Mindfulness of Social Studies' Teachers and Its Relationship to Their Skills of Solving Classroom Problems

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Abstract: The current research sheds light on whether mindfulness meditation would influence the ability to solve classroom problems. More specifically, the study explored the potential correlation between the mindfulness of social studies teachers and their ability to solve classroom problems. The sample of the study consisted of 150 social studies teachers (71 males and 79 females). They were drawn from the population of the study in Irbid Education governorate by using simple random sampling. To achieve that, two scales were used for gathering data; one to measure the mindfulness of social studies teachers and the other to measure their ability to solve classroom problems. Reliability and validity of the study scales were checked. Results of the study indicated that the level of mindfulness of social studies teachers was high with a mean of (4.26). Also, the level of social studies teachers' ability to solve classroom problems was high with a mean of (3.80). Moreover, there was a positive significant correlational relationship at ($\alpha = 0.001$) between the level of mindfulness of social studies teachers and their ability to solve classroom problems. The Pearson correlation coefficient was (0.719).

(Keywords: Mindfulness, Solving Classroom Problems, Social Studies Teachers)

Introduction

There is no doubt that a good education system has the ability to change students' life when it opens the door to a high-quality education and guarantees measurable achievement in their life and career through learning. The education system is oriented toward meeting the needs of students who are exploring their powers and constructing their ambitions for the future. Giving them a quality education, students will grow up with a strong basis of knowledge to meet those ambitions. It's the education system's liability to train students in the skills needed to achieve their goals and make a better life. Furthermore, teaching is one of the most important pillars of education system, the most noble, vital and important career. All the evidence from different education systems around the world shows that the most important factor in determining how well students do is the quality of teaching which requires an actual ability. To be done outstandingly well, it also requires a special talent and a sense of profession (Collen, 2016).

اليقظة الذهنية لدى معلمي الدراسات الاجتماعية وعلاقتها بمهاراتهم في حل مشكلات الغرفة الصفية

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ملخص: يلقي البحث الحالي الضوء على اثر اليقظة الذهنية في حل مشكلات الغرفة الصفية. وبشكل أكثر تحديداً، كشفت الدراسة عن العلاقة المحتملة بين اليقظة الذهنية لمعلمي الدراسات الاجتماعية وقدرتهم على حل مشكلات الغرفة الصفية. تكونت عينة الدراسة من (150) معلماً ومعلمة من معلمي الدراسات الاجتماعية منهم (71) من الذكور و (79) من الإناث، تم اختيارهم من محافظة إربد باستخدام الطريقة العشوائية البسيطة. وتحققاً لذلك، تم استخدام مقياسين لجمع البيانات، الأول لقياس مستوى اليقظة الذهنية لدى معلمي الدراسات الاجتماعية، والثاني لقياس قدرتهم على حل مشكلات الغرفة الصفية. تم التأكد من صدق وثبات أداتي الدراسة. وأشارت نتائج الدراسة إلى أن مستوى اليقظة الذهنية لدى معلمي الدراسات الاجتماعية جاء مرتفعاً بمتوسط حسابي مقداره (4.26). كما أن مستوى قدرة معلمي الدراسات الاجتماعية على حل مشكلات الغرفة الصفية جاء أيضاً مرتفعاً بمتوسط حسابي مقداره (3.80). كما تبين من النتائج وجود علاقة ارتباطية ذات دلالة إحصائية عند مستوى الدلالة ($\alpha = 0.001$) بين مستوى اليقظة الذهنية لدى معلمي الدراسات الاجتماعية وقدرتهم على حل مشكلات الغرفة الصفية، حيث بلغ معامل ارتباط بيرسون (0.719).

(الكلمات المفتاحية: اليقظة الذهنية، حل مشكلة الغرفة الصفية، معلمو الدراسات الاجتماعية)

The claim that good teaching comes from the identity and integrity of the teacher might sound like a truism. Therefore, teachers are the backbone of the educational institution. The most important lesson is that no education system can be better than the quality of its teachers. They are the most important part of the education system. Research consistently shows that teachers have the strongest school-based impact on student performance as they directly organize students' learning experiences and do make a tangible difference in their achievement (Robert, et al., 2014).

Teachers help students discover different career fields and develop their skills in the areas that interest them. They play a big part in students' outcome as they represent the common denominator in school improvement and students' achievement. They give them the base skills in core subjects, like language, mathematics, science, history and arts. When students graduate from high school, they should have a set of basic skills to help them be successful in whatever career or higher education they choose to pursue. (Parihar, 2011).

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Research shows that effective teachers are the most important factor contributing to students' achievement. Although curricula, lower class size, region funding, family and community involvement all contribute to school improvement and student achievement, the most considerable factor is the teacher. Choosing efficient teachers is extremely important for schools trying to improve their performance (Hill et al., 2015).

Teachers are often altruistic and dedicated to making a positive difference in students' lives. But too many of them are not well prepared for the social and emotional demands of today's classroom. Stressful conditions can lead them to feel discouraged and ready to quit. Most teacher training programs focus on content and teaching, overlooking the very real social, emotional and cognitive demands of teaching itself (Jenning & Siegel, 2015).

