through all what we have said above, it summed up by stating that the characteristics of the progress for each nation or people are measured by its

civilization and what it is offered to man and humanity. Consequently, the Algerian university is now trying to catch up with the world, and make up for what it missed, relying on and believing in its ability and its role in building its glory by preparing young people who are able to protect it and protect themselves first within the sophistication and quality of modern life.

The purpose of this study is to develop a tool for measuring the quality of life of university students, and to report its validity and reliability on six dimensions: academic achievement, family life quality, social life quality, personal happiness, life satisfaction, and mental health.

1 Method

1.1 Participants

The descriptive method was used in a survey format for its suitability to the type of the study and research.

The research sample is psychology university students majoring the second grader of master's degree in various sub-disciplines of psychology. The researchers relied on twenty (n=20) Algerian universities which were randomly selected by researchers. The total number of participants in this study (n=4016) male and female who have enrolled in social sciences during the academic year (2018/2019). The researcher has chosen a random sample from the target population of 963 male and female students, representing 23.98% of the population of psychology university students majoring in different branches of master's degree year two.

1.2 Statistical analysis

The researchers used questionnaires to investigate the quality of life of university students who enrolled in Psychology discipline.

2 Results

Table 1

Validity of the measurement tool

<u>Number</u>	<u>Axes</u>	<u>Arithmetic mean</u>	<u>Standard deviation</u>	<u>Correlation coefficient</u>	<u>Indication</u>
01	Public health quality	36.9667	4.62846	.354	Statistically significant
02	Quality of education and study (academic)	37.0333	6.05054	.648	Statistically significant
03	Family quality of life	49.0333	6.38050	.590	Statistically significant
04	Quality of social life	33.1500	7.26222	.627	Statistically significant
05	Personal happiness	42.0000	5.80473	.746	Statistically significant

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06	Life satisfaction	35.5833	5.10995	.636	Statistically significant
07	Psychological health	44.1000	7.75187	.783	Statistically significant
	The tool as a whole	277.8667	27.53024	1	-

1 - Correlation of the total score of the axis with the total score of the tool

Note: - 0.01. **At the level of significance

It is shown above clearly that the correlation coefficients of the total degrees of the axis with the total degree of the tool are statistically significant at the level of indication of validity “significance” (0.01). Thus, it becomes clear that the tool is characterized by a good degree of internal consistency, meaning that the tool measures what it was aimed to do.

2.1 Tool stability calculator

Stability was calculated by half-splitting using the Cronbach’s Alpha, Roland and Kettmann and Spearman - Brown equation, calculating the stability for each axis and for the quality of life tool as a whole. The results were as follows:

Table 2

The stability coefficients by the split-half method for each axis

<i>Tool axes</i>	<i>Public health quality</i>	<i>Quality of education and study (academic)</i>	<i>Family quality of life</i>	<i>Quality of social life</i>	<i>Personal happiness</i>	<i>Life satisfaction</i>	<i>Psychological health (psychological dimension)</i>
Cronbach’s Alpha	.478	.186	.502	.439	.349	.436	.558
Roland and Kettman	.345	.315	.669	.612	.517	.609	.716
Spearman-Brown	.310	.310	.669	.610	.512	.604	.716

Obviously and from the obtained results in Table 2 (statistically significant), this indication is in all dimensions of quality of life according to the Cronbach’s alpha equation, which merged between .186-.558 and Roland and Kettmans and ranged between .315-.716 and according to Spearman Brown ranged between .310-.716. It can be concluded that all dimensions of quality of life are characterized by a good degree of stability.

Table 3

Half-segment stability coefficients for the quality of life tool

	<u>Roland and</u> <u>Kettman</u>	<u>Spearman -</u> <u>Brown</u>	<u>Cronbach's</u> <u>Alpha</u>	<u>Indication</u>
The value obtained	.629	.776	.773	Statistically significant

The obtained results are as shown in the previous table, by using the Roland and Kettman equation (.629,) and Spearman - Brown (.776) and Cronbach's Alpha (.773), indicate that the tool 'University student quality of life' has good stability.

3 Discussion

Table 4

Descriptive statistics based on the mean and standard deviation of the quality of life scale

	<u>Average</u>	<u>Standard deviation</u>	<u>Sample</u>
Public health quality	3.2422	.51123	963
Quality of education and study	3.4250	.54813	963
Family quality of life	4.1999	.70050	963
Quality of social life	3.9728	.51936	963
Personal happiness	3.7739	.66896	963
Life satisfaction	3.2965	.55157	963
Psychological Health	3.7206	.65541	963
Public Health	3.2422	.51123	963

The above table shows the results of the descriptive statistics of quality-of-life six-dimensions, as well as the sample size adopted in the research.

We calculate the correlations between a group of elements of the quality-of-life measure, then we get a matrix of correlations between these elements, then we analyse the correlation matrix factorially. Finally, we explore the nature of the concentration of elements or dimensions of quality of life.

Table 5

The correlation matrix for quality of life elements

<u>Dimensions</u>	<u>Public Health</u>	<u>Education</u>	<u>Family</u>	<u>Social quality</u>	<u>Happiness</u>	<u>Satisfaction</u>	<u>Health</u>
Public health quality		.211	.217	.107	.146	.022	.339
Quality of education and study			.271	.214	.222	.298	.312
Family quality of life				.141	.120	.372	.385
Quality of social life					.466	.204	.261
Personal happiness						.209	.271
Life satisfaction							.458
Psychological health							

It is clear from the table that the obtained matrix of inter-correlation coefficients, which was greater than 0.0001 for this we supports the targeted study to keep all the dimensions of quality of life.

The following table shows the results of two basic tests, the first test Kayes-Mayer-Olkin (KMO), which proves the adequacy of the sample, which must be greater than 0.6 and the (Bartlett) test for the sake of correlation between the variables that was interpreted by the statistical significance. The aim of this items was to find out the validity or the non-validity of the data and the sample number.

Table 6

Kaiser-Meyer-Olkin Index (KMO) and Bartlett's test

Index for measuring sampling quality	Kaiser-Meyer-Olkin	.764
Bartlett's sphericity test	Chi-square approx.	1093.480
	Ddl	21
	Significance	.000

We notice from the shown results in the above table that the obtained results of the Case-Meyer-Olkin test, that is to say, the measurement value (KMO) reached (.764) which is greater than the reference value 0.6 which is a good indicator. Moreover, we find that the value of the significance level of Bartlett test is equal to zero (0.000) Therefore it functions, and this confirms the existence of a statistically significant relationship and once again is a good indicator, which allows us to use factor analysis successfully.

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Table 7

The quality of representation of the dimensions of quality of life

<i>Representation of qualities</i>		
<i>The quality of the representation of the elements</i>		
	<i>Initials</i>	<i>Extraction</i>
Public Health	1.000	.322
Quality of education	1.000	.358
Family life	1.000	.521
Social life	1.000	.718
Personal happiness	1.000	.717
Life satisfaction	1.000	.513
Psychological life	1.000	.595

Through the shown results in the previous table and the used method (principal component analysis). Which gives us the qualitative value of representing the dimensions of quality of life, the qualitative value of the dimension of public health and the quality of education was not good because it was less than 0.4, but all the remaining dimensions were more than 0.4, which means that they are good and we obtained the interpreted variance values. From the foregoing, it is clear that all the conditions for using factor analysis as a tool are available, and therefore we can apply it as a research reference. The presented the table indicates that eight values, which shows the quantity of variance and dispersion ratios, which is known as 'explained variance'.

Table 8

The percentages of variance explained by the factors

<i>Component factors</i>	<i>Initial values</i>			<i>Sums taken from the square of the loadings</i>		
	<i>Total</i>	<i>% of variance</i>	<i>% cumulative</i>	<i>Total</i>	<i>% of variance</i>	<i>% cumulative</i>
Public Health	2.582	36.889	36.889	2.582	36.889	36.889
Quality of education	1.162	16.595	53.484	1.162	16.595	53.484
Family life	.840	12.000	65.484			
Social life	.747	10.665	76.149			
	.633	9.046	85.194			
Personal	.529	7.562	92.756			
happiness	.507	7.244	100.000			

It is worthy noticed that there are two factors, and that their in-kind value is greater than one, the interpretation percentages of the discrepancies were

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achieved from the total variance of each factor. So, it explains about 53.484% of the total information. Also, the value of the explained variance for the first component equals 2.582 of the total variances, it explains the factors constituting the scale with a percentage of 36.889%. As for the value of the explained variance for the second component, equals to 1.162 of the total variances, it explains the factors constituting the scale at a rate of 53.484%.

Table 9

Saturation of the factors before rotation

	<u>Component matrix</u>	
	<u>Component</u> <u>1</u>	<u>Component</u> <u>2</u>
Social health	.496	
Quality of education	.595	
Quality of family life	.602	
Quality of social life	.542	.651
Personal happiness	.553	.642
Life satisfaction	.676	
Psychological life	.750	

It is clearly shown from the obtained results that the matrix of factors before the rotation includes two factors. They are related to each other in a sequential form. The first factor includes all the dimensions or elements in different proportions, while the second factor includes only two dimensions or two factors, namely the quality of social life and personal happiness. Therefore, the dimension component before rotation can include even factors or constitute two explanatory factors for a quality scale. The life of university students, and this is all before the factors rotate.

Table 10

Saturations of the factors after rotation

	<u>Component rotation matrix</u>	
	<u>Component</u> <u>1</u>	<u>Component</u> <u>2</u>
Social health	.567	
Quality of education	.539	
Family life	.721	
Social life		.839
Personal life		.837
Life satisfaction	.699	
Psychological life	.733	

The above table indicates the matrix of factors after rotation, which also includes two factors. The first factor contains five elements and the second one consists of two factors. From the obtained results, we conclude the following: the first factor explains 36.898% and includes the next five variables: Public Health, Education quality, Family life, Life satisfaction, Psychological health, as far as the second factor is concerned, it explains 53.484% and includes two variables: Quality of social life and Personal happiness.

Table 11

The variance matrix in the components coefficients

	<u>Component matrix</u>	
	<u>Component</u>	<u>Component</u>
	<u>1</u>	<u>2</u>
Social health	.496	-.275
Quality of education	.595	-.063
Family life	.602	-.398
Social life	.542	.651
Personal happiness	.553	.642
Life satisfaction	.676	-.235
Psychological health	.750	-.181

Table 11 indicates the magnitude and strength of the relationship between the factors before and after the rotation and analyses the projection of variables at the global levels.

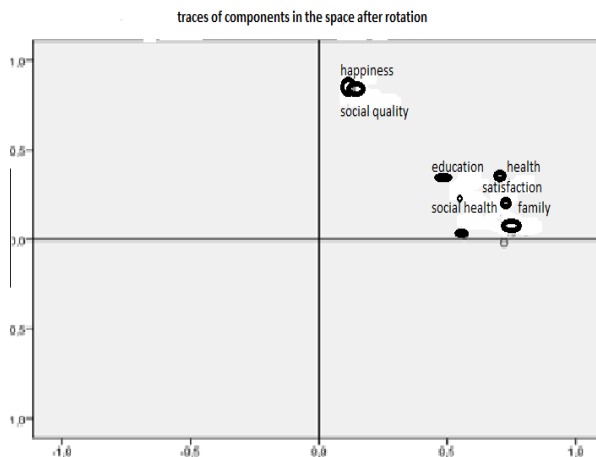


Figure 2. Traces of components after rotation

It is obviously shown from the diagram that the matrix of factors consists of two factors. The first one includes the component of quality of social life and personal happiness which are very identical and have a highly positive direction, close to the correct one, and have a highly quality of representation at this global level. Thus, we can measure the quality of a university student's life through these two dimensions only. As for the second factor is concerned, it contains the following five elements (public health, quality of education, quality of family life, life satisfaction, and mental health), which are close to each other, but they are far from the correct ones. It is in the positive direction as well, except for the family quality of life factor which changed the direction of negative values, and thus affected the amount and the results of other factors.

Table 12

Variance matrix in the component coefficients

<u><i>Covariance matrix of component coefficients</i></u>		
<u><i>Component</i></u>	<u><i>1</i></u>	<u><i>2</i></u>
1	1.000	.000
2	.000	1.000

The previous table results reveal that the presence of the quantity and strength of the relationship between the factors of good quality of life.

The feedback on quality of life indicate that the quality of general and psychological health are main indicators of quality of life and through which students become satisfied with their lives and have a high quality of life. It agrees with the study of al-Dulaimi et al. (2012) and Kazem and al-Bahadli (2006), which showed that there is a strong relationship between public health and quality of life, and agrees with the results of Abdel Mawgoed Eid Bayoumi (2014), which is the existence of a relationship between environmental participation, quality of life, environmental awareness, cultural heritage, quality of life and individual feeling, responsibility towards the family and the society in which he highly believes that it increases the quality of his life. Moreover, there is an interrelation between social skills and working with the group with life satisfaction, and this is conform to the study of Al-Hindawi (2011).

The indicators of quality of life are objective, subjective, and existential and are represented in the (quality of public health, quality of academic life, quality of family life, quality of social life, personal happiness, life satisfaction, quality of psychological life "mental health").

4 Limitations of the study

The questions of the tool and the research in general were applied on a sample of 963 male and female students with a percentage of 23.98% at the national level who were randomly selected from different disciplines of master's degree at the Faculty of psychology. Research was done during the academic year 2018/2019.

Conclusion and recommendations

Through the factor analysis, it becomes clear that there are seven main factors.

The results confirmed that the seven factors gathered around two main themes and axes that measure two elements of quality of life; the first component is related to each of the following: public health, quality of education, family life, life satisfaction, and mental health. The second one includes the quality of social life and personal happiness.

The factor structure of the chosen university student's quality of life measure through exploratory factor analysis has a good validity and stability, and it is distributed on two basic scales.

We highly recommend the use of this tool to measure the quality of life of a university psychology students.

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Second-Chance Education in UNESCO Activities - Examples from History and Some Current Forms

*Eduard Lukáč**

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Abstract:

Introduction: The United Nations Educational, Scientific and Cultural Organization (UNESCO) was founded in the post-war period and since then it has been working to combat the illiteracy of children, the youth and adults. A specific area in this context is the issue of second-chance education.

Purpose: The paper analyzes these UNESCO activities in the field of second-chance education, which allows individual target groups to obtain elementary education, respectively professional knowledge and skills for finding a job in the historical transformations as well as at present.

Methods: The main criterion was the perception of second-chance education in individual stages of educational reality, for which content analysis and comparison of the final reports of UNESCO conferences, its current educational programmes, as well as specific examples of educational activities were used.

Conclusions: Second chance education, with its specific position, content focus, target groups and organization, has become an essential part of educational systems not only in developing countries, but also in developed countries, because in every society, this issue is a current challenge for the educational reality.

Key words: second-chance education, UNESCO, illiteracy, early termination of education.

Introduction

The experience of experts from long-term monitoring of the development of literacy shows that even compulsory primary education will never ensure full and developed literacy of the entire adult population. Even in developed countries with a long-term tradition of compulsory school attendance, it is not possible to guarantee the achievement of literacy for all graduates of compulsory

* Eduard Lukáč, University of Presov, Faculty of Humanities and Natural Sciences, Institute of Pedagogy, Andragogy and Psychology, Prešov, Slovakia; eduard.lukac@unipo.sk

education. In every society, there will always be a certain number of individuals who, for various reasons, do not complete all years of school education within the framework of compulsory schooling, or who do not learn the necessary knowledge and skills during compulsory schooling. Alternatively, they can master certain knowledge at a very low level and after a few years are no longer able to apply the required knowledge at an adequate level. For more than seven decades, UNESCO has been trying to contribute through various ways and activities to the fact that the phenomenon of illiteracy, which is perceived in many variations in today's world, becomes the smallest possible barrier to the development of individuals, but also of communities and society.

At the 14th meeting of the UNESCO General Conference in 1966, the 8th September was declared International Literacy Day. The impulse for its introduction was The first World Congress of Ministers of Education on the Eradication of Illiteracy, which took place in 1965 in Tehran. For example, 2020 was marked by the theme Teaching and Learning of Literacy in and after the COVID-19 crisis, with a focus on the role of educators and changing pedagogical approaches (International Literacy Day). According to data from the UNESCO Institute for Statistics (UNESCO UIS), about 258 million children, adolescents and young people do not attend school, which indicates the prediction that in 2030 one in six children aged 6-17 will not attend school and only 6 out of 10 will complete secondary education. According to these estimates, 55% of children and adolescents of primary and lower secondary school age do not reach the minimum level of mastery in reading and 60% do not reach these levels in mathematics (Launch of the 2019 SDG 4 Data Digest). Other data indicate that there are around 750 million illiterate adults aged 15 and more, of which 473 million are illiterate women, representing 63% of the adult illiterate population (4th Global Report on Adult Learning and Education, p. 121).