Because teaching is considered a challenge, teachers' exhaustion and stress-related problems are reality for most of teachers and educators. Furthermore, since teaching is a highly stressful profession, school teachers report high levels of pressure which impact their engagement with students and effectiveness as teachers (Smith et al., 2000).

Teachers report that current teaching climates produce high levels of stress, leading to work-related exhaustion, depression and anxiety, skepticism and low self-efficacy. Furthermore, teacher stress and burnout can negatively impact students' engagement and learning through teacher absence, low self-efficacy and decreased teaching effectiveness (National Association of Schoolmasters Union of Women Teachers, 2013).

Likewise, individual differences in emotion regulation and self-effectiveness may contribute to teachers fatigue; therefore, early interference or prevention approaches may support teachers to develop positive confrontation and protect them against potential stress. One of the very promising approaches to deal with such situations is mindfulness.

Mindfulness is a construct related to a mental state. It has two main approaches: Meditative mindfulness which emphasizes non-conceptual consciousness where one thinks deeply to understand the truth of something, then lets the thoughts go (Yeganeh, 2006) and socio-cognitive mindfulness which refers to goal-oriented

cognitive thinking rather than nonjudgmental observation. As a result, these different types of awareness evoke different treatment patterns (Pirson et al., 2012).

Interest in the concept of mindfulness has begun over the past three decades. Its roots reach deep into Buddhism and it is considered an essential element in some eastern spirituality and traditions by engaging in meditation techniques that focus on the relationship between mind, body, thoughts and feelings. Through meditation, an individual can explain the phenomena and situations in the world by finding new ways to understand them (Bishop et al., 2004).

Mindfulness has been defined widely and differently through literature. It could be a psychological trait (Baer et al., 2006), a method or a case (Bishop et al., 2004). Some researchers view mindfulness as a one-dimensional construct centered around attention and awareness (Brown & Ryan, 2004), while others consider it to be a multidimensional construct comprising self-regulation of attention and orientation of experience (Baer et al., 2006).

Thus, there is no single or consistent definition for mindfulness. In their review of related literature, Neal and Griffin (2006) pointed out that mindfulness is a mental state that is achieved by focusing one's awareness intentionally on the present moment and includes awareness and attention. According to Kabat-Zinn (1994), mindfulness is the awareness that emerges by way of paying attention on purpose, in the present moment, to the unfolding of experience moment by moment with curiosity and kindness to things as they are.

Bishop et al. (2004) defined it as the ability to focus attention on the present moment while possessing an orientation of openness, curiosity and non-judgment. Similarly, it had been described as bringing one's complete attention to the present experience on a moment-to-moment basis (Marlatt & Kristeller, 1999). It is remembering to pay attention to our present moment experience (Black, 2011).

Throughout the literature review, the researcher defines mindfulness simply as paying attention. In more detail, it is a state of sensory and effective awareness which is neither prepared, nor judgmental, and focuses on the present experience, where each thought, feeling or perception that

arises in the area of interest is recognized and accepted as it is. When a person pays attention with all of his/her senses, he/she is then present in the current moment. By being in the current moment, his/her mind is not thinking about the past or worried about the future.

Literature review explores different components of mindfulness. Hölzel et al. (2011) proposed four components of mindfulness: Attention regulation, body awareness, emotion regulation and change in perspective on the self. Bishop et al. (2004) identified two basic components of mindfulness: one involves self-regulation of attention and the other one involves an orientation toward the present moment in a way characterized by openness, curiosity and acceptance. According to Baer et al. (2006), there are five components of mindfulness: Observation, description, acting consciously, lack of prejudice and lack of interaction with internal experience.

Several studies have highlighted the robust benefits of mindfulness. It is considered a tool that improves the level of concentration and shows promise in improving an individual's sense of cohesion, sense of meaning in life and ability to manage the environment (Mace, 2008). The importance of mindfulness is also associated with a range of activities that stimulate minds and reduce pressures, such as improving ability to manage stress, improving conflict-resolution skills, increasing capacity to overcome challenges, being patient, enjoying the freedom of the moment and not rushing to judge others (Bernay, 2009).

In the psychological and health sector, mindfulness has benefited a broad range of life difficulties ranging from the treatment of depression (Broderick, 2005), physical complaints (Sharma et al., 1990), to pain management programs (Astin, 2004). Several experimental studies have pointed out that mindfulness is positively associated with psychological performance and considered an essential component of a number of psychological interventions (Baer, 2003; Dalrymple & Herbert, 2007) and increases the amount of information retrieved from the memory (Jha et al., 2010).

Pedagogically, a range of benefits of mindfulness have been noted for teachers. When teachers practice mindfulness, they not only harvest personal benefits, such as reduced stress and exhaustion, but their schools do as well (Flook,

et al., 2013). Moreover, they experience greater effectiveness in doing their jobs (Jennings et al., 2013) and better classroom organization (Flook et al., 2013).