D. M. Kelly (1995) identified two basic models of causes and factors that result in the early leaving of young people from primary education. The first of them is the "drop out" model, i.e. dropping out of education, in which he emphasized individual factors and situational causes causing early school leaving:

- personal failure,
- social and economic characteristics of the family environment,
- pregnancy,
- starting a family.

The second "push out" model, i.e. exclusion from education, defines the characteristics of the school system or of other processes of a supra-individual nature that lead to early school leaving.

One of the other studies (Jimenez et al., 2007) mapped the basic reasons why young people inevitably need the opportunity to participate in second-chance

education. The first is the fact that most of those, who need second-chance education, are the poor, who were unable to take advantage of their first educational path because the available education was either too expensive or of poor quality. The lack of adequate credit in most developing countries also means that poor students, given their future earnings, are unable to borrow funds to finance their education.

The second reason is that even though young people have the main word in the decisions about their education, they often lack the information needed to make good decisions or they simply have the wrong ideas. Not knowing the true value of investment in education can result in underinvestment in education from a social perspective.

A third reason is the confirmed phenomenon that early school leaving and failure in the labour market increase the likelihood that young people will engage in anti-social behaviour or will be exposed to risky behaviour, including drug abuse, unprotected sex and violence, which have huge social consequences.

A fourth reason appears to be that waiting until adulthood to invest in human capital has high costs. As people age, the occasional costs of keeping them in the second chance program are higher because labour productivity tends to increase with experience. It is therefore important that young people are given second chances for education when the return on investment in education is still high enough. Investing in young people also has a greater return than investing in adults because of the longer time period over which the benefits can be used.

The fifth reason is that not investing in second-chance educational activities wastes early childhood investments. Today, young people have, on average, a higher educational base on which to build human capital than older generations of the population. Learning is cumulative, and knowledge and skills acquired earlier make it easier to continue learning later.

Leading Slovak pedagogue Š. Švec (2008, p. 225) defines the concept of second-chance education as "an opportunity for adults to acquire, in a continuing, continuous cycle of education, the kind and level of education that is normally acquired in childhood or youth during the initial, first cycle of education."

In their monographic work, the authors Pirohová, Lukáč, and Lukáčová (2020, p. 13) state that in the practical implementation of second-chance education there is currently a mutual intermingling of pedagogy and andragogy, because:

- it is a formal education (educational institution) for the purpose of obtaining a degree (according to the valid legislation, it can only be obtained in an educational institution),
- it is carried out in accordance with pedagogical laws and documents on the upbringing and education of children and youth,

- the target group is not children and youth, but adults, who cannot be reduced to pupils (because adults are not isolated from their social roles in work, family and private life),
- the subject of education cannot be a lecturer or an adult educator (as is the case of andragogy), but a teacher (of primary or secondary school).

Based on research results from 2020 in the countries of the European Union, an average of 9.9% of young people aged 18-24 left education and training earlier, i.e. their highest completed education was lower secondary education and they had not completed any further education in the four weeks prior to the survey (Early leavers from education and training).

Table 1

Early termination of education of 18-24 year-olds in selected countries (Early leavers from education and training by sex and labour status)

<u>Country/Year</u>	<u>2011</u>	<u>2013</u>	<u>2015</u>	<u>2017</u>	<u>2019</u>	<u>2020</u>
Denmark	10.3%	8.2%	8.1%	8.8%	9.9%	9.3%
Poland	5.6%	5.6%	5.3%	5.0%	5.2%	5.4%
Czech Republic	4.9%	5.4%	6.2%	6.7%	6.7%	7.6%
Hungary	11.4%	11.9%	11.6%	12.5%	11.8%	12.1%
Slovakia	5.1%	6.4%	6.9%	9.3%	8.3%	7.6%
Austria	8.5%	7.5%	7.3%	7.4%	7.8%	8.1%
Sweden	6.6%	7.1%	7.0%	7.7%	6.5%	7.7%
Norway	16.6%	13.7%	10.2%	10.4%	9.9%	9.9%
Malta	22.7%	20.8%	20.2%	17.7%	17.2%	16.7%
Italy	17.8%	16.8%	14.7%	14.0%	13.5%	13.1%
Spain	26.3%	23.6%	20.0%	18.3%	17.3%	16.0%

1 Selected UNESCO conferences on the issue of adult education and second-chance education

In terms of UNESCO's understanding, the term second-chance education is defined in the document International Standard Classification of Education ISCED 2011 as: "Education specifically aimed at individuals who, for various reasons, have never attended school or who have not completed school before completing the degree for which they were enrolled, or who have completed that degree but wish to enter an educational programme or occupation for which they are not yet qualified. Participants are often older than the typical target age group for a given program at ISCED level (but not necessarily adults). Sometimes second-chance education is also referred to as "bridging programmes" or "reintegration programmes" (TVETIpedia Glossary).

Based on the example of the World Association for Adult Education, which operated in the years 1919-1946, UNESCO began organizing world conferences dedicated to the issue of adult education. Already at the first UNESCO conference on adult education (June 19th-25th, 1949, Elsinor, Denmark), the participants of the conference also commented on the problem of early termination of education of youth who, after completing compulsory education, is not ready to fully participate in the life of society. As J. M. Guehénn, then Inspector General of National Education in Paris, argued: "We cannot without a feeling of sadness observe this generation of young people who, at the age of fourteen or fifteen, leave school in July and are exposed only to coincidence in their further development of thought" (Hely, 1967, p. 23). In this sense, representatives of individual delegations thought about how to solve the given situation, realizing:

- a) "that the optional education of adults, as it was practiced at the time, is addressed only to a small minority, to a kind of elite, to adults who are capable of education,
- b) that it would be necessary to provide the youth with a better prepared and longer lasting school education in order to enable young people to understand that it is necessary to continue with education throughout life,
- c) that when school education has the required scope, it will primarily be adult education that will have the task of eliminating of its shortcomings, namely in countries that have advanced the most in the application of a general and compulsory education system" (Hely, 1967, p. 24).

The Second UNESCO World Conference on Adult Education (22nd August – 2nd September 1960, Montreal, Canada) was held under the theme "Adult Education in a Changing World".

In the context of the analyzed influences and changes, it was pointed out that adult education has an irreplaceable place in the reorientation of adults, so that they do not feel a threat from the implemented changes, especially in the production sphere, or even resistance to them. The prominent American adult education expert Wilbur C. Hallenbeck (1960, p. 31) gave the following opinion on this topic: "Even if we constantly rebuild and modernize education as best as we can, we will never be able to perfectly prepare young people to face the world as it will be when they themselves become adults. The main task of adult education is to maintain a balance between a person and the conditions of their existence in a changing world." Much attention was paid to the adult education in developing countries, which was reflected in the demand to eliminate illiteracy in these countries, and at the same time these countries became more aware of the importance of adult education and subsequently began to actively participate in international cooperation.

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The years 1963-1965 represent an important period in which the activities of UNESCO culminated as a priority in the field of elimination of illiteracy and in the field of education of youth who did not receive the necessary education. The International Commission of Literacy Experts met at its first meeting on 1st-10th April 1964 and paved the way for the definition of objectives, methods and means for pilot projects for the spread of literacy. The result of this stage was also two key events.

The first of them was the "International Youth Conference", which took place in Grenoble, France (August 23rd - September 1st, 1964) and brought new incentives, e.g. also in the field of creating educational programmes for youth. The result of the negotiations was more than 80 recommendations, which significantly helped UNESCO in shaping its future projects in the given areas, as well as planning and the very activity of the International Youth Commission.

The second was the "World Congress for the Eradication of Illiteracy" in Tehran (Iran, 8th-19th September 1965), which was visited by 88 delegates who discussed the following six areas:

- illiteracy in the world;
- spread of literacy and technical, economic and social development;
- financing the fight against illiteracy;
- goals, organization, methods and forms of ensuring literacy, including activities for new literates;
- international cooperation in the field of implementation of literacy;
- measures designed to ensure the support of public opinion and the active participation of people in all countries in the world campaign to eliminate illiteracy (Report on the Implementation of UNESCO'S Adult Education Programme Since the Last Session of the Committee, 1965, p. 5).

The Congress also emphasized the necessary relationship between adult education in the field of basic literacy and continuing adult education. As one of the biggest actions of its time, the congress contributed to the intellectual emphasis of the importance of the fight against illiteracy within the spread of basic concepts in this fight, as well as to the emphasis of the psychological dimension resulting from the awareness of what the problem of the fight against illiteracy contains.

At the Third UNESCO Conference on Adult Education in Tokyo (July 25th - August 7th, 1972, Japan), whose main theme was "Adult Education in the Context of Lifelong Learning", marginalized groups were defined to become a new target group in adult education – unemployed youth, groups with early school leavers in developing countries, rural population, migrating workers, the unemployed and the people of post-productive age. The illiterate part of the population was considered, although not a new, but constantly important group. New educational counselling centres were to provide their services for them as

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well, in accordance with the necessary legislative measures, on the basis of which the participation of adults in education was to be increased - e.g. measures to ensure paid study leave, to provide a day off for full-time studies, to protect the job position during studies, etc.

The participants of the Fourth UNESCO Conference on Adult Education (March 19th-29th, 1985, Paris, France) also evaluated the progress in the field of spread of adult literacy since the conference in Tokyo (1972). The delegates of the conference pointed out that adult education became an integral part of the entire educational system all over the world and represents an important contribution in the system of implementing education for all. As one of the main tasks of adult education, they decided to ensure the elimination of illiteracy and at the end of their negotiations they adopted the important document "Right to education", which represents:

- the right to read and write,
- the right to learn and analyze,
- the right to imagine and create,
- the right of the individual to read about their own world and write its history,
- the right to access educational resources,
- the right to develop individual and collective skills.

The Paris Conference called on all countries to put this right into effect and create the necessary conditions for its effective implementation by making available all the necessary human and material resources and by reshaping educational systems in the sense of greater justice.

Although the fight against illiteracy was primarily a matter for countries in Africa, Asia and Latin America, this phenomenon also appeared in European countries in relation to the increasing number of immigrants. The constantly faster development of information and communication technologies has opened many areas of educational activities for adult education, connected with the issue of the increasing role of functional literacy.

The theme of the fifth UNESCO conference on adult education (June 14th-18th, 1997, Hamburg, Germany) was: "Adult education: the key to the 21st century." The conference was held on the threshold of the new millennium, which was to be expressed by the main motto of the conference: "Adult education as a right, a tool, a pleasure and a shared responsibility". The context of the conference's motto was explained by the then Director General of UNESCO, Federico Mayor, in his welcoming speech: "Education is an essential strategic instrument for the sustainable development of humanity. It's a tool. But it is also the right of every individual - the right to become an active and creative resident. And finally, education is a pleasure: it can reveal the sense of freedom, self-realization and independence in every person. The pleasure of education once gained can never be forgotten; it repeats and returns throughout life and is inexhaustible." (Fifth

International Conference on Adult Education, 1997, Annex V). Among the highlights of his performance was the fact that he left space for Nonkosinathi Hathuka from South Africa, who spoke about her experience as a participant in a second chance education project that enabled her to become a literate adult.

Conference delegates expressed dissatisfaction with the state of education for girls and women. On the one hand, the efforts of many countries to integrate relevant measures into their policy documents were recognized, but on the other hand, their implementation in practical life was assessed as insufficient. These were mainly programs that had the task of erasing the gender gap on a general level, with an emphasis on the social and economic sphere. At the end of the negotiations, two important documents were adopted: "The Hamburg Declaration on Adult Learning" and the second one called "Agenda for the Future", which represents the concretization of the Declaration.

An evident result of these adopted documents is represented by two activities that support and promote adult education in terms of its irreplaceable importance in modern society: the "One hour a day for learning" movement and the "Adult Education Week".

The document "Framework for action", which was adopted at the sixth UNESCO Conference on Adult Education (December 1st-4th, 2009, Belém, Brazil), emphasizes that adult education and learning have a decisive role in responding to current cultural, economic, political and social challenges and underlines the need to place learning and education of adults into the broader context of sustainable development. The conference focused on literacy as a key factor in lifelong learning and an integral part of the right to education. The document calls for a doubling of efforts to reduce illiteracy by 50% in 2015 compared to 2000, alongside with increased investment and expertise, relevant measures to ensure curriculum and quality mechanisms and reduction of the gender gap in literacy. The participants of the conference stated that despite the efforts and conclusions of the 5th UNESCO conference, the field of adult education continues to be financially undersized and underappreciated in society. It was not possible to make adult education one of the political priorities, the allocation of resources is not at a sufficient level at the national and international degree. There is still a lack of opportunities for training andragogic staff and monitoring; evaluation and feedback are still underutilized.

2 UNESCO programs and activities in the field of second-chance education

At the 40th UNESCO General Conference in Paris in 2019, the 4th goal of the document Agenda 2030 was elaborated into the document UNESCO Strategy for Youth and Adult Literacy (2020-2025). The main objective of the Strategy is to guide UNESCO's work to support member states in ensuring that by 2030 all

youth and a significant proportion of adults, men and women, achieve literacy. The mentioned UNESCO Strategy recognizes the importance of a threefold approach to literacy:

1. Expanding of quality education.
2. Providing alternative opportunities for children, youth and adults who have not finished school.
3. To improve the environments offering the acquisition of literacy (UNESCO, 2019, p. 6-7).

Four priority areas were defined and one of them is priority strategic area (ii) addressing the learning needs of disadvantaged groups, especially women and girls. It is based on the sad observation that, despite the steady progress so far, there are still many people who are not able to read and write at a sufficient level corresponding to everyday life. They include e.g. young people who did not finish school and did not acquire initial literacy, or migrants or disadvantaged populations.

This new strategy mainly focuses on the second approach – i.e. providing alternative opportunities for children, youth and adults who have not finished school - and builds on the knowledge gained from previous initiatives and strategies, such as United Nations Literacy Decade: education for all, one of the priority target groups of which was to include children and young people who did not finish school and of whom it was mainly girls - children, adolescent girls and young women (United Nations Literacy Decade: education for all, 2002, p. 4). The concretization of the mentioned strategy was, for example, also the 2006-2015 Literacy Initiative for Empowerment (LIFE) programme, provided by the UNESCO Institute for Lifelong Learning, which aimed to financially support a number of regional literacy activities while attempting to be a catalyst for planning, capacity development and partnership building (Wagner, 2011, p. 320).

In 2003, UNESCO launched the "Capacity Development for Education for ALL - CapEFA" programme, which was modified in 2016 to be used more effectively in accordance with the SDG4 - Education 2030 agenda (The Sustainable Development Goals) - in which Goal No. 4 is dedicated to education, and the program was renamed "Capacity Development for Education - CapED".

The document "The Sustainable Development Goals Report 2017" (p. 24) defines the 4th goal entitled "Quality education" as follows: "Quality education and life-long learning opportunities for all have become crucial to ensure a full and productive life for all individuals and for realization of sustainable development. Despite significant progress in school attendance, millions of children are out of school, especially where education systems struggle to keep up with growing populations. Even if more children attend school, many fail to acquire even basic skills. The brake on quality education is the lack of trained

teachers and a sufficient number of adequate school facilities. Achieving this goal will require intensified efforts, particularly in sub-Saharan Africa and South Asia, targeting vulnerable populations, namely persons with disabilities, indigenous peoples, refugees and the rural poor people.” This CapED programme is aimed at the least developed countries, or at countries that are not expected to achieve the goals of the "Sustainable Development Goals - SDG" programme, especially the 4th goal dedicated to the field of education. Currently, 26 countries are involved in the programme, of which we present some examples - in Nigeria and Tanzania.

UNESCO is e.g. currently involved in second-chance education for women and girls in Nigeria through a radio education programme. In this country, according to UNESCO data, in 2018, only 52.65% of girls were literate in the category of 15 years and older. “This programme is developed under the Spotlight Initiative to provide accelerated second-chance educational opportunities to girls and out-of-school children who face cross-cutting marginalization. Many of those targeted by this programme, are either ostracized or marginalized because they either live with HIV/AIDS or are victims of early and unintended pregnancy, child marriage, gender-based violence or are classified as rural poor. This programme gives them the opportunity to reintegrate into standard formal education.” (Lives Resumed by Education).

The disease COVID-19 contributed to the increase in domestic and sexual abuse, which also forced the mentioned distance form (radio) of education, or also a content focus on informing about the general rights of children and adults. In the context of the use of radio in adult education, A. Altun (2012) states that UNESCO began to deal intensively with media literacy on the basis of the International Symposium on Media Education held in the Polish city of Grunwald in 1982.

Under the supervision of UNESCO, a programme entitled "Providing alternative educational opportunities for adolescent girls who have left school due to pregnancy" was implemented at the Institute of Adult Education in Dar el Salaam (Tanzania). For young women and girls who have not completed secondary education, a 2 and ½ year educational course in two stages was prepared. The first level was aimed at strengthening the basic skills of girls by improving their literacy and math skills, which were complemented by the development of business and life skills. The second part consisted of professional training in various fields identified by the students: tailoring and embroidery, batik, clothing dyeing, soap production, vaseline production as well as cooking.

Out of the total number of 220 young women, 149 successfully completed it in 2020 (Empowering Out of School Young Mothers through Second Chance Education).

UNESCO and the World Bank were at the birth and, of course, continue to help with the financing of the "Second Chance Education Programme", the aim of which is:

- to increase the number of out-of-school youth and young adults who complete recognized equivalency programs;
- to decrease number and/or rate of leavers from each program and level, thus increasing internal efficiency of the program.

The project consists of four activities:

1. Support for the development of equally high-quality curricula, training of trainers during their activity and strengthening of the quality and availability of teaching and instructional materials.
2. Improving the quality of services provided, which includes strengthening of management, training and funding of teaching staff and community facilitators, monitoring and evaluation and promotion of the educational programme.
3. Expanding of local capacity for service providing through community learning centres, including supporting the assessment, planning and delivery of expanded service providing capacity through the establishment of up to 65 community learning centres.
4. Information, monitoring and evaluation technologies (Timor-Leste Second Chance Education Programme).

An example of the adaptation of this programme is the state of Bangladesh, where a specific educational program "The Reaching Out of School Children" (ROSC) was introduced, providing second-chance education to out-of-school children in targeted areas - poor rural communities and urban slums. With it, the government responded to the sad fact that in 2010, almost 5.6 million children aged 6-13 were excluded from primary education, mainly because of poverty, manifested in several factors - the impossibility of purchasing textbooks and school uniforms, lack of funds enabling transportation to school, the necessity of earning instead of attending school, etc. (A Second Chance to Education). For the education of these children, so-called "joy schools" (ananda schools) were founded, which provide children with scholarships to ease the burden on their families, free textbooks, stationery and uniforms. The ROSC project, which has been in its second phase (ROSC II) since 2013, launched four pilot programs:

- expanding second-chance education for children from urban slums and pre-vocational skills training for older students, while evaluating pilot interventions targeting children in the home and developing early reading habits in ROSC students,
- strengthening the internal monitoring capacity of ROSC through a revised management structure at field level,

- providing an opportunity for the education of Rohingya children living in Bangladesh through an additional financial grant,
- providing pre-professional training to disabled youth and adolescents.

Second-chance schools of joy differ from regular schools in the fact that the students are older, they work through flexible timetables and one teacher prepares all pupils in a class for progression to secondary education.

Conclusion

It is only natural that the issue of second-chance education is also in the interest of other multinational institutions, such as the United Nations. Under its management and with the support of the BHP Foundation, a project focused on women's second-chance education "UN Women's Second Chance Education and Vocational Learning Programme" has been launched, which enables women to re-enter formal education, to acquire professional and business skills and connects them with work and business opportunities (Second Chance Education and Vocational Learning Programme). A part of today's educational policies and practical activities "should also be an important system element of the second-chance system, the goal of which is to involve people with a low level of education and lack of qualifications back into education. The main task of second-chance education is to protect this target group from these risks and provide them with the necessary knowledge and skills, as well as to regain faith in them and in their abilities, faith in education and work applicability." (Lukáč & Temiaková, 2021, p. 24). In today's forms, the concept of second-chance education is used for the implementation of several educational activities directed to the field of primary education, as well as to the field of professionally oriented education in order to provide the necessary knowledge and skills for employment on the labour market. It is implemented in the form of classic face-to-face teaching, teaching through an online connection, or through alternative educational systems that combine an individual modular method with a face-to-face form provided by mobile teachers travelling across the country's individual regions. The second-chance education of convicts serving a prison sentence also has a specific form, which is limited by many factors. One of them is e.g. also the regime in the prison, which affects the way how a teacher communicates with the learning prisoners. Compared to students in classical education, these students represent a specific target group that is considerably heterogeneous - level of education, work qualification, age, motivations and attitudes towards education, absence in movement, decision-making and action, etc. Individual examples, as well as everyday experience, prove that second-chance education is already part of the educational systems of not only developed countries, but also an inevitable reality for developing countries.

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A Cross-Sectional Examination of the Written Expression Skills of Students with Low Vision, Visual Impairments, and their Sighted Peers

Cem Aslan - Salih Cakmak*

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Abstract:

Introduction: Several studies in the literature have investigated writing skills of students with visual impairment and low vision. However, no research was found to examine the written expression skills of students with visual impairment in terms of text cohesion, text coherence, text quality, text length, and writing time variables. A more comprehensive approach to research on the written expression skills of students with visual impairments and low vision is needed.

Methods: In this study, a cross-sectional design was employed to examine the written expression skills of students with low vision, visual impairment, and their sighted peers. Participants of this study consist of 344 secondary school students who were divided into three groups: Visual impairment, low vision, and sighted peers. During the application process, all students were given two different guidelines (six in total) for each text type (memoir, persuasive, informative) and asked to write about the instructions they chose. As a result, all students wrote three different texts. Texts scored on text length, writing time, text quality, coherence level, and cohesion levels. Descriptive statistics and statistical comparisons of groups were provided. Whether written expression skills of students differed according to groups was determined by one-way analysis of variance, which is one of the parametric tests.

Results: In this research, the mean of students with visual impairment and sighted peer's text length and writing time differed statistically. And in this study, the average of students with visual impairment and sighted peer's coherence level and text quality differed statistically.

Discussion: It can be stated that students with visual impairment do not consider their thoughts in integrity, have difficulty in concluding their articles, their texts remain as an introduction, and generally write low-quality texts. In this study, the

* Cem Aslan, Gazi University, Faculty of Education, Department of Special Education, Ankara, Turkey; cemaslan@gazi.edu.tr
Salih Cakmak, Gazi University, Faculty of Education, Department of Special Education, Ankara, Turkey; salih_cakmak@gazi.edu.tr

mean of students with visual impairment, low vision, and sighted peer's coherence level and text quality differed statistically. There are significant differences between students in all text types except for persuasive text. While there was no difference in memoir and persuasive text at the level of cohesion, were significant differences among students in terms of informative text and total scores. There are studies in the literature that are in line with these results. Thus, it can be said that results obtained from the present research are parallel to the literature.

Limitations: The results obtained from this research are limited to memoir, persuasive and informative texts. The variables are limited to text length, writing time, text coherence, text quality, and cohesion level. Having each student write three different texts simultaneously (consecutively) in a single session can be given as another limitation of the research.

Conclusions: In this research, memoir, persuasive, and informative text types were used. In future research, texts such as discussion and stories can be writing, or variables such as effort, motivation, and writing tendency can be examining. Further research on fluency and legibility regarding the mechanical aspect of writing can be planning, or spelling mistakes of students with visual impairment can be investigating. Experimental research focusing on teaching writing strategies can be done. Activities should be organized by teachers to motivate students about writing, encourage them, and increase their interests. If teachers include writing activities, this can serve to the improvement of students with visual impairments. Students who try to write should be supported. Considering the limitations of students with visual impairment in terms of writing skills, technologies that will serve these students' better writing should be used.

Key words: written expression skills, visual impairment, writing, low vision, sighted peers.

Introduction

Writing is one communication tool and is one of the basic skills each student should learn. The traditional goals of writing skills have been academic, professional, and social (Feldman, 2011). Writing skills allows students to spread their knowledge and demonstrate what they know (Harris & Graham, 2013). Writing skills play a significant role in the school, business, and social life (Graham & Harris, 2005). Writing skills can be discussed in two dimensions: (1) mechanical dimension (writing process), which is generally related to the formal appearance of the writing, and (2) content dimension (expression of ideas), which relates to the discovery of a written product. Written expression is the realization of a written essay withal using a combination of some cognitive and metacognitive processes according to the characteristics of the text types (Harris, 1993). In other words, writing expression is a highly complex and demanding process (Englert & Mariage, 2003).

1 Students with visual impairments and written expression

Written expression skills are among the curriculum objectives. However, many students have difficulty in these skills (Ozmen, Selimoglu, & Simsek, 2015). One of the groups of students who have a hurdle in written expression skills is those with visual impairment and low vision. Students with visual impairment may learn writing expression skills as a natural outgrowth of oral expressions like their sighted peers (Harley, Truan, & Sandford, 1997). The notion of literacy as such has recently often been put into relation with preschool age (Tamášová & Šulganová, 2016). When viewed from this angle, while students with visual impairment have limited access to braille before they start school, their sighted peers start reading after exposure to print in an informal way (Dodd & Corn, 2000). Many students with visual impairment may not be exposed to print or braille until they reach preschool or kindergarten (Hatton, Erickson, & Lee, 2010). Braille is complex and tactile writing. Therefore, students with visual impairment acquire reading and writing skills later. Also, students with visual impairment are slower readers than sighted students (Dodd & Conn, 2000). For the plurality of students with visual impairment learning to write is the same process as for their sighted peers, although they may need more planning, more consideration, and more time (Arter, McCall, & Bowyer, 1996; Swenson, 1999). These factors can cause students with visual impairment to underperform their sighted peers (e.g. Harris-Brown, Richmond, Maddalena, & Jaworski, 2015; Kreuzer, 2007; Meieran, 1985).

2 Students with low vision and written expression

Handwriting is a complex skill that depends on the integration of many skills such as fine motor coordination, spelling, and sentence construction (Harley et al., 1997; Watson, Wright, Wyse, & De L'Aune, 2004), and requires a combination of visual, motor, and cognitive skills (Markowitz, 2006). All are necessary to communicate ideas through writing. Therefore, for students with low vision, writing is a challenging skill. The kinesthetic information or/and sensory input restricts development. So, students with low vision academic skills such as writing are inadequate (Aki, Atasavun, & Kayihan, 2008; Barraga & Erin, 2001; Bishop, 2004). Besides, the writings of students with low vision can be quietly short, and they may be reluctant to write (Corley, Robinson, & Lockett, 1989). An irregular pattern may appear in their writings, and discrepancies may seem between the letters they write (Arter, Mason, McCall, McLinden, & Stone, 1999).

3 Current research

Several studies investigated writing skills students with visual impairment and low vision. For example, handwriting abilities (Harris-Brown et al., 2015), expressive writing skills (Koenig, 1987), writing practices (Kreuzer, 2007), writing samples (Erin & Wright, 2011; Savaiano & Hebert, 2019), written expressive language (Meieran, 1985; Tulumovic & Huremovic, 2012), writing performance (Aki et al., 2008; Atasavun Uysal & Aki, 2012), the impact of a braille-note on writing (Kamei-Hannan & Lawson, 2012), written expression skills (Aslan & Cakmak, 2020), writing instructional practices (Hebert & Savaiano, 2020), promote the handwriting accuracy (Chang, Lo, & Chuang, 2020) were examined. However, no research was found to investigate the written expression skills of students with visual impairment and low vision in terms of text cohesion, text coherence, text quality, text length, and writing time variables. In this context, it is possible to mention the need for further research and the contribution that the present study can make to knowledge in the literature. In this study, the written expression skills of students with visual impairment and low vision and their sighted peers were compared. Therefore, this research is considered significant. The results to be obtained can serve to the understanding of whether vision affects written expression skills or not, as well as determining students' status. Besides, it can help prepare content for writing intervention programs. Thus, arrangements can make in line with the needs of the students. In particular, this research is expected to provide important information on deciding which skills require educational measures. Finally, it is thought that it can direct teachers in specific issues such as patterning, implementation, development, evaluation, and monitoring in processes related to teaching written expression skills. The purpose of the current study is to examine written expression skills with a cross-sectional sample of students with low vision, visual impairment, and their sighted peers. The following research questions guide the study:

1. Do the text length of students with low vision, visual impairment, and their sighted peers differ from each other?
2. Do the writing time of students with low vision, visual impairment, and their sighted peers differ from each other?
3. Do the cohesion level of students with low vision, visual impairment, and their sighted peers differ from each other?
4. Do the quality level of students with low vision, visual impairment, and their sighted peers differ from each other?
5. Do the coherence level of students with low vision, visual impairment, and their sighted peers differ from each other?

4 Methods

In this study, a cross-sectional design was employed to examine the written expression skills of students with low vision, visual impairment, and their sighted peers.

4.1 Participants

Participants of this study consist of 344 secondary school students who were divided into three groups: Visual impairment, low vision, and sighted peers (see Table 1). Students with visual impairment and low vision included in the study depending on the following criteria: (1) diagnosis of visual impairment, (2) being between the fifth grade and the eighth grade, (3) using braille (students with visual impairment) or regular text (students with low vision) as a writing tool, (4) writing a memoir about what they did during the weekend using five or more sentences (Guzel-Ozmen, 2006). Students were excluded if they had multiple disabilities (Harris-Brown et al., 2015; Kreuzer, 2007). There were no other exclusion criteria. Sighted peers were included in the study depending on the following criteria: (1) students with no visual impairment or diagnosis of motor or/and intellectual disabilities (Harris-Brown et al., 2015). (2) writing a memoir about what they did during the weekend using five or more sentences (Guzel-Ozmen, 2006), (3) being between the fifth grade and the eighth grade, (4) matching with the participants in other student groups in terms of grade level. Demographic data of the participants are given in Table 1.

Table 1

Participant demographics

<u>Variables</u>	<u>Category</u>		<u>LV</u>		<u>VI</u>		<u>SP</u>		<u>Total</u>
Gender	Female	48	43.2	62	54.9	48	40	158	45.9
	Male	63	56.8	51	45.1	72	60	186	54.1
Grade Level	5 th	29	26.1	30	26.5	30	25	89	25.9
	6 th	25	22.5	29	25.7	30	25	84	24.4
	7 th	27	24.3	27	23.9	30	25	84	24.4
	8 th	30	27.1	27	23.9	30	25	87	25.3
Type of School	School for The Visual Impairment	54	48.6	97	85.8	-	-	151	43.9
	Public School	-	-	-	-	120	100	120	34.9
	Inclusive School	57	51.4	16	14.2	-	-	73	21.2

LV: Students with Low Vision, VI: Students with Visual Impairments, SP: Sighted Peers

4.2 Data collection tools

4.2.1 Text length

Text length was measured by counting the number of words in students' text (Lane et al., 2008). All text samples written by the students were transferred to the computer. The word count tool that was involved in the word processing software was used to calculate the total text length. Text length was calculated for each text type.

4.2.2 Writing time

Writing time was measured using stopwatches for each text type. The total writing time duration was measured, starting with the instructions until the finish of writing. Writing time was calculated for each text type.

4.2.3 Cohesion level

For the assessment of the level of text cohesion, The Scale for Evaluating Cohesion Level was used (Coskun, 2005). The scale consists of five cohesion measures and 24 items. Scoring is done according to the frequency of use of the cohesion measures. The overall reliability of the scale is $r=.99$. The scale can use for different text types. Two independent researchers scored the texts. Inter-scoring reliability (ISR) was 86.8% for memoir, 92.1% for persuasive text, and 98.6% for informative text.

4.2.4 Text quality

The Holistic Assessment was used to assess the quality of the texts (Saddler, 2006). The assessment score ranges from 1 to 7 points. The texts written by 5th, 6th, 7th, and 8th-grade students were taken as the basis for scoring text quality. Each of the texts was assessed by the authors. Those texts that were agreed and received 2, 4, and 6 scores, were chosen for holistic assessment. The texts written by the students were scored using these texts. ISR was 80.9% for memoir, 78.2% for persuasive text, and 85.1% for informative text.