This was confirmed by Gless and Moir (2004) which reported that, in a mindfulness-based program, personal and emotional support, higher retention and greater teacher self-efficacy were achieved in nearly every teaching context.

According to Jennings and Siegel (2013), mindfulness can help teachers foster the calm, relaxed classroom environment that students need to learn. It helps them be more effective at decreasing conflict and developing more positive ways of relating in the classroom which can help them feel more job satisfaction. Furthermore, mindfulness help teachers refuge into mindful presence when it's most needed, allowing them to pay better attention to the learning environment and their students' needs within the classroom.

On the other hand, applying mindfulness training among students, they become more aware of themselves and their thoughts, whether they are in the past, the future or the present. Having the choice and the ability to redirect their attention to the present enables them to concentrate for longer periods on whatever they are currently doing, whether they are learning, playing or just relaxing (Kelly, 2015).

Mindfulness as outlined in Schoeberlein and Sheth (2009) also summarized its benefits to teachers, as it improves focus and awareness, increases responses to students' needs, fosters emotional balance, supports stress management and stress reduction, supports healthy relationships at work and home and enhances the classroom environment.

Moreover, they listed a wide range of benefits of mindfulness to both teachers – improving concentration and awareness, increasing responsiveness to student needs, enhancing classroom environment and students supporting readiness to learn, strengthening attention and focus, reducing anxiety and enhancing social and emotional learning. They go on to state that mindfulness and education are beautifully interwoven. Mindfulness is about being present with your inner experience as well as your outer environment including other people. When teachers are fully present, they teach better. When

students are fully present, the quality of their learning is better.

However, the use of mindfulness is still a matter of controversy. Research (see, for example, Rosenstreich, 2016; Seli, et al., 2015; Chrisine, 2019) alluded that mindfulness does not necessarily help remember more effectively and may increase false memories. Greater states of mindfulness have been linked with lower states of creativity. Increased states of dissociation and feeling disconnected from one's body were noticed. In addition, it may make people more psychotic, nervous and unbalanced.

Despite the different perspectives over the use of mindfulness, its merits still depend on the manner in which it is used in education. The researcher believes that the benefits of mindfulness are numerous. It helps practitioners recognize, slow down or stop unplanned responses, react more effectively to difficult situations, become more creative, achieve balance and resilience and strengthen relationships with others at home and at work.

Teaching profession in the twenty-first century is not an easy job. Teachers are members of the community who deal with a large majority of students every day and often face challenges at all levels of their professional development. They need to learn to cope with their current problems and professional pressures in the educational and social environment that have accompanied the recent changes in society, economy and politics (Cook, et al., 2017).

These changes have had a huge effect on public education system and required high-quality teacher education and professional development. Since teaching is a practical experience, efficient problem-solving skills are among the basic competencies teachers need to own. They should be aware of rules and strategies of problem-solving skills in their discipline. It is therefore necessary that teachers possess tools and techniques that help them in this regard (Orgoványi, 2016).

Problem-solving theories -one of which is the standard theory- have become widely adopted in both artificial intelligence and cognitive psychology. Standard theory states that problem-solving involves conducting search through a problem area in an attempt to transform an initial state into one that meets a goal description. This problem area is generated dynamically by applying

operators that convert states into other states. The search process is organized by strategies that affect the order in which states are considered and in which operators are applied (Newell et al., 1958).

Problem-solving is the process of obtaining an appropriate solution to a new problem, or at least a problem which the problem solver has not seen before using information and knowledge he/she has already learned and the skills he/she has acquired (Qasim, 2005). Those skills are strongly connected to such general cognitive and meta-cognitive processes as perception and representation of the problem, reasoning, gathering information, analyzing, creating solutions, decision-making, planning, reflecting and evaluating (Huitt, 1992). Expert teachers claim that maintaining professionalism in a field means a special incorporation of a high-level content knowledge along with possessing general problem-solving skills. It is a complex thinking process that uses most of the creative and critical thinking skills in order to find the best solutions to get out of a problem or a dilemma towards a desired goal (Jarwan, 2002).

Based on exploring the related literature, the researcher might describe problem solving as the process of challenging the barriers and coping with the problems that individuals confront. It is a learning technique and a way of thinking which is useful in removing any kind of difficulty and raising the level of teaching, so that teachers need to think about the accuracy of multiple viewpoints and thoughts while analyzing the problems and solutions.

Teachers must be prepared to address unexpected situations, to adapt current knowledge to deal with new problems, to learn essentially new things, to deal effectively with classroom atmospheres and to create positive climates (Silverman et al., 1992). In order to overcome all the challenges of their career, teachers are supposed to have a wide range of competences and combine knowledge in multidimensional disciplines, such as group management, learning process, decision-making and ethics (Orgoványi, 2016).

Additionally, the presence of students in the classroom who have problems of adaptation, difficulty in learning, low motivation, who require special education, who show problematic behavior and who engage in physical and verbal violence

with their classmates is a reason why teachers have to be competent problem solvers as well (OECD, 2009). Clearly, problem-solving gets into every aspect of the teaching profession (Silverman & Welty, 1990).