4.2.5 Text coherence

The Holistic Coherence Scale was utilized (Bamberg, 1984; Zorbaz, 2010) for assessment of the level of text coherence. The scale consists of five points ranging from unscorable or miscellaneous (0 points), incomprehensible (1 point), incoherent (2 points), partially coherent (3 points), and fully coherent (4 points). The overall reliability of the scale is $r=.739$. The scale can use for different text types. Two independent researchers scored the texts. ISR found 81.8% for memoir, 83.3% for persuasive text, and 84.6% for informative text.

For all variables, disagreements were resolved by discussing with the first author to obtain the final score.

4.3 Procedure

The data collection process of the research was completed in the 2018-2019 academic year. In the data collection process, firstly, compulsory legal permission was obtained by the Ministry of National Education. Then, ethical approval was obtained by Gazi University Ethics Committee. Then the application started. During the application, all students were given two different guidelines (six in total) for each text type (memoir, persuasive, informative) and asked to write about the instructions they chose. The instructions were presented randomly in a mixed order. As a result, all students wrote three different texts. For this, various materials were given to the students. For example, students in the sighted peer group were given a standard booklet with instructions and blank pages for writing. The students wrote their texts starting from the text type they wanted. For students in low vision group, instructions were prepared with alternative font sizes (e.g. 12, 14, 16, 18, 20, 22, 24, 26, 28) (Atasavun Uysal & Duger, 2012) and the “Century Gothic” font (Cakmak, Karakoc, Safak, & Kan, 2014). Instructions were given in preferred font sizes to students with low vision. Besides, students were allowed to use materials such as bold-lined paper. Instructions were prepared in braille format for students with visual impairment. Each instruction was written on separate pages. The presentation of instructions to students was made in a mixed (random) order to prevent order effect and selection bias.

Time recording started when the students began to write, to be valid for all students. In this research, the written expression skills of students were investigated. Therefore, no feedback was given to the students about the content of their writings. However, some encouraging expressions such as well done, you can continue writing, and very well were used for the writing process. There was no restriction regarding students' writing time and text length. The writing time was recorded by the researchers. Writing texts written by students were collected. Each student was given a code number, and the application process was completed by thanking the students.

4.4 Data analysis

All data collected from students were transferred to the computer for statistical analysis. Then, data analysis started. We used the SPSS for the statistical analysis of the data. In the evaluation of the study data, descriptive statistics used. Increasing the reliability of a study and consistently interpreting the findings at the outset requires choosing appropriate statistical techniques. These depend on factors, such as the research model, distribution of measured variables, and sample size. Therefore, firstly, analyze the normal distribution of the data. The suitability of data to normal distribution was tested utilizing the Shapiro-Wilk and Kolmogorov-Smirnov tests. The kurtosis and skewness values

show that the data obtained are suitable for normal distribution (Tabachnick & Fidell, 2013). Accordingly, whether the written expression skills of students differed according to groups was determined by one-way analysis of variance (ANOVA), which is one of the parametric tests. Post-Hoc Scheffe test was used to determine the source of the difference. The analyses were performed at a .95 confidence interval. The significance of the analyses was evaluated at the $p < 0.05$ level.

5 Results

5.1 Text Length

ANOVA results determining whether students differ in text length are presented in Table 2.

Table 2

Results of ANOVA test on students' text length according to groups

<u>Text Type</u>	<u>Text Length Scores</u>	<u>Sum of Squares</u>	<u>df</u>	<u>Mean Square</u>	<u>F</u>	<u>Sig.</u>	<u>Meaningful Difference</u>
Memoir	Between Groups	14379.578	2	7189.789	6.734	.001*	SP > VI
	Within Groups	364082.256	341	1067.690			
	Total	378461.834	343				
Persuasive	Between Groups	3971.232	2	1985.616	2.722	.067	-
	Within Groups	248742.486	341	729.450			
	Total	252713.718	343				
Informative	Between Groups	33018.580	2	16509.290	12.354	.000*	SP > LV
	Within Groups	455714.301	341	1336.406			SP > VI
	Total	488732.881	343				
Total	Between Groups	120395.039	2	60197.519	10.249	.000*	SP > LV
	Within Groups	2002783.540	341	5873.266			SP > VI
	Total	2123178.578	343				

* $p < 0.05$

The results of the ANOVA test presented in Table 2 indicated that the average scores of the students statistically varied according to the text types of memoir

($F=6.734$; $p<.05$), informative ($F=12.354$; $p<.05$), and total ($F=10.249$; $p<.05$). On the other hand, the average scores of the students were not statistically significant in terms of persuasive ($F=2.722$; $p>.05$). According to Post-Hoc Scheffe Test, the difference in memoir is between students with visual impairment and sighted peers; text length differences in informative and total are between sighted peers with students with visual impairment and low vision ($p<.05$).

5.2 Writing time

ANOVA results, conducted to determine whether there is a difference between the writing times of students, are shown in Table 3.

Table 3

Results of ANOVA test on students' writing times according to groups

<u>Text Type</u>	<u>Writing Time Scores</u>	<u>Sum of Squares</u>	<u>df</u>	<u>Mean Square</u>	<u>F</u>	<u>Sig.</u>	<u>Meaningful Difference</u>
Memoir	Between Groups	2519485.722	2	1259742.861	6.455	.002*	VI > LV
	Within Groups	66546538.833	341	195151.140			
	Total	69066024.555	343				
Persuasive	Between Groups	3593334.699	2	1796667.349	13.390	.000*	VI > LV
	Within Groups	45753771.057	341	134175.282			VI > SP
	Total	49347105.756	343				
Informative	Between Groups	2409160.959	2	1204580.480	7.144	.001*	VI > LV
	Within Groups	57498083.134	341	168616.080			
	Total	59907244.093	343				
Total	Between Groups	25155462.991	2	12577731.495	10.833	.000*	VI > LV
	Within Groups	395936906.960	341	1161105.299			VI > SP
	Total	421092369.951	343				

* $p<0.05$

When Table 3 is examined, a significant difference is seen between students with visual impairment, low vision, and sighted peers in terms of all text types (Memoir: $F=6.455$; $p<.05$; Persuasive: $F=13.390$; $p<.05$; Informative: $F=7.144$;

$p < .05$) and total writing time ($F = 10.833$; $p < .05$). According to Post-Hoc Scheffe Test, there was a difference between students with visual impairment and low vision in memoir and informative; students with visual impairment, low vision, and sighted peers in persuasive and total writing time ($p < .05$).

5.3 Cohesion level

ANOVA results, conducted to determine whether there is a difference between the levels of cohesion between students with low vision, visual impairment, and sighted peers, are presented in Table 4.

Table 4

Results of ANOVA test on students' cohesion levels according to groups

<u>Text Type</u>	<u>Cohesion Level Scores</u>	<u>Sum of Squares</u>	<u>df</u>	<u>Mean Square</u>	<u>F</u>	<u>Sig.</u>	<u>Meaningful Difference</u>
Memoir	Between Groups	956.016	2	478.008	2.967	.053	-
	Within Groups	54936.167	341	161.103			
	Total	55892.183	343				
Persuasive	Between Groups	66.645	2	33.323	.328	.721	-
	Within Groups	34662.235	341	101.649			
	Total	34728.881	343				
Informative	Between Groups	3999.877	2	1999.939	13.821	.000*	SP > LV
	Within Groups	49343.832	341	144.703			SP > VI
	Total	53343.709	343				
Total	Between Groups	7544.033	2	3772.017	5.272	.006*	SP > VI
	Within Groups	243966.339	341	715.444			
	Total	251510.372	343				

* $p < 0.05$

According to Table 4, the cohesion levels of students with low vision, visual impairment, and sighted peers memoir ($F = 2.967$; $p > .05$) and persuasive text ($F = .328$; $p > .05$) texts do not differ significantly. Conversely, a significant difference was found between students with low vision, visual impairment, and

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sighted peers in terms of informative ($F=13.821$; $p<.05$) and total coherence ($F=5.272$; $p<.05$). These differences are in favor of sighted peers.

5.4 Text quality

ANOVA results, conducted to determine whether students' text quality varies among groups, are presented in Table 5.

Table 5

Results of ANOVA test on students' text quality according to groups

<u>Text Type</u>	<u>Text Quality Scores</u>	<u>Sum of Squares</u>	<u>df</u>	<u>Mean Square</u>	<u>F</u>	<u>Sig.</u>	<u>Meaningful Difference</u>
Memoir	Between Groups	36.782	2	18.391	5.935	.003*	LV > VI
	Within Groups	1056.707	341	3.099			
	Total	1093.488	343				
Persuasive	Between Groups	48.520	2	24.260	9.614	.000*	LV > VI
	Within Groups	860.500	341	2.523			LV > SP
	Total	909.020	343				
Informative	Between Groups	38.169	2	19.085	6.290	.002*	SP > VI
	Within Groups	1034.595	341	3.034			
	Total	1072.765	343				
Total	Between Groups	238.315	2	119.158	7.452	.001*	LV > VI
	Within Groups	5452.568	341	15.990			
	Total	5690.884	343				

* $p<0.05$

When Table 5 is examined, significant differences are observed between students with low vision, visual impairment, and sighted peers in terms of all text types (Memoir: $F=5.935$; $p<.05$; Persuasive: $F=9.614$; $p<.05$; Informative: $F=6.290$; $p<.05$) and total text quality ($F=7.452$; $p<.05$). According to Post-Hoc Scheffe Test, there was a significant difference between students with visual impairment and low vision in terms of memoir and the sum text quality; between low vision, visual impairment, and sighted peers in terms of persuasive; and between sighted peers and students with visual impairment in terms of informative ($p<.05$).

5.5 Text coherence

ANOVA results, conducted to determine whether there is a difference between students' text coherence levels, are shown in Table 6.

Table 6

Results of ANOVA test on students' text coherence levels according to groups

<u>Text Type</u>	<u>Text Coherence Scores</u>	<u>Sum of Squares</u>	<u>df</u>	<u>Mean Square</u>	<u>F</u>	<u>Sig.</u>	<u>Meaningful Difference</u>
Memoir	Between Groups	30.937	2	15.469	10.019	.000*	LV > VI
	Within Groups	526.502	341	1.544			
	Total	557.439	343				
Persuasive	Between Groups	19.327	2	9.664	7.995	.000*	LV > VI
	Within Groups	412.161	341	1.209			LV > SP
	Total	431.488	343				
Informative	Between Groups	22.221	2	11.110	7.407	.001*	LV > VI
	Within Groups	511.497	341	1.500			SP > VI
	Total	533.718	343				
Total	Between Groups	158.423	2	79.212	9.962	.000*	LV > VI
	Within Groups	2711.298	341	7.951			SP > VI
	Total	2869.721	343				

* $p < 0.05$

When Table 6 is analyzed, a statistically significant difference is seen between students with visual impairment, low vision, and sighted peers students in terms of all text types (Memoir: $F=10.019$; $p<.05$; Persuasive: $F=7.995$; $p<.05$; Informative: $F=7.407$; $p<.05$) and total coherence level ($F=9.962$; $p<.05$). According to the Post-Hoc Scheffe Test result, the difference is between visual impairment and low vision groups in terms of memoir; between low vision, visual impairment and sighted peers in terms of persuasive; between students with low vision, visual impairment, and sighted peers in terms of informative and total text coherence ($p<.05$).

6 Discussion

6.1 Text Length and writing time

In this study, the text length and writing time scores of students with visual impairment, low vision, and sighted peers differed statistically. In the literature, there are studies supporting this finding (e.g. Aki et al., 2008; Atasavun Uysal & Aki, 2012; Harris-Brown et al., 2015; Koenig, 1987; Kreuzer, 2007; Meieran, 1985). In this respect, the findings obtained from the research are consistent with the literature. In the study, sighted peers wrote the highest number of words, and students with visual impairment wrote the lowest number of words. Students with visual impairment used the longest time, and students with low vision used the shortest time. These findings coincide with the research in the literature (e.g. Harris-Brown et al., 2015; Kreuzer, 2007). The writing time of students with visual impairment is very high compared to low vision students and their sighted peers. This result may be due to braille. Because braille is one of the significant issues that students with visual impairment have difficulties in (Heller, D'Andrea, & Forney, 1998). On the other hand, handwriting may be an arduous activity for students with visual impairment (Arter, 1997). Factors such as writing from right to left in braille, pressing the dots that make up the letters one by one, using abbreviations, the tactile nature of writing, and fatigue of hands or fingers while writing, can slow down the writing process. Therefore, students with visual impairment may experience a significant waste of time writing. This situation may cause students with visual impairment to fall behind their sighted peers. Swenson (1999) emphasizes that students with visual impairment need more time and effort to become competent writers.

Students with low vision writing time are low compared to other students. This result may be associated with limitations in motor skills or visual factors. Restriction in the sense of vision may lead to delays in fine and gross motor skills of students with low vision (Arter et al., 1996). Since handwriting is a complex skill that depends on the integration of many abilities, such as fine motor coordination, spelling, and sentence construction (Harley et al., 1997; Watson et al., 2004), and requires a combination of visual, motor, and cognitive skills (Markowitz, 2006). Students with low vision are a heterogeneous group in terms of many features, and their functional vision levels differ from each other. Students with low vision may not be able to see the area they will write as a whole. As a result, the writing process for this student can be tiresome and often lead to difficulties (Downes, Walker, & Fletcher, 2015). Some students with low vision may need to look very closely at the page to see what they are writing (Arter, 1997; Holbrook, Koenig, & Rex, 2010). In this case, students with low vision may have eye fatigue, watering eyes, or sore eyes. These factors are thought to affect low vision students' writing performance, especially in terms of time.

6.2 Cohesion level, text coherence, and text quality

In this study, the mean of students with visual impairment, low vision, and sighted peer's coherence level and text quality differed statistically. There are significant differences between students in all text types except for persuasive text. While there was no difference in memoir and persuasive text at the level of cohesion, significant differences were observed among students in terms of informative text and total scores. There are studies in the literature that are in line with these results (e.g. Koenig, 1987; Kreuzer, 2007; Meieran, 1985; Tulumovic & Huremovic, 2012). Thus, it can be said that results obtained from the present research are parallel to the literature. Sighted peers have the highest average in cohesion levels, while students with low vision have the highest average in-text coherence and text quality. Students with visual impairment have a lower average score compared to other students. As reported in the study of Erin and Wright (2011), some students wrote long, expressive essays that were filled with miscues, while others wrote short unimaginative passages that were free of errors. Kreuzer (2007) stated that students with visual impairment scored significantly lower compared to sighted peers. In the study of Koenig (1987), students with visual impairments, especially in the age group of 17, performed poorly than their sighted peers. In this respect, the results obtained from the research support the literature.

The results given above may have been due to the lack of knowledge, skills, and experience of students with visual impairment. Lack of experience, knowledge, vocabulary and cultural characteristics can affect many written expression skills. Students with visual impairment may have inefficient experience due to visual limitations and experience limited prior knowledge, language skills, and vocabulary (Meieran, 1985). For students with visual impairment, learning this skill is very difficult (Plimmer, Crossan, Brewster, & Blagojevic, 2008). Students with visual impairment may not have clear and sufficient knowledge of the meanings of some words and may use some words that they cannot visualize. These can cause these students to have difficulty in writing. It can also be reflected in the content of the texts they write (Erin & Wright, 2011). Another significant factor is that students with visual impairment are more concerned with the mechanical dimension of writing (please see the findings on the writing time). Students with visual impairment who spent a lot of time on writing mechanics may have ignored the content of their writing. These can be seen as a reason for the low level of compatibility, text quality, and text coherence. It can be said that the written expression skills of students with visual impairment are not at the desired level. According to the findings obtained from the research, students with visual impairments write papers that are less consistent and have low text quality and limited text coherence. In other words, it can be stated that they do not consider their thoughts in integrity, have difficulty in concluding

their articles, their texts remain as an introduction, and generally write low-quality texts.

The writing process comprises planning, drafting, editing, and revising strategies (Graham & Harris, 2005). These strategies help improve written expression skills and increase text quality and length (De La Paz & Graham, 1997). However, all students participating in this research wrote their articles at once. They did not use strategies such as editing and revising. Kamei-Hannan and Lawson (2012) state that students with visual impairment start writing without any plan or preparation. However, students who write in braille seldom use prewriting strategies (Ely, 1989), and they often wrote a single draft without revisions (Gere, 1982). Failure to use these strategies could potentially affect the written expression skills of students with visual impairment. Thus, students with visual impairment may have performed poorly than other students.