Educators who are fans of problem-solving (ex., Wayne, 2006) consider it important both to individuals and organizations: it enables to have control over environment, gives a mechanism for identifying actions and processes that are broken or not functioning in the desired way to work, addresses risks, improves performance and seizes opportunity.

The researcher believes that modern education is based on a problem-solving strategy, which helps teachers and students overcome obstacles within the school setting. Certainly, teachers hold a great role for the success of this scheme. Problem-solving skills give them the ability to think positively to find appropriate solutions to the problems facing them and their students.

Even though mindfulness is a repeated topic of discussion and commonly associated with meditation, it can be applied to many daily activities, such as problem-solving. Being mindful involves impartial recognition of an individual's feelings, thoughts and physical sensations (Backer, 2015).

Humans use their experience to understand the present and to solve many problems that emerge in life. Because the world is complex and dynamic, however, experience can interfere with adaptation and get people stuck in traditional problem-solving strategies that no longer apply in a new situation. Mindfulness aims to reduce the influence of habit on the way of interpretation and may facilitate the solving of problems that generate unusual or creative responses (Ostafin & Kassman, 2012).

In addition to content knowledge general problem-solving skills are also an important part of teachers' skills. Problem-solving is a key element of teachers' thinking in both the interactive and the planning stages. It is the link between knowledge and action, explanatory and procedural knowledge and thus, it has an important knowledge transfer role (Tsui, 2009).

Backer (2015) emphasized the earlier mentioned point and reported that typically, a good behavior is achieved when working well with others, staying motivated and being able to

successfully resolve conflicts. Mindfully approaching a conflict involves being receptive, rather than resistant to people's thoughts and opinions. It is easy to let emotions get the best while facing a challenging situation. This is where practicing mindfulness can be workable.

Although problems in life have a variety of forms, they share common features that serve as signs, warning to the presence of a problem. The attitude chosen to take toward the problem can serve as a powerful factor of the ability to reduce distress and use emotional information in helpful ways. Many of the problems become less terrifying when a proactive attitude is taken toward solving them. A mindfully open and alert attitude can serve as a solid foundation in confronting the problem and moving toward a solution (Wood, 2010).

Before undertaking this study, mindfulness and problem-solving research in the field of education was reviewed. The key focus was on the effects of mindfulness and problem-solving on students in classrooms to promote general success, yet limited studies of the value of mindfulness and problem-solving to teachers themselves have been conducted. Despite the importance of teachers' vision of mindfulness and effective problem-solving competencies, limited attention is given to this area in the current literature.

Kelley (2004) investigated the effect of teacher education programs that include mindfulness as a tool for coping with the stress and needs of teaching. A total of 18 public elementary school teachers were recruited to participate in the study in Colorado city. The researcher reported that these programs have a very effective role in supporting and assisting the personal and emotional issues and have possibly significant impacts on flexibility, performance, job satisfaction and retention for teachers.

Kostanski (2007) investigated the effects of mindfulness training on (23) teachers through a six-week mindfulness training program in Australia. Consequently, the participants reported greater emotional clarity and improved regulation of negative emotions. Moreover, mindfulness training helps teachers control rushing behavior and respond more smoothly to stressful emotions.

Hyland (2010) investigated using mindfulness exercises in education in Bolton University Northwest England. 30 students participated in the exercises. The results showed that using mindfulness boosted learning by establishing strong connections between the cognitive and affective domains of education, reduced test anxiety, built emotional awareness and increased attention to unleash learning potential which is important for academic achievement.

Benn et al. (2012) assessed the effectiveness of a five-week mindfulness program for 32 parents and 38 teachers of students with special needs. The mindfulness training positively influenced teachers' self-efficacy beliefs. Further, with increased mindfulness, teachers realized that they could more effectively measure and manage their reactions to stressful situations in the classroom and felt more effective in their teaching competence.

Similarly, plethora of research (ex., Jennings, Frank, Snowberg, Coccia & Greenberg, 2013; Frank et al., 2013; Flook et al., 2013) reported very closely related results and emphasized that after participating in a mindfulness training program, teachers reported an increased ability to act with greater awareness of their emotional reactivity and an increase in the ability to self-regulate, thus feeling more mindful.

The researcher believes that there is insufficient research in this area. Thus, the current study is expected to add to the existing body of research on the utility of mindfulness and problem-solving skills among social studies teachers.

Problem of the Study

Teachers in general and teachers of social studies in particular are among individuals whose profession requires them to be fully aware and present of where they are and what they are doing to deal with the classroom environment cautiously, consciously and without getting distracted. What might help them do so is starting their mindfulness journey which could help in dealing with the classroom environment and its new stimuli that appear constantly due to different classroom situations, different socio-economic and cultural groups and diversity of students in terms of their backgrounds and prior learning.

There is no denying that being a teacher is an extremely hard work. Like every other career, social studies teachers are also facing a lot of challenges and problems due to the numerous and overlapping roles they implement: They have a cognitive role represented in teaching various subjects (history, geography, national education), students' assessment role and the administrative role, requiring them to face pressures and hassles resulting from these roles, in addition to the performance pressure from school administrators.

The inability to meet these various expectations and demands may threaten their practices in classrooms and negatively influence how satisfied they are with their jobs. They may feel dissatisfied and less motivated to do their best (Al-Mash'aan 2000).

Mindfulness includes a number of competencies and capabilities that develop a state of awareness and attention to deal with all unexpected situations in the surrounding environment (Alter, 2012). In this respect, Napoli (2004) confirmed the above result and reported improvement in teachers' ability to manage conflict and anxiety and improvement in productivity following mindfulness training.

Overall, while mindfulness training has been identified as a promising means for planting seeds of attention and stress reduction, (*to the best of the researcher knowledge*), no research has investigated this approach with social studies teachers and its impact on their professional role. Some of the existing literature brings qualitative views to the subject, yet there are few empirical studies that have used objective measures to assess self-reported mindfulness.

The researcher's noticed – *through her experience as a supervisor of social studies teachers*- that social studies teachers were unable to cope with the various classroom events and problems. Therefore, this study endeavored evaluating the level of mindfulness behavior exhibited by social studies teachers and their problem-solving skills in light of sex and experience variables. In addition, the researcher sought to investigate possible correlations between the two variables.

Questions of the Study

The study seeks to answer the following questions:

- 1- What is the level of mindfulness of social studies teachers in light of sex and experience variables?
- 2- What is the level of solving classroom problems for social studies teachers in light of sex and experience variables?
- 3- Is the teachers' mindfulness significantly correlated with their ability to solve classroom problems?

Significance of the Study

Despite the crucial role of social studies teachers in fostering students' academic learning and social-emotional well-being, addressing teacher stress and problem-solving skills in the classroom remains a significant challenge in education. Thus, the current study has several dimensions of significance: The findings of this descriptive, correlational study are expected to provide potentially significant information to fill a gap in the research and literature regarding the potential correlation between mindfulness and problem-solving skills among social studies teachers. It provided an instrument for measuring problems-solving skills inside the classroom, which was built by the researcher herself.

The study potentially benefits the Ministry of Education in establishing special programs that focus on teachers' mindfulness, thus improving problem-solving skills which may reflect positively on their professional lives. Also, it provides a unique knowledge reference on the concepts of mindfulness and classroom problem-solving skills.

The researcher could not locate any research that focuses on teachers' mindfulness and their skills of solving classroom problems simultaneously. It is the first study (*to the best of the researcher knowledge*) concerned with linking teachers' mindfulness and their skills of solving classroom problems. Thus, the study is expected to contribute to the field of education and add to the existing body of research on this topic.

Limitations of the Study

This study was limited to: a sample of social studies teachers, the directorate of education for Irbid governorate and the academic year 2019/2020.

Generalizing the results of the current study was limited to the nature of the measures used in it and their indications of validity and reliability.

Operational Definitions

Mindfulness: It is a state of sensory awareness that leaves the teachers open to all that is new. It is their ability to monitor the experiences they are going through continuously while dealing with, accepting and facing them properly. Operationally, it is the score obtained by the social studies teachers on the scale of mindfulness prepared for this purpose.

Solving Classroom Problems: It is a set of procedures and practices in which teachers use their experiences and knowledge to deal with the unwanted situations in the classroom. Operationally, it is the score obtained by the social studies teachers on the scale for solving classroom problems prepared for this purpose.

Method

The present study followed a non-experimental, quantitative, correlational design, in which the level of mindfulness and problem-solving skills among social studies teachers and the correlation between them were investigated.

Participants

The whole population of this study consisted of all social studies teachers (No. 400) at Irbid governorate who teach geography, history and national education in public schools in the second semester of the academic year 2019–2020.

A simple random method in choosing the participants was used in order to collect in-depth data and select a sample with different ages, sexes and teaching experiences. The respondents to the questionnaires were (220) teachers willing to take part in the study and fill in the questionnaires. Out of the distributed questionnaires, (200) copies of the instruments were completed by the respondents and returned to the researcher (a return rate of 90.9 %).

Upon close inspection of the completed questionnaires, (50) of the completed instruments were discarded, since they were either incomplete or carelessly completed (for example those questionnaires in which one response was systematically selected). This left the researcher with the total number of (150) completed questionnaires which represented the study subjects, as shown in Table 1.

Table (1)*The distribution of the study sample in light of sex and experience.*

Sex		Experience	
Female teachers	79	Less than 5 years	20
		5- less than 10 years	27
		10 years and more	32
Male teachers	71	Less than 5 years	18
		5- less than 10 years	26
		10 years and more	27
Total	150		

Instruments of the Study

Based on the extensive review of literature, two questionnaires were employed as major tools in the collection of data for this study: A nineteen-item questionnaire was adapted from (Alrabee', 2018) and modified to suit the purpose of the study to measure the level of mindfulness of social studies teachers, as well as a twenty seven-item questionnaire which was developed by the researcher himself to measure the level of problem- solving skills for the same study sample. Teachers participating in this study ranked the items in both questionnaires as corresponding to each statement by filling in a 5-point Likert scale starting with 1 (strongly disagree) and ending with 5 (strongly agree).