7 Limitations

The results obtained from this research are limited to memoir, persuasive and informative texts. The variables are limited to text length, writing time, text coherence, text quality, and cohesion level. Having each student write three different texts simultaneously (consecutively) in a single session can be given as another limitation of the research. However, obtaining permissions repeatedly from the relevant schools for each application where data is collected from many students and take a long time data collection process made it compulsory to collect the research data in a single session.

Conclusion

In this research, memoir, persuasive, and informative text types were used. In future research, texts such as discussion and stories can be writing, or variables such as effort, motivation, and writing tendency can be examining. Furthermore, these variables can be dealt with in various contexts, such as gender, school attended, and the writing tool used. Further research on fluency and legibility regarding the mechanical aspect of writing can be planning, or spelling mistakes of students with visual impairment can be investigating. Experimental studies focusing on teaching writing strategies can be done. Relational research can be carried out, for instance, to examining the effect of the writing tool used on the length. Finally, larger samples can be studied to increase the generalizability of the findings.

Activities should be organized by teachers to motivate students about writing, encourage them, and increase their interests. If teachers include writing activities, this can serve to the evolution of students with visual impairments. Students who try to write should be supported. Students should be made aware

of text structures and elements. These should contain different text types rather than a specific text type. Considering the limitations of students with visual impairment in terms of writing skills, technologies that will serve these students' better writing should be used. Freeing students in topic selection can motivate them and make them more willing to write.

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Interaction Analysis in Nurseries

*Ágnes Klein - Tünde Tancz**

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Abstract:

Introduction: The present research aimed to review the qualitative aspects of communication between children and their caregivers. We focused on the presence of quality indicators, on the strategies we encounter in influencing language acquisition in the interaction between children and early childhood educators.

Methods: We examined the diversity, awareness and efficiency with which educators use communication tools and techniques in various preschool education situations for children under 3 years of age. In the empirical survey of day-care interactions a questionnaire was based on the evaluation and observation of questionnaire responses.

Results: The emotional and motivational basis of language acquisition is formed by the toddler's social inclinations and attachment needs, as well as social inclinations, with his environment playing a prominent role in changing these processes.

Discussion: These interactions provide a framework for language acquisition, where in the classic case language acquisition is not guided, but takes place through everyday situations, through participation in authentic communication situations. The axiom is that language skills develop in language use.

Limitations: The questionnaire was validly completed by 60 people. The data collection concentrated on the region of southern and northern Transdanubia in Hungary. Although not in national terms, this offers the opportunity to evaluate and reflect on the situation at the regional level.

Conclusions: The professional communication and competent language development activity of educators' results from the interplay of scientific-theoretical knowledge, implicit empirical knowledge, competence-oriented procedures

Key words: crèche, language acquisition, support, interaction.

* Ágnes Klein, University of Pécs, Faculty of Cultural Sciences, Education and Regional Development, Pécs-Szekszárd, Hungary; klein.agnes@pte.hu
Tünde Tancz, Pedagogical Service, Szekszárd, Hungary; ttunde@tolna.net

Introduction

Language acquisition through communication

The first and most common form of institutionalized expansion and development of the small children's social space is the crèche. Day nurseries are facilities in which the children are professionally cared for, raised and supervised during their parents' working hours or for other reasons. In the last few decades the number of children attending daycare has increased across Europe, including in Hungary. In 2018, 44,577 children attended a daycare center, which is 17% of Hungarian children between the ages of 1-3. The day nursery is basically a facility that specializes in looking after children aged between 0-3, but around 30% of the children enrolled in the facility have already reached the age of 3 (Hungarian Central Office for Statistics, 2019). In this context, there are children who are starting to acquire their first language in the daycare center and there are also children in whom the skills they have already acquired at home are being developed.

According to Krashen's "input hypothesis" (1985), language acquisition is only possible on the basis of the corresponding quantity and quality of the input; through an appropriate language pattern and support from the supervisor. At the beginning of early childhood, language input is primarily offered by parents and the immediate family environment. Later, institutionalized education expands the linguistic sources and influences. The educator helps, motivates and gives feedback in daycare communication, but the children also communicate themselves, they actively participate in interactions. The linguistic input only achieves its goal, namely the promotion of the language-speaking skills of the children, if there are no emotional barriers, e.g. fear, lack of motivation, discouragement, lack of self-confidence, which hinder or make the use of language difficult. The basic program of crèche education and care posits the development of children's speaking skills as the primary task of educators, in order to ensure this, an attractive and stimulating language environment is to be ensured for the children in which communication is stimulated and maintained in all kindergarten situations. As well as through the transfer of rhymes, songs and poems. Interactions can appear embedded in and independent of bound and unbound activities. "Interaction situations deserve a lot of attention, because the development and inner growth of the child are largely determined by the daily amount and depth (characterized by the emotions and versatile information options) of the interactions" (Bimbó, 2015, p. 223).

Language is an active, individual-dependent and current activity that language partners use to achieve their goals. With the help of language communication can arise, the innumerable forms of which are known. An important accompaniment to verbal communication is non-verbal communication; the younger the child takes part in the act of communication, the more important the non-verbal signs

(Buda, 1994). We emphasize that the acquisition process works through the combination of visual and auditory cues in early childhood and that the children's language ability only becomes a speaking skill through interactions.

Verbal communication is part of human communication, more and more of our senses are involved, and non-verbal means also appear in the communication process. We distinguish three different channels of oral communication: the visual channel (mimicry, posture, clothing, hair, gestures, eye contact), the tactile channel (smell, body temperature, breathing rate, body touch) and the auditory channel (sound, volume, rhythm, speed of speech). About half of the information is obtained through non-verbal signals (Günther-Günther, 2004, p. 40). We can also find that the younger a child, the more important non-verbal signs are. Visual cues are especially important for children because the learning process at this age works through the combination of visual and auditory cues. It is possible to communicate without language using facial expressions, gestures and even pictures. However, we cannot do without language, and it is also certain that people's ability to speak is only developed in dealing with others.

Pedagogical communication

Pedagogical communication is a special area of the communication process. The more or less systematically prepared and implemented communication, which mostly takes place in direct personal relationships between educators and students, is led by educators (Szőke-Milinte, 2013) and uses a regulated language. Pedagogical communication in nurseries is the order of the day and can be influenced by the external and internal environment of the nursery. The educator is also influenced by his own experiences, e.g. the way he was brought up as a child. In addition, it is influenced by the traditions, regulations and management of the institution. Zrinszky (2002) summarizes the quantitative and qualitative indicators of communication between infants and young children: The quantitative indicators are: the extent of teacher communication and the relative proportions of each channel, the extent of child language: teacher-child language, child-to-child language, time spent with children, time spent using media and tools, percentage of communication activity within a given time (e.g., a walk, a game). The effectiveness of pedagogical communication is significantly influenced by how precisely the educator interprets the children's non-verbal signals, especially in the crèche age. Children are never as aware of this as early childhood educators, but they are very receptive to non-verbal messages from adults. Through this they learn emotions, values and identify with behavioral patterns and even develop empathy.

Qualitative indicators can be: importance, appropriateness, appropriateness of communication (for age, children's needs), focus on the child, the subject or the teacher, expressive attitudes (child love, enthusiasm), childlike freedom of

communication and control techniques for the role of the more anxious or fearless).

A central theme in communication between educators is the relationship between verbal and non-verbal cues. This is especially important when working with children, as they mainly interpret non-verbal messages.

Pedagogical communication in day care centers is strongly linked to the upbringing and care situations, but is influenced by the external and internal environment of the day care center (e.g. morality of the facility, traditions, communication). The educator must be aware of his or her own communication patterns, the use of language, coding system, while he or she converts thoughts into word symbols, body movements, facial expressions and gestures. Their adequacy is actually the realization of authenticity (appropriate behavior with oneself at a certain moment) and congruence (harmony between the internal state and external behavior, see Buda, 2012). For the educator in the pedagogical situation, coherence means that the child's feelings and attitudes are experienced and understood (Bugán, 1996). The signaling system of a child and an adult is not the same for a long time, especially when it comes to verbal communication. The child reacts sensitively to the hidden content of the information provided by the educator and questions its truthfulness if it perceives a discrepancy between the two types of information. If the educator's verbal and non-verbal messages are out of order and harmonious, the child's communication will not be effective either (Buda, 2012).

When organizing the nursery life, it is important to develop a reliable, stable bond, to accept the child's personality, and to show openness and interest in the child's linguistic manifestations (Grimm, 2003, p. 62). The child's language development is most effectively supported by interactions relevant to maintain their attention and interest. Communication should be coordinated with the images and actions necessary to understand them, and the child should be actively involved in the interactions. From the beginning, the language production system is organized according to the model of adults, for example "the vocabulary of children follows the amount of language heard" (Cole & Cole, 2003, p. 333) and they learn implicit grammatical rules from longer sentences (Hoff-Ginsberg, 2000, p. 482). On the basis of this it can be posited that the language acquisition of children is supported by the adults in addition to a quantitative as well as a qualitative input. They can support them with the following strategies: questions about a topic, possible answers, complex additional answers or reactions that implicitly make mistakes correct (Farrar, 1992; Saxton, 2000).

1 Methodology

In the empirical survey of day-care interactions, two paths were chosen by the authors. On the one hand, a questionnaire survey to research the communication strategies and techniques of educators, and on the other hand, participatory observations and an observation protocol on verbal and non-verbal characteristics of interactions were used in two selected daycare centers. Unfortunately, due to the COVID situation, it was not possible to visit crèches, so only the results of the questionnaire can be presented here. The study was carried out with the participation of educators in day nurseries. The questionnaires were sent in electronic form using the snowball method. The data sheet was easy to read, with multiple choice questions and a few open-ended questions. The questions asked which methods of communication (e.g. request, instruction, explanation, question) are preferred by the educators and should indicate them on the Likert scale. The questionnaire was validly completed by 60 people 100% females; which is not at all surprising since the vast majority of childcare educators are women.

The data collection concentrated on the region of southern and northern Transdanubia (Baranya, Fejér, Pest and Tolna counties), where 75% (n= 45) of the responses) came from. Although not in national terms, this offers the opportunity to evaluate and reflect on the situation at the regional level. To reiterate: the present survey focused on the qualitative aspects of the interactions. Using a self-developed interaction questionnaire, the strategies of educators to promote language development and communication skills were examined. The questionnaire contained 20 easy-to-read multiple-choice questions and some open-ended essay questions. In this study we present 3 of them because of the given length of the paper.

The focus was on the presence of quality indicators, i.e. on the importance and appropriateness of communication (appropriateness to the age, needs of the children), the central topic of communication and the attitudes expressed (e.g. love of children, enthusiasm) as well as control technology and degree of freedom of communication in the questions. It was also examined with what diversity, how consciously and efficiently the educators can use the communication instruments and techniques in day-care situations.

The educators' qualification level ranged from MA to intermediate. The most of the educators 41.67% (n=25) have an advanced level qualification (without university degree), 28.33% (n=17) with degree BA 28.33% (n=17) an intermediate qualification and 1.67% (n=1) with a MA graduation.

Regarding the working experience of the participants, the highest rang belonged to the educators of 0-5 years (45%) (n=279). This can be justified with the following arguments. They are easier to reach because they recently graduated. Moreover, the authors of the study assume that the questionnaires that could be

completed through the internet were more likely to be completed by representatives of the younger generation. Educators with more experience 28.33% (n=17) have usually lower qualifications, but are overrepresented in the profession.

As for place of work, 66.67% (n=40) of the educators work in settlements with between 5 and 10 thousand inhabitants and a 5% (n=3) in villages. If there are at least seven children in a village, a mini crèche can be opened. Smaller settlements are typical for the settlement structure of the South Transdanubia region.

The answers to the questionnaire clearly show that most of the nurseries 96.67% (n=58) are run by the local governments. The number of private crèches is insignificant.

As for further statistics, the majority 61.67% (n=37) of the educators have 11-15 children in their group. According to the answers, the number of groups with few children is small 15% (n=9), but this strongly determines the quality and quantity of language development. In the smaller groups, the day care worker has more time and energy for each child. They have more opportunities for individual language development and help young children with special needs. An appropriate and ideal group size means on the one hand the prerequisite for optimal development of the child, on the other hand more favorable working conditions and more efficient work for the educator.

The following table summarizes the above data:

Table 1

Distributions of demographic variables

<i>Variable</i>	<i>n</i>	<i>%</i>
<i>Gender</i>		
Female	60	100
<i>Qualifications</i>		
MA	1	1.67
BA	17	28.33
Further education	25	41.67
Secondary education	17	28.33
<i>Working experience</i>		
0-5 years	27	45.00
6-10 years	8	13.33
11-30 years	8	13.33
32+ years	17	28.33

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<i>School location type</i>		
Village	3	5.00
Town	40	66.67
City	17	28.33
<i>Maintainer</i>		
Municipality	58	96.67
Private	2	3.33
<i>Number of children in a crèche group</i>		
0-5	9	15.00
6-10	15	23.33
11-15	37	61.67

2 Findings

The first question asked which methods of communication (e.g. request, instruction, explanation, question) are preferred by the educators and should indicate them on the Likert scale. Of the forms of communication, the respondents believed that asking was the most important thing. It is the basis for a smooth flow of communication and the development of polite behavior. However, if the educator only expects the child to comply with the request, no real speaking situation arises. Respondents named explanation as the second most common method. Explanation is a monologue method that increases understanding while creating little opportunity for interaction. The predominance of the explanation does not create a language situation in which the child can actively participate, so that communication can become one-sided.

The dialogue can be effectively maintained and promoted through questioning, interestingly a third of educators consider it not important or do not apply it, another third consider it moderately important and only a third state that they use it frequently throughout the day. Yet, asking, positing questions has an essential function in dialogue: it creates contact, initiates the conversation and offers the opportunity to expand the relationship. Without questioning, the success of the interaction is highly questionable. Following this line of thought, instruction was the least preferred among educators. We emphasize that the function of the instruction in terms of communication flow and output is the same as that of the request, yet the tone is different. Both methods attempt to influence and require a pre-announced resolution, while the instruction conveys a more direct and powerful call. The answers in diagram 1 show that praise, consolation, encouragement, support, inquiry, thanks, and positive evaluation are cited as the most common forms of feedback from educators. Praising at the right time and in the right situation has a positive effect on personal development and, through

the use of the educator, can also promote the child's motivation and participation in activities.

The forms of punishment (e.g. lecture, scold, command, criticize, judge, humiliate, shame, brand) were almost never or very rarely stated as being used in practice. This is to be welcomed, because punishment as a means of education has many negative consequences. On the one hand, it can cause stressful and unpleasant emotions (e.g. frustration, fear) in the child and also strain the relationship with the adult; on the other hand, it suppresses disapproved behavior but does not eliminate it, for this reason one should try to avoid negative methods and replace them with stimulating reactions. Positive emotions, a warm and loving atmosphere of trust as well as caring and authentic parenting behavior are important for developing communication skills.

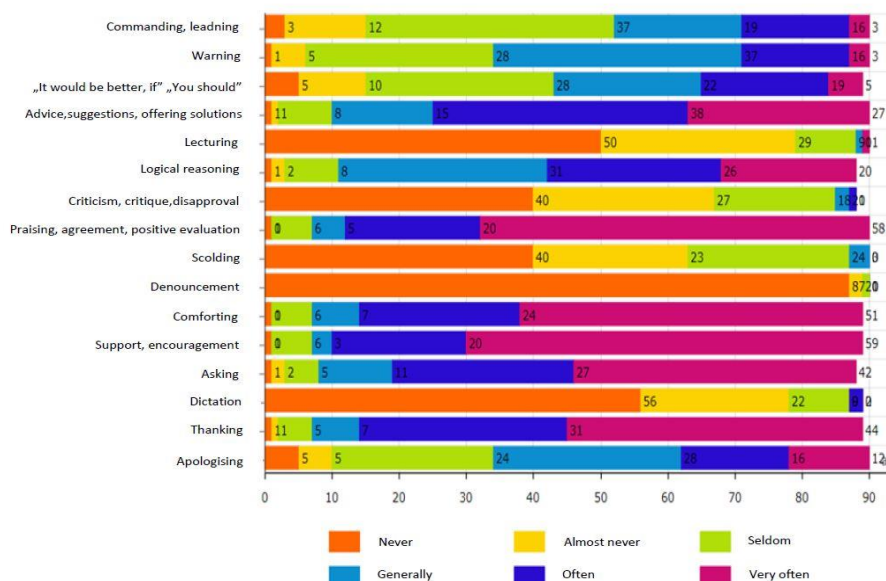


Figure 1. Preferred forms of communication.