Data Analysis of the Questionnaires

Social studies teachers' responses were analyzed in terms of the five-point Liker scale; which was further categorized into three: High, intermediate and low degrees. Mean scores were valued against the following criteria: (1.00 - 2.33 as weak; 2.34 - 3.67 as intermediate; 3.68 - 5.00 as strong). The percentage was calculated according to the following equation: The highest value – The lowest value/category number. In the present research, the highest value was 5; the lowest value was 1; and the category number was 3. Thus, the appropriate degree was calculated as follows: $5-1/3 = 1.33$.

$$\text{Class Interval} = \frac{\text{Highest Value} - \text{Lowest Value}}{\text{number of classes you want to have}}$$

In the problem-solving scale, reversed questions were designed. A positively worded question refers to an item where agreement is considered a good answer and a negatively worded question is considered an item where disagreement would be a good answer. Negatively worded

questions were reversed to match the response scale for the positively worded questions. The researcher reversed the negative items (3, 7, 8, 16, 17, 18, 20, 21 and 23) by creating a new variable in which 1=5 , 2=4, 3=3, 4=2, 5=1.

Validity of the Instruments

In order to examine the face validity of the instruments, a panel of six educational experts reviewed the instruments. The team was asked to validate the content of the instruments concerning its appropriateness and suitability to the purposes of the current study. The team's comments and suggestions were studied carefully and the necessary modifications were made accordingly.

To ensure the construct validity of the instruments, they were piloted on a sample of thirty social studies teachers who were chosen from outside of the participants in the study. Pearson's correlation coefficients between the two scales' paragraphs and their overall score were calculated.

The correlation values ranged between (0.454 - 0.731) for the mindfulness items and ranged between (0.239 - 0.664) for problem-solving items. According to Odeh (2011), the correlation coefficient of the overall scale must not be less than 0.20 in order to be accepted and accordingly all the items of the measures were accepted.

Reliability of the Instruments

For the purpose of verifying the internal consistency of the mindfulness and problem-solving scales, the internal consistency coefficients were calculated using the Cronbach's Alpha equation on the data of the pilot sample; they were tested and found (0.89) for the mindfulness scale and (0.80) for the problem-solving scales'. To verify the scales' stability, the participating

teachers were asked to fill the questionnaires twice within a two-week interval and the value reached (0.87) for the mindfulness scale and (0.83) for the problem-solving scale, which were considered suitable to conduct the current study.

1- Results of the First Question

The first research question of the study sought the level of mindfulness of social studies teachers in light of the sex and experience variables. In order to answer this question, a fill-in self-reported

questionnaire was adapted on a five-point scale (strongly agree, agree, undecided, disagree, strongly disagree with the numerical values of five, four, three, two and one' respectively). Quantitative analysis was conducted to interpret the results obtained through the questionnaire. The means and standard deviations of the participants' scores in light of the sex and experience variables were calculated, as shown in Table 2.

Table (2)

Means and standard deviations of mindfulness of social studies teachers in light of sex and experience variables.

Variable	Level of variable	Mean	S.D.
Sex	Male	4.1859	0.37607
	Female	4.3402	0.37394
	Total	4.2672	0.38161
Experience	Less than 5 years	4.1856	0.42648
	5 – less than 10 years	4.2596	0.39091
	10 years and more	4.3265	0.33627
	Total	4.2672	0.38161

Maximum score mean: 5.

Table 2 shows that the level of mindfulness was high in light of sex and experience variables. It is also noted that there are apparent differences in mindfulness means among social studies teachers in Jordan due to sex and experience variables. In

order to verify the significance of the apparent differences, a two-way analysis (2-way ANOVA without interaction) was performed for the mindfulness of social studies teachers according to the two variables, as shown in Table 3.

Table (3)

Results of 2-way ANOVA analysis (without interaction) for mindfulness among social studies teachers in Jordan in light of sex and experience variables.

Source	SS	df	Mean square	F	Sig.
Sex	0.872	1	0.872	6.255	0.013
Experience	0.445	2	0.222	1.595	0.206
Error	20.362	146	0.139		
Total	21.698	149			

Table 3 shows that there are statistically significant differences at ($\alpha = 0.05$) between the means of the teachers mindfulness attributed to sex variable in favor of females. Moreover, there were no statistically significant differences due to experience variable.

2- Results of the Second Question

The second research question of the study sought the level of social studies teachers in

solving classroom problems in light of sex and experience variables. To answer this question, another fill-in self-reported questionnaire was developed on a five-point scale (strongly agree, agree, undecided, disagree, strongly disagree with the numerical values of five, four, three, two and one, respectively). The means and standard deviations of the participants' scores in light of the sex and experience variables were calculated, as shown in Table 4.