There are countless opportunities to speak and interact in day nurseries, which can be used to exchange ideas with the children. In everyday situations, such as routine activities, everyday activities or free play, there are many ways to speak. The next group of questions was about how educators generally respond to children when approached with communicative intentions. 90% (n=54) the majority of respondents indicated that they would take up the topic and continue.

No one wrote that they would ignore the child's intentions to communicate, and six indicated that they would end the situation with a brief instruction.

Table 2

Generally respond to children intentions

<u>Options</u>	<u>n</u>	<u>%</u>
I take up the topic and continue.	54	90
I ignore the child.	0	0
I give brief instructions, to solve the situation quickly.	6	10

The reactions are generally very positive, but here too the expected active and passive behavior of the child dominates. Engaging in dialogue, conversation, involving other children, especially when multiple children are affected by the problem, and discussing this, verbalizing shared thoughts, can provide a framework and an opportunity for interactions to learn from these educator-led situations.

The next questions focused on how the educators can solve such problems that are likely to arise on a daily basis in the group, in which they develop the language together with the children and at the same time solve the situation. It provides an opportunity and time to consciously experience and articulate each child's emotions, which creates interactions. A common source of conflict in day care is tidying up when a toddler does not want to pack after the game. The following options were offered and Table 3 shows the results.

Table 3

Methods/Techniques of the early childhood educators to bring the children to tide up

<u>Options</u>	<u>n</u>	<u>%</u>
I start packing and hope that the child will follow my example.	12	20
I tell him that if it doesn't help, he mustn't play with the toy the next time.	12	20
I try to coax it with conversation, songs, and rhymes.	36	60

The results in table 3 indicate that 60% (n=36) of the educators try to motivate a passive child with experiences so that he does not get bored with the task. This creates an interaction situation in which tensions are resolved together in a common language. Some of the educators are insecure, do not know how to express and enforce their instructions to include the child in communication and cooperation. Notably, 20% (n=12) uses an avoidance strategy and carries out the originally joint task independently. Another 20% (n=12) choose a completely

opposite strategy, accepting the conflict, even provoking it by threatening the child. This reaction triggers frustration and fear in the child and can even undermine the relationship of trust in the long run.

Table 4

Bring children to eat

<u>Options</u>	<u>n</u>	<u>%</u>
If you don't eat it, I'll take it away and you go to bed hungry.	3	5.00
Eat it!	1	1.67
Have a nice meal and then there will be time for storytelling and games.	24	40.00
Taste it, you will definitely like it!	32	53.33

Fortunately, the first two options offered were actually chosen by very few (n=4) 6.67% people. The last two sentences offer an opportunity for a brief conversation about the food, its name and its ingredients, leaving room for speaking and for creating a dialogue.

Resolving a situation in which one child hurts another is not easy, but it is common in children's groups. With regard to conflict resolution, the following alternatives were offered:

Table 5

Methods/techniques of early childhood educators used to solve conflicts

<u>Options</u>	<u>n</u>	<u>%</u>
Maybe you shouldn't act so ugly, it would hurt you too.	32	53.33
You should be ashamed of yourself, you are a very bad child.	0	0.00
You scare me when you hit another child. I don't want anyone to get hurt.	28	46.67
You don't either?		

About half of the educators gave the first answer. With this answer they expressed their insecurity in communicating with the children. "Maybe" is a modifier that expresses hesitation, which is reinforced by the conditional form. For a child who still interprets what they hear literally, it does not mean a prohibition, but an opportunity, an alternative behavior. It is gratifying that the answer in the form of the second "you message" was not marked by any educator. This sentence does not classify the act, but the child. It is an attack as it demeans the child and puts all responsibility for the conflict on them. The third answer in the language of acceptance was given by half of the educators. "I-messages" are suitable for reflecting emotions. The subject of the sentence is "I" with which the educator articulates his or her own state of mind. The educator

emphasizes that he or she wants to make the child understand what feelings his behavior aroused. At the end of the message there is also an “inviting” sentence that gives the child the opportunity to express their needs and feelings. It also offers the opportunity to find a good solution together in a conversation (Gordon, 1990).

3 Discussion and conclusions

Language acquisition is one of the most important achievements of early childhood, its process and its quality shape the future life of the child. For example, it has a decisive influence on the acquisition of additional languages, the development of cognitive processes and the quality of social integration. The emotional and motivational basis of language acquisition is formed by the toddler's social inclinations and attachment needs, as well as social inclinations, with his environment playing a prominent role in changing these processes. These interactions provide a framework for language acquisition, where in the classic case language acquisition is not guided, but takes place through everyday situations, through participation in authentic communication situations. The axiom is that language skills develop in language use. Children develop strategies for regulating emotions at an early age, such as: interactive regulation strategies (contact with caregivers or peers): self-calming strategies (sucking, thumb sucking, rocking, various rituals, etc.); retreat (climbing or escaping); or the manipulation of an emotional situation (through play) (Pfeffer, 2017). Adults can support the regulation of emotions through tactile and kinetic calming strategies such as lifting, rocking, hugging or touching the child, as well as verbal calming strategies or play (Kullik & Petermann, 2012). The co-regulation of emotions can lead to an improved refinement of the interaction between children and their caregivers. In the first few years of life, this state of mind is referred to as the “phenomenon of social calming”. This happens when young children orientate themselves in unsafe situations, seek active eye contact with their caregivers and imitate their behavior. The prerequisite for this is the recognition of the expression of the emotions of the caregiver and the association of the emotional expression with certain objects or events (Petermann & Wiedebusch, 2016). The focus of early interpersonal relationships is mutual cooperation which means social-emotional-intellectual and, closely related to this, language education in the early years. The professional communication and competent language development activity of educators’ results from the interplay of the following factors: a) explicit, scientific-theoretical knowledge, b) implicit empirical knowledge, c) competence-oriented (e.g. methodological, didactic, communicative) procedures.

The degree of pedagogical communication that can be effectively promoted through group methodical training (e.g. workshops, workshops, training, etc.) is decisive for child development.

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An Investigation of the Types of Power Used by High School Teachers in Classroom Management According to Teachers' and Students' Opinions

Fatma Sadık - Hasan Nasırcı*

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Abstract:

Introduction: Power relationships, which manifest themselves in all kinds of organizational environments, including educational institutions, manifest themselves as a necessity for teacher leadership in the classroom. It is necessary to use different types of power, which are multi-sourced and influenced by more than one variable, in classroom management to increase the quality of education. Due to these reasons, this study aimed to comparatively examine the types of power used by high school teachers in classroom management according to the opinions of teachers and students.

Methods: This research is a descriptive study in the survey model. The study group of the research consists of 187 teachers working in high schools in the central districts of Adana province and 950 students studying in these high schools. The "Personal Information Form (PIF)" and the "Instructor Power Types Scale (IPTS)" were used to collect research data. In addition to descriptive statistics, data were analyzed by the Mann-Whitney U and Kruskal-Wallis tests.

Results: According to the data obtained in the study, it was determined that teachers used charismatic power and informational power most frequently in classroom management, and they used the power of understanding at least. It was observed that there was no significant difference according to variables in legitimate power and power of understanding among the types of power used by teachers in classroom management. It was revealed that the types of personal power, coercive power, charismatic power, informational power, and expert power differed significantly according to some variables. According to students, teachers use charismatic power and coercive power at most in classroom management and they apply the power of understanding less. Among the power types used by teachers, all other power types, apart from personal power, differ

* Fatma Sadık, Çukurova University, Department of Educational Sciences, Turkey; fatmasdk@gmail.com
Hasan Nasırcı, Çukurova University, Department of Educational Sciences, Turkey; hasannasirci@gmail.com

significantly according to various variables of students. There was no significant difference between teachers' and students' opinions in terms of using the power of understanding in classroom management. Furthermore, according to students, teachers use other power types (personal power, coercive power, charismatic power, informational power, expert power, and legitimate power) less than they think.

Discussion: The frequent use of informational power by teachers may be due to their desire to show these students preparing for the university that every knowledge is very important and necessary. Since the power of understanding is related to the items related to school attendance, this result obtained is thought to be influenced by the school attendance regulations in secondary education. Due to differences in the opinions of students and teachers, it can be said that teachers do not use these different types of power in classroom management as they think or cannot transform their intentions into behavior.

Limitations: It is obvious that these results were limited to the reached teachers and students in high schools. Another limitation was that the data within the study collected via PIF and IPTS.

Conclusions: In addition to these findings obtained with only quantitative data, it can be examined with classroom observations and student interviews how teachers apply the types of power they use in classroom management in the classroom environment, their effects on the environment, and which type of power is used in which situations.

Key words: secondary education, classroom management, types of power.

Introduction

The concept of power, which gives an individual social superiority and the privilege of making others do what he/she wants, manifests itself in many organizations. The power we frequently encounter in all areas of social life is felt more, particularly in situations when one person's behavior depends on another person. Power, in the most general definition, can be expressed as the ability to make others do what one wants to do and influence them (Arslantaş & Dayanan Uğur, 2018; Aslanargun & Eriş, 2013; Greenberg & Baron, 1993; as cited in Titrek & Zafer, 2009; Lunenburg, 2012; McShane & VonGlinow, 2016). Individuals can meet their needs by realizing their goals thanks to the power they have (Özcan, Karataş, Çağlar, & Polat, 2014). Moreover, since power always creates an area of responsibility, the person who has power is also obliged to observe the aims of the organization (Çelik, 2003). Therefore, it is possible to mention a power relationship whenever and wherever there are mutual interactions in social relationships. Özdemir (2008) emphasizes that power relationships manifesting themselves in so many different environments make the concept of power comprehensive and ambiguous. Therefore, it is stated that

making a precise definition of power is difficult and complex (Bayraktaroğlu, 2000; Özdemir, 2008). Nevertheless, different explanations made for the concept of power converge in the idea that power expresses interpersonal relationships (Alkan & Erdem, 2019; Greve & Mitsuhashi, 2007; Hoy & Miskel, 2010; Koçel, 2011).

Erkuş (2011), who states that power is a dynamic factor, indicates that the power used will differ according to conditions and the characteristics of group members. For example, Sargut (2015), who emphasizes the phenomenon of culture in management, states that the leader's use of legitimate power, coercive power, and reward power resources is an effective tool in management in a management approach specific to Turkish society (as cited in Dirik, Eryılmaz, & Altın Gülova, 2016, p. 28). Along with this situation, questions such as "What does power originate from?", "Where does the effect of power on individuals and groups come from?" have made it necessary to investigate what gives power to the owner of power (Bayrak, 2001). According to the source of power, power is generally divided into two as "power originating from the individual" and "power originating from the position" (Yukl, 2002). While expert power and referent power are given as examples of personal power, legitimate power, reward power, and coercive power are given as examples of position power. It is observed that many classifications are made regarding different types of power that can be based on these two main sources (Brass, 2002; Can, Aşan & Aydın, 2006; Etzioni, 1975; French & Raven, 1959; Jones, 2010; Robbins, 1994; Robbins & Judge, 2011). The most accepted classification among these is the classification made by French and Raven (1959). According to this study, the types of power used by leaders are described under five headings as coercive power, legitimate power, reward power, charismatic power, and expert power. While coercive power, legitimate power, and reward power among these types of power explained are the types of power originating from the organizational position of the leader, charismatic power and expert power originate from the leader's personal characteristics. Raven (1965) later added informational power to this classification and increased the number of power types to six. As an alternative to the classification of French and Raven (1959), Etzioni (1975) addressed power types as coercive power, utilitarian power, and normative power. While Can et al. (2006) addressed the types of power in terms of organizational structure and chose the way of classifying them vertically and horizontally, Robbins (1994) identified four different types of power as position power, personal power, expert power, and opportunity power. In this study, power types were examined in seven categories: personal power, coercive power, charismatic power, informational power, expert power, legitimate power, and power of understanding (Aslanargun & Eriş, 2013).

Personal power is the type of power in which leaders' influence on the group is based on personal characteristics rather than a position (Bayrak, 2001). The leader creates a voluntary effect on the group without any coercion (Bilgin, 1997). Coercive power has a punitive feature based on pressure and fear in case of the failure of group members (Eren, 2010). The leader's influence on group members can manifest itself with different sanctions such as material and moral coercion, physical or psychological pressure, and threats (Kızanıklı, Koç, & Kılıçlar, 2016). Charismatic power is based on the fact that features such as the physical characteristics of leaders, successful work, and behavioral patterns are taken as examples by group members. People are affected by persons with charismatic power and tend to follow these people and imitate their behavior (Güney, 2011; Nartgün, Nartgün, & Arıcı, 2016). Informational power derives from the knowledge that the leader has. It is not the leader himself, but the information he presents that makes group members be influenced by the leader. Therefore, this power effect manifests itself at the cognitive level (Gürüz & Gürel, 2006). Expert power is the superior understanding and experience of what needs to be done in critical situations. Group members do not feel the need to question this reason themselves, relying on the leader's experience in any situation when they cannot understand the reasons. The "understanding why" situation mentioned here is the main difference that separates informational power and expert power (Kızanıklı et al., 2016). Therefore, the main source of expert power is the trust of group members in the leader. Legitimate power is the type of power that a leader takes from his official position (Hoşgörür & Yorulmaz, 2016). In this respect, legitimate power is also expressed as an official authority. Group members admit that people in higher positions naturally have the power to influence them (Şimşek, 2002). The power of understanding is the type of power based on human. It requires doing more for human and human relationships. The effect of this power-based leadership on group members is based on mutual respect, sincerity, and friendship relationships (Ekşi, 2006; Norton, 2005).

When the relevant literature is reviewed, it is observed that studies have been conducted in different sectors on power and the use of power. For example, in the study of Akyüz, Kaya, and Aravi (2015), who investigated the effect of power types on the job satisfaction of individuals working in a public institution, it was determined that the reward power and legitimate power of the leader had a positive effect on job satisfaction, but coercive power caused a decrease in job satisfaction. In the study conducted by Çavuş and Harbalıoğlu (2016) in accommodation businesses, it was stated that the reward power, expert power, charismatic power, and informational power used by the leader positively affected the organizational citizenship behaviors of employees. Mann and Haugaard (2011) address the power sources on a country basis, mention military,

political, economic, and ideological types of power and emphasize the strong relationship of these types of power with globalization.

When studies on the types of power used in educational institutions are reviewed, it is observed that there are studies at different educational levels (Elias & Mace, 2005; McCroskey & Richmond, 2009; Allen, 2010; Özcan et al., 2014; Sapanıcı, Aslanargun, & Kılıç, 2014; Memduhoğlu & Turhan, 2016; Arslantaş & Uğur, 2018; Uzun & Özdem, 2018). According to teachers, administrators use legitimate power at most and apply coercive power at least (Arslantaş & Uğur, 2018). The use of legitimate power, coercive power, and reward power by the administrators of education faculties leads to the formation of a power culture based on bureaucracy (Özcan et al., 2014). In their study conducted with teachers, Memduhoğlu and Turhan (2016) determined that school principals used expert power most frequently and coercive power at least. Sapanıcı et al. (2014) revealed that education supervisors used facilitating power at least. It was determined that teachers' punitive attitude related to coercive power in classroom management increased classroom bullying (Allen, 2010), while the use of personal power and informational power facilitated the adaptation of students to school (Elias & Mace, 2005). In their study, McCroskey and Richmond (2009) found that the types of power used by teachers in the classroom differed according to the opinions of teachers and students; however, teachers and students agreed that the type of power dominant in the classroom was expert power. In the study in which the types of power used by instructors were examined according to students' opinions, it was determined that legitimate power was used at most and coercive power was used at least (Uzun & Özdem, 2018). There is no study that examines and compares the types of power used by teachers working in secondary education in classroom management in terms of different variables from the perspective of teachers and students.