Table (4)

Means and standard deviations of problem-solving skills of social studies teachers in light of sex and experience variables.

variable	Level of variable	Mean	S.D.
Sex	Male	3.6704	0.33715
	Female	3.9195	0.57896
	Total	3.8016	0.49441
Experience	Less than 5 years	3.6253	0.40616
	5 – less than 10 years	3.8128	0.42764
	10 years and more	3.9051	0.57218
	Total	3.8016	0.49441

Maximum score mean: 5.

Table 4 shows that the level of problem-solving skills was high in light of sex and experience variables. It is also noted that there are apparent differences in problem-solving skills means among social studies teachers in Jordan due to sex and experience variables. In order to verify the significance of the apparent differences, a two-

way analysis (2-way ANOVA without interaction) was performed for the problem-solving skills of social studies teachers according to the two variables, as shown in Table 5.

Table (5)

Results of 2-way ANOVA analysis (without interaction) for problem-solving skills among social studies teachers in Jordan in light of sex and experience variables.

Source	SS	df	Mean square	F	Sig.
Sex	2.278	1	2.278	10.289	0.002
Experience	1.778	2	.889	4.016	0.020
Error	32.324	146	.221		
Total	36.422	149			

Table 5 shows that there are statistically significant differences at ($\alpha = 0.05$) between the means of the teachers problem-solving skills attributed to sex variable, in favor of females. Moreover, there are statistically significant differences due to experience variable. A Scheffe

test was performed for *post-hoc* comparisons to reveal the differences between mean scores according to experience variable, as shown in Table 6.

Table (6)

The results of Scheffe test for post-hoc comparisons of problem-solving among social studies teachers in light of experience variable.

Experience		Less than 5 years	5 – less than 10 years	10 years and more
Scheffe	Mean	3.6253	3.8128	3.9051
Less than 5 years	3.6253			
5 – less than 10 years	3.8128	-0.1876		
10 years and more	3.9051	-0.2798(*)	-0.0923	

Table 6 shows that there are statistically significant differences at the level of ($\alpha = 0.05$) between the mean scores of problem-solving skills among teachers attributed to experience variable, in favor of those with 10 years of experience and more compared to less experienced teachers.

3- Results of the Third Question

The third research question of the study sought whether teachers' mindfulness significantly correlate with their ability to solve classroom problems or not. To answer this question, the correlation coefficient was computed as shown in Table 7.

Table (7) Correlation between teachers' mindfulness and their level of problem-solving skills

		Mindfulness	P. solving
Mindfulness	Pearson Correlation	1	0.719**
	Sig. (2-tailed)		0.000
	N	150	150
Problem-solving	Pearson Correlation	0.719**	1
	Sig. (2-tailed)	0.000	
	N	150	150

Table 7 shows a strong positive correlation between teachers' mindfulness and their level of problem - solving skills ($r = 0.719^{**}$, $p < 0.001$).

Discussion

The first question sought the level of mindfulness among social studies teachers in light of sex and experience variables. The results for this question have been drawn from the teachers' responses on the mindfulness questionnaire. The results revealed that the participants had a high level of mindfulness.

The researcher believes that the more stressful and confused modern world is greatly affecting both teachers and students. Consequently, they are in urgent need to new skills and awareness to deal with such an environment. Thus, building teachers' mindfulness may provide a new way of realizing their experiences and meeting the expectations of the classroom. Furthermore, the nature of social studies teacher's work and their interaction with students from different backgrounds require them to be armed with a set of skills and competencies, one of which is mindfulness, to hopefully guarantee them a positive and fruitful relation in this atmosphere.

Additionally, since teaching is a very stressful occupation, mindfulness should be a significant part of social studies teachers' education to help them cope with the demands of their profession such as cognition, attention regulation skills, mental and occupational health and capacities to create and maintain both supportive relationships with students and classroom climates. This goes in line with Crain et al. (2017) who asserted the

importance of mindfulness for teachers. They reported that teachers who practice mindfulness and employ it in their classrooms are less stressed, sleep better, report fewer bad moods and report more workplace satisfaction than those who don't.

Another important point to be remembered is that social studies teachers like other teachers at the Ministry of Education are constantly being assessed on their knowledge and skills and wish to boost their personal achievements and advance their careers to higher levels of salary, responsibility or authority. Interest in keeping abreast of the rapid development and the pace of change - through the acquisition of mindfulness skills - may contribute to achieving their goal.

Moreover, the research examined sex differences in mindfulness. Results showed that there were small, but statistically significant, sex differences in favor of females. This result is consistent with previous research (Stoet et al., 2013). Sex differences could be explained with different cognitive functioning of females and males. Women in general are better in mindfulness practices than men and this could be explained by multitasking which is doing several things at the same time, while men in general are concentrating on one task at the time and are more aware while doing it.

Regarding experience differences in mindfulness, the results showed no statistically significant differences. The researcher attributes this to the fact that teachers resort to developing only their academic and professional expertise in order to find better ways to deal with important pedagogical challenges, which leads to improving their performance without paying attention to any other aspects which might be considered not needed such as mindfulness that is the subject of discussion.

Furthermore, regardless the years of experience, the socialization of teachers through which they selectively acquire the values, knowledge, skills and behaviors of the teaching profession may contribute to the development of their skills in the field of mindfulness and thus, they were able to continue this development in an autonomous manner as the basis is prepared for that.

The second question sought the level of problem-solving skills among social studies teachers in light of sex and experience. The results for this question have been drawn from the teachers' responses on the problem-solving questionnaire. The results revealed that the teachers were good problem solvers.

The researcher thinks that efficient problem-solving skills represent one of the fundamental competencies that social studies teachers need to own. They often face challenges at all levels of their career and need to learn to cope with their current problems.

The researcher believes that social studies teachers need problem-solving skills to be able to respond to all of the challenges that teaching career holds, which is considered one of the key features in their profession. Teachers must be prepared to manage unexpected situations, acclimate to current knowledge to address new problems and deal advantageously with the changing class environment. Furthermore, solving problems is one of the strategies that social studies teachers employ inside the classroom and teach it to students. As a role model for students, they must be distinguished by their use of problem-solving strategy in their lives in general and in their work in particular and this explains the high degree of teachers' ability to solve problems.

The results indicate a positive effect on problem-solving skills in favor of exercising mindfulness. The findings of this research support that mindfulness programs can provide positive outcomes for social studies teachers in terms of problem-solving skills.

This seems to be in line with (Karplus, 1977; National Council of Teachers of Mathematics, 2000; Schoenfeld, 1985) who supported the importance of problem-solving skills for teachers and stated that rather than giving information to students about how to solve their problems, teachers must enhance and develop their own problem-solving skills. Moreover, strong problem solving abilities are essential in life in general. It is important that educators be aware of their teachers' problem solving abilities and perceptions for the sake of the students they teach.

Concerning sex differences in teachers' problem-solving skills, results showed that there were small, but statistically significant, sex differences, in favor of females. The researcher explained that female teachers, by virtue of their natural role as mothers practicing the same role in the classroom, have more patience in dealing with classroom problems which may reflect positively in their handling with such problematic classroom situations.

Regarding experience differences in problem-solving skills, results showed that there were small, but statistically significant differences, in favor of teachers with more experience. The researcher may explain that teachers are exposed to many behavioral situations similar to what is going on in the classroom during their practical and educational experience, which help them use what they acquire to solve new problems in the classroom.

Moreover, teachers - through their experiences - are characterized by their ability to pay attention to what is happening around them, so they can link events and situations and reach positive solutions, in addition to using positive strategies to solve classroom problems such as taking advantage of time and comprehensively considering the various dimensions of problems.

Another possible explanation for the results concerning the experience differences is that through experience, teachers increasingly adapt ways of managing their emotions and therefore become wiser when judging others. This seems to be in line with Charles et al. (2001) who found that negative affect decreased with more experience and that more experienced workers had a tendency to regulate their emotions in dealing with problems more effectively.

The third question sought the correlation between mindfulness of social studies teachers and their problem-solving skills. The results for this question have been drawn from the correlation between the teachers' responses on the two above mentioned questionnaires, as indicated in Table 3.

The Pearson correlation coefficient of ($r = 0.719$) indicates a strong positive correlation between the two variables. Social studies teachers' mindfulness is believed to correlate significantly with problem-solving skills and had statistically significant effects on their skills in solving classroom problems. This implies that as mindfulness increases, social studies teachers' problem-solving skills tend to increase.

Many explanations have been proposed for this relationship. To a great degree, social studies teachers are often selfless and devoted to making a positive difference in students' lives. Mindfulness helps social studies teachers with problem-solving by clarifying their minds and promoting creativity, so that it is being incorporated into every life aspect where strong solutions are required.

Mindfulness helps social studies teachers develop their ideas and methods of teaching and gives them more focus in their work. When attention is paid, they gain a lot of strength, confidence and control over the classroom and its problems, which improves the level of

performance and thus increases their ability to solve problems and manage the classroom environment. Furthermore, social studies teachers' mindfulness made them more aware of the educational process and more flexible to carry out their own tasks to set up a positive learning environment, which allowed them to pay better attention to the learning environment and their students' needs within the classroom. It also helped them face and solve the problems inside the classroom more flexibly.

This seems to go in line with Jennings and Greenberg (2009) who asserted that mindfulness helps teachers be aware of and reflect on experience in a nonjudgmental manner, flexible when solving classroom problems, pliable after failure and attend to others with empathy and kindness. They added that mindfulness is an effective way of deploying attention and awareness in the classroom and facilitates emotion regulation, stress reduction, and healthy social interactions.

Recommendations

The present study recommends the following:

- 1- The results encourage the decision makers at the Ministry of Education to promote the topic of mindfulness for teachers from different disciplines and make enrichment programs about it.
- 2- Conducting other studies related to mindfulness and linking it with other variables, such as decision-making, leadership skills ... etc.
- 3- More studies including a greater amount of participants are recommended to further determine the effect of mindfulness on problem-solving skills

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