Power relationships, which manifest themselves in all kinds of organizational environments, including educational institutions, manifest themselves as a necessity for teacher leadership in the classroom. As can be seen, the leadership of the teacher, who plays an effective role in maintaining the relationship order in the classroom, does not directly affect the academic achievement of students but has the power to affect the classroom atmosphere, the attitudes and behaviors that are effective in their learning (Bozkurt Bostancı, 2010; Cheng, 1994; Daučianskaitė & Žydzūnaitė, 2020). Regardless of what kind of leadership teachers adopt, they have to apply different types of power while using this leadership. This situation emerges as a result of aiming at the multidimensional development of students together with the developing and changing educational understanding. Furthermore, parallel to the learning-teaching approaches that deal with students from all aspects, it is necessary to use different types of power, which are multi-sourced and influenced by more than one variable, in

classroom management to increase the quality of education. For example, instead of using only the types of power originating from the organizational position, using the power types in which personal characteristics are effective is important in terms of increasing the inclusiveness of teaching activities and creating an atmosphere of trust.

Considering the age and developmental characteristics of students, the classroom management behaviors of teachers who approach classroom management developmentally should change according to the levels they are assigned to. For example, teachers working in secondary education have to take into account that the 15-18 age range covers the puberty and adolescence period (Senemoğlu, 2005). Due to these reasons, this study aimed to comparatively examine the types of power used by high school teachers in classroom management according to the opinions of teachers and students. In line with this main purpose, the answers to the following questions were sought:

1. What types of power do teachers use in classroom management?
2. Do the types of power used by teachers in classroom management differ significantly according to gender, age, length of service, type of school, branch, and the number of students in the class?
3. According to students' opinions, what types of power do teachers use in classroom management?
4. Do students' opinions on the types of power teachers use in classroom management show a significant difference according to gender, type of school, and grade level?
5. Is there a significant difference between teachers' and students' opinions on the types of power teachers use in classroom management?

1 Methods

1.1 Research design

This research is a quantitative study in the survey model that comparatively examines the types of power applied by high school teachers in classroom management according to the opinions of teachers and students. The purpose of the survey model is to determine the opinions of participants regarding the situation, which is the research subject (Büyüköztürk, Kılıç Çakmak, Akgün, Karadeniz, & Demirel, 2016). During this determination, the variables of the situation that is the subject of research are attempted to be described as they are (Karasar, 2012).

1.2 Population and sample

The population of the study consists of teachers working in high schools in the central districts of Adana province in the second term of the 2017-2018 academic year. To create the sample, first, the list of general and vocational high

schools in the central districts of Adana province (Çukurova, Sarıçam, Seyhan, & Yüreğir) was taken from the website of the Ministry of National Education. At the next step, each sampling unit was given an equal chance to be selected by the simple random sampling method in line with the principle of impartiality (Büyüköztürk et al., 2016; Karasar, 2012). As a result, one general high school and one vocational high school were determined randomly from each of the central districts. Two science high schools in the city center were also included in the sample. Teachers working in a total of 10 schools determined and students studying at these schools constituted the sample group of the study. The data collection tool was delivered to all teachers in the schools in the sample and students in a randomly selected class from each grade level (9th, 10th, 11th, and 12th grade). A total of 187 teachers and 950 students from among the teachers and students who were at the school on the days of the application voluntarily participated in the study. The characteristics of the teachers who participated in the study in line with the findings obtained from the personal information form are presented in Table 1.

Table 1

Teachers' demographic characteristics (N=187)

		<i>f</i>	<i>%</i>
Gender	Female	102	54.5
	Male	85	45.5
Age	20-29 years	14	7.6
	30-39 years	69	36.9
	40-49 years	80	42.7
	50 years and older	24	12.8
	Less than 10 years	37	19.8
Length of Service	11-20 years	97	51.9
	21 years and +	53	28.3
School Type	General High School	82	43.9
	Vocational High School	74	39.6
	Science High School	31	16.5
	Science-Mathematics	54	28.9
	Social Sciences	32	17.1
Branch	Language Courses	52	27.8
	Vocational Courses	31	16.6
	Skill Courses	18	9.6
The Size of the Class Served	20-30 students	121	64.7
	31-40 students	66	35.3

As seen in Table 1, more than half of the teachers participating in the study are female teachers (f: 102, 54.5%). Most of the teachers are in the 40-49 age range

(f: 80, 42.7%) and have a length of service between 11-20 years (f: 97, 51.9%). Concerning the type of school and branches served, it is observed that the majority of teachers work in general high schools (f: 82, 43.9%) and branches of Science-Mathematics (f: 54, 28.9%) and Language Courses (f: 52, 27.8%). When the teachers in table 1 are examined in terms of the number of students in their class, it is observed that the majority of the participants work in classes of 20-30 people (f: 121, 64.7%).

The demographic information of the students participating in the study is shown in Table 2.

Table 2

Students' demographic characteristics (N=950)

		<i>f</i>	<i>%</i>
Gender	Female	597	62.8
	Male	353	37.2
Type of School	General High School	375	39.5
	Vocational High School	363	38.2
	Science High School	212	22.3
	9 th grade	270	28.4
Grade Level	10 th grade	268	28.2
	11 th grade	259	27.3
	12 th grade	153	16.1

According to Table 2, most of the students participating in the study are female students (f: 597, 62.8%). The number of students studying in general high schools (f: 375, 39.5%) and vocational high schools (f: 363, 38.2%) is close to each other. When Table 2 is examined in terms of grade levels, it is observed that the number of students studying in the 9th grade (f: 270, 28.4%), 10th grade (f: 268, 28.2%), and 11th grade (f: 259, 27.3%) is close to each other.

1.3 Data collection tools

In the collection of research data, the Personal Information Form (PIF) developed by the researchers and the Instructor Power Types Scale (IPTS) developed by Aslanargun and Eriş (2013) were used.

The PIF was prepared to learn the demographic information of the participants, and there are six questions in the teacher form, including gender, age, years of service, school type, branch, and the size of classes served. To facilitate comparisons, common subject areas were taken into consideration in the classification of teachers' branches, and five categories were created. These are Science-Mathematics (Physics, Chemistry, Biology, Mathematics), Social Sciences (Geography, History, Religious Culture and Moral Knowledge),

Language courses (Turkish Language and Literature, English, German), Vocational courses (Food and Beverage Services, Child Development, Air Conditioning, Machine Technologies, Electric-Electronics, Metal Technologies, Furniture and Interior Design, Textile Technologies), and Skill courses (Information Technologies, Visual Arts, Physical Education, Music). The student personal information form includes three questions: gender, school type, and grade level.

The PTS consists of seven sub-scales, including Personal Power (10 items), Coercive Power (6 items), Charismatic Power (7 items), Informational Power (4 items), Expert Power (3 items), Legitimate Power (2 items), and Power of Understanding (2 items). The scale has a total of 34 items, including 26 positive and eight negative items, and responses are given on a 5-point Likert-type scale (strongly disagree-strongly agree). The Kaiser-Meyer-Olkin (KMO) value of the scale is .89, and 34 items explain 53.318 of the total variance. The scale's Cronbach's alpha coefficient is .92. The scale was adapted to teachers by the researchers in line with the permission of Aslanargun and Eriş (2013), and the items created in a way that students would answer were made suitable for teachers. For example, the statement "They follow current developments in the field." in the original of the scale was arranged as "I follow current developments in my field." In line with the data obtained from the teachers, the necessary analyses were performed again on the scale, the KMO value of the scale was calculated to be .90. As a result of Bartlett's test, it was found that 34 items that were significant at the .00 level explained 70.163 of the total variance. The scale's Cronbach's alpha value was calculated to be .75.

1.4 Data analysis

The research data were analyzed by the Mann-Whitney U and Kruskal-Wallis tests in addition to descriptive statistics. First, the scores obtained by the teachers and students from the scale were calculated, and descriptive statistics were performed (frequency, percentage, arithmetic mean, standard deviation). The arithmetic mean of the scores obtained was divided by the number of items in the subscales, and values between 1 and 5 were obtained, and these values were interpreted according to the intervals as 1.00-1.80 (strongly disagree-very low), 1.81-2.60 (disagree-low), 2.61-3.40 (undecided-medium), 3.41-4.20 (agree-high), 4.21-5.00 (strongly agree-very high). Afterward, the Kolmogorov-Smirnov test was performed to examine whether the measurements met the assumption of normality, and the results showed that the measurements did not meet the assumption of normality. Therefore, to compare the scores according to the variables, the Mann-Whitney U and Kruskal-Wallis H tests were used. In cases when significant differences were observed as a result of the Kruskal-Wallis H test, the Mann-Whitney U test was repeated on the pairwise

combinations of the groups to determine in favor of which groups the difference was. The significance level was accepted to be .05 in all analyses.

2 Results

The findings obtained from the study are explained below in line with the sub-purposes.

2.1 Types of power used by teachers in classroom management

The descriptive statistics regarding the teachers' IPTS scores are presented in Table 3.

Table 3

Descriptive statistics of the IPTS scores (N=187)

<u>Sub-Scales</u>	<u>\bar{x}</u>	<u>Sd</u>
Personal Power	4.27	.56
Coercive Power	4.35	.69
Charismatic Power	4.42	.62
Informational Power	4.39	.58
Expert Power	4.13	.75
Legitimate Power	3.20	.40
Power of Understanding	2.81	.97

When the mean scores of the sub-scales in Table 3 are examined, it is observed that teachers strongly agree with the items in the Personal Power (\bar{x} =4.27), Coercive Power (\bar{x} =4.35), Charismatic Power (\bar{x} =4.42), and Informational Power (\bar{x} =4.39) sub-scales, agree with the items in the Expert Power sub-scale (\bar{x} =4.13), and are undecided about the items in the Legitimate Power (\bar{x} =3.20) and Power of Understanding (\bar{x} =2.81) sub-scales. The highest mean score obtained from the scale was in the Charismatic Power (\bar{x} =4.42) and Informational Power (\bar{x} =4.39) sub-scales, while relatively lower mean scores were in the Power of Understanding (\bar{x} =2.81) and Legitimate Power (\bar{x} =3.20) sub-scales.

2.2 Investigation of the types of power used by teachers in classroom management according to their demographic characteristics

Table 4 shows the Mann-Whitney U test results of the teachers' IPTS scores according to gender and the number of students in their classes.

Table 4

The Mann-Whitney U test results of the teachers' IPTS scores

<u>Sub-Scales</u>			<u>N</u>	<u>Mean</u> <u>Rank</u>	<u>Rank</u> <u>Sum</u>	<u>U</u>	<u>P</u>
Gender	Personal Power	Female	102	97.42	9937	3986	.34
		Male	85	89.89	7641		
	Coercive Power	Female	102	99.79	10179	3745	.10
		Male	85	87.05	7399		
	Charismatic Power	Female	102	98.33	10030	3893	.22
		Male	85	88.80	7548		
	Informational Power	Female	102	101.34	10337	3586	.03*
		Male	85	85.19	7241		
	Expert Power	Female	102	99.10	10108	3815	.14
		Male	85	87.88	7470		
	Legitimate Power	Female	102	94.73	9662	4261	.81
		Male	85	93.13	7916		
Number of students in the class	Personal Power	Female	102	91.21	93.03	4050	.41
		Male	85	97.35	8275		
	Personal Power	20-30	121	86.62	10481	3100	.01*
		31-40	66	107.54	7098		
	Coercive Power	20-30	121	83.89	10151	2770	.00*
		31-40	66	112.54	7428		
	Charismatic Power	20-30	121	85.97	10402	3021	.00*
		31-40	66	108.73	7176		
	Informational Power	20-30	121	90.07	10899	3518	.17
		31-40	66	101.20	6679		
	Expert Power	20-30	121	91.13	11027	3646	.31
		31-40	66	99.27	6552		
	Legitimate Power	20-30	121	92.10	11145	3764	.45
		31-40	66	97.48	6434		
	Power of Understanding	20-30	121	91.85	11114	3733	.44
		31-40	66	97.94	6464		

p<.05

As seen in Table 4, gender created a statistically significant difference only in the Informational Power sub-scale, and when the mean ranks were examined, it was observed that this significant difference was in favor of female teachers (mean rank=101.34) ($U=3586$, $p<.05$). The differences observed between the scores of the other sub-scales were not statistically significant ($U= 3986$, 3745 , 3893 , 3818 , 4261 , 40150 , $p>.05$). When Table 4 is examined, it is observed that the number of students in classes creates a statistically significant difference in the Personal, Coercive, and Charismatic Power sub-scales, and this difference is

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in favor of teachers whose number of students is 31-40 (Mean rank= 107.54, 112.54, 108.73, $U=3100, 2770, 3021, p<.05$). The differences observed between the scores in the other sub-scales according to class size were not statistically significant ($U= 3518, 3646, 3764, 3733, p>.05$).

The Kruskal-Wallis H test results of the teachers' IPTS scores according to the age, length of service, school type, and branch variables are presented in Table 5.

Table 5

The Kruskal-Wallis H test results of the teachers' IPTS scores

PTS Dimensions and Mean Ranks of the Teachers' Scores									
Variables	Groups	N	Personal Power	Coercive Power	Charismatic Power	Informational Power	Expert Power	Legitimate Power	Power of Understanding
Age	20-29 years (1)	14	102.04	99.61	96.57	105.64	75.50	102.11	89.43
	30-39 years (2)	69	96.24	98.57	98.51	95.33	93.43	90.28	92.25
	40-49 years (3)	80	93.11	95.85	92.94	94.66	103.59	99.77	94.57
	50 years and + (4)	24	85.83	71.42	83.08	81.19	74.46	80.75	99.81
	Sd		3	3	3	3	3	3	3
	χ^2		1	5.06	1.55	2.11	7.73	3.98	.52
	P		.80	.16	.66	.54	.05*	.26	.91
Significant difference							1 < 2, 3		
Length of service	10 years and - (1)	37	96.45	96.45	89.62	94.09	78.16	96.69	94.59
	11-20 years (2)	97	96.84	92.78	99.00	95.85	103.13	94.33	94.55
	21 years and + (3)	53	87.10	94.52	87.91	90.56	88.35	91.52	92.58
	sd		2	2	2	2	2	2	2
	χ^2		1.20	.13	1.78	.33	6.90	.27	.05
	P		.54	.93	.40	.84	.03*	.87	.97
	Significant difference						1 < 2		
School types	General high school (G)	82	100.88	95.98	103.85	99.92	102.98	89.94	97.68
	Vocational high school (V)	74	87.05	89.91	81.93	88.89	85.64	95.71	89.03
	Science high school (S)	31	92.37	98.53	96.76	90.53	90.21	100.66	96.13
	sd	2	2	2	2	2	2	2	2
	χ^2		2.58	.77	6.65	1.82	4.42	1.34	1.15
	P		.27	.68	.03*	.40	.10	.51	.56
	Significant difference				G < M				
Branch	Science-Math. (SM)	54	103.29	98.24	99.14	98.56	98.94	92.24	94.52

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Social sciences (SS)	32	90.61	83.94	85.83	91.56	83.91	104.83	92.22
Language Courses (L)	52	101.32	101.97	112.41	109.85	113.53	93.34	102.43
Vocational Courses (V)	31	77.19	87.95	73.77	84.44	79.42	94.24	80.47
Skill Courses (S)	18	79.97	86.56	74.75	55.36	65.83	81.53	94.56
sd		4	4	4	4	4	4	4
χ^2		6.90	3.39	14.21	15.57	16.41	3.06	3.55
P		.14	.49	.00*	.00*	.00*	.54	.46
Significant difference				M < D	B < D	M < D		

As seen in Table 5, the variables of age, length of service, type of high school served, and branch created statistically significant differences in the teachers' IPTS scores. According to the analysis results, the significant difference observed in the Expert Power sub-scale according to age was in favor of teachers in the age groups of 30-39 and 40-49 among the teachers in the 20-29, 30-39, and 40-49 age groups [$\chi^2 (3)=7.73$ p <.05]. According to the length of service, in the Expert Power sub-scale, a significant difference was detected in favor of teachers with the length of service of 11-20 years among the teachers with the length of service less than 10 years and of 11-20 years [$\chi^2 (2)=6.90$, p <.05]. When Table 5 is examined in terms of the type of school served, it is observed that the scores obtained by the teachers working in general high schools from the Charismatic Power sub-scale are significantly higher than those of teachers working in vocational high schools [$\chi^2 (2)=6.65$, p <.05]. In terms of branches, the significant differences determined between the scores obtained by teachers from the Charismatic Power, Informational Power, and Expert Power sub-scales were in favor of the teachers who taught language courses among the teachers of language courses, vocational courses, and skill courses [$\chi^2 (4)=14.21$, 15.57, 16.41, p <.05]. The differences between the scores obtained by the teachers from other sub-scales were not statistically significant (p > .05).

2.3 Types of power used by teachers in classroom management according to students

The descriptive statistics of the students' IPTS scores are presented in Table 6.

Table 6

Descriptive statistics of the students' IPTS scores (N=950)

<u>Sub-Scales</u>	<u>\bar{x}</u>	<u>Ss</u>
Personal Power	3.29	.79
Coercive Power	3.38	.95

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Charismatic Power	3.48	.82
Informational Power	3.09	.88
Expert Power	3.27	.85
Legitimate Power	3.08	.49
Power of Understanding	2.89	.86

When table 6 is examined, it is observed that students agreed with the items in the Charismatic Power (\bar{x} =3.48) sub-scale and were undecided about the items in the Personal Power (\bar{x} =3.29), Coercive Power (\bar{x} =3.38), Informational Power (\bar{x} =3.09), Expert Power (\bar{x} =3.27), Legitimate Power (\bar{x} =3.08), and Power of Understanding (\bar{x} =2.89) sub-scales. While the highest mean score obtained from the scale belongs to the Charismatic Power (\bar{x} =3.48) and Coercive Power (\bar{x} =3.38) sub-scales, it is observed that relatively lower mean scores belong to the Legitimate Power (\bar{x} =3.08) and Power of Understanding (\bar{x} =2.89) sub-scales.

2.4 Investigation of students' opinions about the types of power used by teachers in classroom management according to demographic characteristics

The Mann-Whitney U test results of the students' IPTS scores according to their gender are presented in Table 7.

Table 7

The Mann-Whitney U test results of the students' IPTS scores according to their gender

<u>Sub-Scales</u>	<u>Gender</u>	<u>N</u>	<u>Mean</u> <u>Rank</u>	<u>Rank Sum</u>	<u>U</u>	<u>p</u>
Personal Power	Female	597	476.17	284275	104970	.92
	Male	353	474.36	167451		
Coercive Power	Female	597	493.96	294892	94353	.00*
	Male	353	444.29	156834		
Charismatic Power	Female	597	478.55	285692	103552	.65
	Male	353	470.35	166033		
Informational Power	Female	597	473.01	282384	103881	.71
	Male	353	479.72	169341		
Expert Power	Female	597	483.74	288794	100451	.22
	Male	353	470.13	162932		
Legitimate Power	Female	597	478.67	285768	103477	.60
	Male	353	470.13	165958		
Power of Understanding	Female	597	469.81	280479	101976	.39
	Male	353	485.12	171247		

p<.05

In Table 7, there is a significant difference according to gender only in the Coercive Power sub-scale ($U = 94353$, $p < .05$), and when the mean ranks are examined, it is observed that this significant difference is in favor of female students (mean rank = 493.96). The differences observed in other sub-scales were not statistically significant ($U = 104970, 103552, 103881, 100451, 103477, 101976$, $p > .05$).

Table 8 shows the Kruskal-Wallis H test results of the students' IPTS scores according to the school type and grade level variables.

Table 8

The Kruskal Wallis-H test results of the students' IPTS scores

PTS Dimensions and Mean Ranks of the Students' Scores									
Variables			<u>Personal power</u>	<u>Coercive Power</u>	<u>Charismatic Power</u>	<u>Informational Power</u>	<u>Expert Power</u>	<u>Legitimate Power</u>	<u>Power of Understanding</u>
	<u>Groups</u>	<u>N</u>							
Type of School	General high school (G)	375	472.90	499.12	490.22	459.77	468.58	476.61	449.71
	Vocational high school (V)	363	462.16	439.45	444.82	448.40	438.38	439.64	489.90
	Science high school (S)	212	502.94	495.45	495.45	549.73	551.29	534.94	496.47
	Sd		2	2	2	2	2	2	2
	χ^2		3.01	10.19	7.62	20.44	23.44	20.48	5.95
	P		.22	.00*	.02*	.00*	.00*	.00*	.06
	Significant difference			M<G	M<F	G,	G,	G,	
Grade Level	9 th grade (1)	270	456.30	462.88	469.80	491.37	464.94	468.29	490.93
	10 th grade (2)	268	504.10	469.28	488.46	472.92	473.15	465.51	494.23
	11 th grade (3)	259	468.96	488.65	467.46	468.26	466.48	479.73	481.66
	12 th grade (4)	153	470.35	486.42	476.47	464.26	513.51	498.57	405.03
	sd		3	3	3	3	3	3	3
	χ^2		4.44	1.55	.94	1.37	3.69	2.13	13.21
	P		.21	.67	.81	.71	.29	.54	.00*
	Significant difference								4<1,2,3

As shown in Table 8, the variables of school type and grade level created statistically significant differences in the students' IPTS scores. When the analysis results are examined in terms of school type, it is observed that the scores of the students attending general high schools from the Coercive Power sub-scale are significantly higher compared to the students attending vocational high schools [$\chi^2 (2) = 10.19$, $p < .05$]. Furthermore, the scores obtained from the

Charismatic Power sub-scale were found to be statistically significant in favor of science high school students compared to vocational high school students [χ^2 (2)=7.62, $p < .05$]. It is also observed that the scores of science high school students obtained from the Informational Power, Expert Power, and Legitimate Power sub-scales are significantly higher than students in both general high schools and vocational high schools [χ^2 (2)=20.44, 23.44, 20.48, $p < .05$]. The significant difference between the scores obtained by the students from the Power of Understanding sub-scale in terms of grade level was in favor of 9th, 10th, and 11th-grade students among all grade levels [χ^2 (3)=13.21, $p < .05$]. The differences between the scores obtained by the students from other sub-scales were not found to be statistically significant ($p > .05$).

2.5 Comparison of teachers' and students' opinions on the types of power used by teachers in classroom management

Table 9 shows the Mann-Whitney U test results regarding the IPTS scores of teachers and students.

Table 9

The Mann-Whitney U test results of the teachers' and students' IPTS scores

<u>Sub-Scales</u>	<u>Groups</u>	<u>N</u>	<u>Mean Rank</u>	<u>Rank Sum</u>	<u>U</u>	<u>p</u>
Personal Power	Student	950	502.66	477528	25803	.00*
	Teacher	187	906.02	169426		
Coercive Power	Student	950	513.07	487419	35694	.00*
	Teacher	187	853.13	159535		
Charismatic Power	Student	950	506.67	481338	29613	.00*
	Teacher	187	885.64	165616		
Informational Power	Student	950	495.07	470317	18952	.00*
	Teacher	187	944.58	176636		
Expert Power	Student	950	515.60	489822	38097	.00*
	Teacher	187	840.27	157131		
Legitimate Power	Student	950	554.75	527016	75291	.00*
	Teacher	187	641.37	119937		
Power of Understanding	Student	950	574.93	546179	83196	.15
	Teacher	187	538.90	100774		

When Table 9 is examined, it is observed that there is a statistically significant difference between the IPTS scores of teachers and students in all sub-scales except for the Power of Understanding sub-scale. The significant differences observed according to the mean ranks of the participants were in favor of teachers (Mean rank = 906.02, 853.13, 885.64, 944.58, 840.27, 641.37, U=,

25803, 35694, 29613, 18952, 38097, 75291, $p < .05$). The mean rank of the students' scores in the Power of Understanding sub-scale was higher than that of teachers, and this difference was not statistically significant ($p > .05$).

3 Discussion

As a result of the study, it was determined that teachers working in high schools had charismatic power and informational power according to the arithmetic mean of the types of power they used in classroom management. According to Hoy and Miskel (2010), people who use charismatic power are people who are admired by their environment, respected and taken as an example. High school students who are in intense search of identity during the developmental period (Arslan & Bakis, 2014; Senemoğlu, 2005) can also be influenced by their teachers and take their attitudes, speeches, dressing styles, approaches to other people, and attitudes towards events as examples. In this respect, it can be said that high school teachers try to bring positive behaviors to their students by being a model while managing their classes. Thus, this result is in line with the study performed by Karaboğa (2019), who stated that high school students tended to take their teachers as models. The frequent use of informational power by teachers in classroom management may be due to their desire to show these students preparing for the university that every knowledge is very important and necessary. The fact that students have to pass exams to enter the university and the primary source of the knowledge they need in these exams in the school environment is teachers may also cause teachers to apply more this type of power in classroom management. The results obtained showed that the type of power used relatively less in classroom management was the power of understanding. Since the power of understanding is related to the items related to school attendance, this result obtained is thought to be influenced by the school attendance regulations in secondary education. Considering that the research data were collected in the second term of the academic year close to the exam week, it is a necessity for teachers not to tolerate absenteeism and student behaviors that disrupt the teaching in the classroom as exams approach. Furthermore, the change in the anxiety levels of students as the exam approached and the increase in their anxiety may have caused teachers to perceive their behavior differently. According to the studies conducted, exams, which are a stressful and anxious experience for students, can cause students to attribute more or different meanings to events or situations not only in their academic achievement but also in their health, fulfillment of their duties and responsibilities (Softa, Karaahmetoğlu, & Çabuk, 2015; Arana & Furlan, 2016; Tugan, 2016; Çakmak, Şahin, Demirbaş, 2017; Ali, Huma, & Ali, 2020).

The gender variable created a significant difference in the use of informational power, one of the types of power used by teachers in classroom management,

and it was observed that female teachers used this power type at a higher level than male teachers. Compulsory courses such as science-mathematics, social sciences, and language courses constitute the scope of the higher education entrance exams (YGS) organized by the Directorate of Assessment, Selection and Placement Center (ÖSYM, 2020). Therefore, one reason for this result may be that the number of female teachers teaching these courses in the study sample was much higher than that of male teachers. Moreover, the differentiation of gender roles imposed on women may have caused such a result because the behavioral patterns imposed on individuals by birth bring different social preferences (Phillips, 2005). Women in Turkish society are expected to be planned, organized, and controlled. In this case, the fact that female teachers use informational power more may also have originated from their aims to influence students by their domain expertise and to increase students' success by providing order and control in the class. According to the "skills approach," which is one of the leadership approaches, leadership is the ability to use knowledge to achieve goals, and this ability can be developed (Diker, 2014; Genç & Kara, 2019). Therefore, female teachers may use this power type at a higher level to be more effective in classroom management.

In this study, it was determined that teachers who were between 30-49 years of age and had a length of service of 11-20 years used informational power at a higher level than younger teachers and teachers with fewer years of service. The experiences of people obtained from their working lives and their professional training themselves accordingly enable them to influence others. This is explained by expert power (Bağcı & Mohsan-Bursalı, 2011). In this case, it can be said that not only age but also the experience and maturity gained with the progress in the profession reflect the classroom management skills as well as all the teaching skills of teachers. The existence of studies that show that experienced teachers perceive themselves as more effective and experts in classroom management supports this finding (Dinçer & Akgün, 2015; Korkut & Babaoğlu, 2010).

Another important result obtained from the study was that the use of charismatic power by teachers differed significantly according to the type of school they worked in, and it was revealed that teachers working in general high schools used this power at a higher level. According to the statistical data published by the Ministry of National Education (MoNE) on formal education, the density of students in general high schools is higher than in other types of high schools (MoNE, 2018). Due to this density, it becomes difficult for teachers to manage their classes in general high schools, which have large class sizes and a very wide academic success scale. This may require teachers to apply more than one type of power when managing their classes. From the point of view of the curriculum implemented by schools, teachers who teach vocational courses focus

more on providing a safe environment for the gradual teaching of a skill based on physical regulation (Bayrakçı & Sarı, 2018). This may be due to teachers' focusing on students' attention to the correct sequence and correct performing of the processing steps of skills.

When the results were examined in terms of branches, it was determined that teachers who taught language courses used their charismatic, informational, and expert power at a higher level in classroom management than teachers in other branches. Students' beliefs about language learning are largely shaped by the education they receive in secondary education (Peacock, 2001). Furthermore, students create their own language strategies by taking the language teacher as an example (Yin, 2008). The positive metaphors developed by students in the study conducted by Memduhoğlu and Çelik (2015) show that students' perceptions of their language teachers are positive. Considering that these types of power originate from personality traits (French & Raven, 1959), it can be thought that language teachers consciously apply these types of power to ensure students' language autonomy and affect them.

The class size in which teachers worked also created a significant difference in the types of power they used in classroom management, and it was observed that teachers working in crowded classes used personal power, coercive power, and charismatic power at a significantly higher level. Based on this result, which shows that the study findings are consistent, it can be said that it is difficult for a teacher to manage the class effectively based on a single power in crowded classes. The finding indicating that teachers in crowded classrooms experience problems in classroom management in many studies confirms this view (Balay & Sağlam, 2008; Demir & Ersöz, 2016; Yaman, 2010; Yolcu & Akar-Vural, 2021). These problems may have pushed teachers to use a combination of personal traits such as personal power and charismatic power and types of power based on teacher-student interaction. Moreover, these teachers' use of coercive power explained by their behaviors, such as punishing students and criticizing them, at a higher level (Schrodt, Witt, & Turman, 2007) may be due to their efforts to stop these problems in classroom management.

According to students' opinions, teachers use charismatic power and coercive power at a higher level in classroom management. Charismatic power takes its effect from the success of communication between the teacher and student. Using this type of power will create a positive classroom climate for an effective learning-teaching environment (Bozkurt Bostancı, 2010). Therefore, it can be said that this finding indicates a positive atmosphere in the class. However, students also think that their teachers use coercive power a lot in classroom management, and this situation is significantly higher in favor of female students. According to this finding obtained, it can be said that teachers frequently exhibit controlling and punishing behaviors in the class. Teachers

should avoid using force against students, except in situations that are pedagogically necessary. Teachers who put their leadership to the forefront are expected to use this power more properly by giving tasks that will ensure students' development because, if this power is used unconsciously and carelessly, it may cause adverse effects on students (Bozkurt Bostancı, 2010).

The school type created a significant difference in the perceptions of students, and it was observed students in the science high school stated that their teachers used charismatic, informational, expert, and legitimate power types at a higher level in classroom management. The reason for this may be the aim of science high schools, the high expectations of teachers, students, and parents from these schools, and teachers' efforts to respond to these expectations. The conducted studies support this interpretation, and the results show that teachers and students regard science high schools as homes of science, there is pressure on students and teachers to become successful (Günbayı, Yücedağ, & Emir Yücel, 2015), students oppose rote learning (Altındağ, 2015; Osmanoğlu & Yaşa, 2018) and that students are waiting for the increase in laboratories, doing projects, and the opening of TÜBİTAK science fair to ensure scientificity in lessons (Demirtaş & Kahveci, 2010; Osmanoğlu & Yaşa, 2018; Yılmaz & Yiğit, 2011).

As a result of the comparison of teachers' and students' opinions, it was found that teachers' scores were higher in other types of power, except for the power of understanding dimension. In this resulting difference, it can be said that teachers do not use these different types of power in classroom management as they think or cannot transform their intentions into behavior. Although there is no significant difference between students' and teachers' opinions on teachers' use of the power of understanding in classroom management, the reason for the fact that 12th-grade students think more negatively may be due to the fact that teachers behave relatively more exam-oriented towards final year students who are in the process of preparing for university entrance exams. Considering that students have severe depression before the exam (Ay, 2018) and teachers' expectation of success increases students' exam anxiety (Genç, 2016), it can be stated that this situation has the potential to affect students' exam success adversely.

Conclusion

As a result, this study showed that teachers used charismatic power and informational power more in classroom management; they used the power of understanding and legitimate power relatively less (1); that the types of power used by teachers in classroom management differed significantly according to various variables (2); according to students, the types of power used by teachers at most were charismatic power and coercive power; and the type of power used at least was the power of understanding (3); according to students' opinions, all

types of power used by teachers, except for personal power, differed significantly according to various variables belonging to students (4) and teachers thought significantly different from students in the types of power used, except for the power of understanding (5). In addition to these findings obtained with only quantitative data, it can be examined with classroom observations and student interviews how teachers apply the types of power they use in classroom management in the classroom environment, their effects on the environment, and which type of power is used in which situations. Furthermore, since this study covers high school teachers, it can be investigated whether the types of power used in classroom management differ according to different educational levels with a comparative study to be conducted with teachers at other levels.

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