



## לקט פרסומי הסגל האקדמי 2021-2017

### המערכת

עו"ד זכי כמאל

פרופ' רנדה ח'יר-עבאס

ד"ר ראפע ספדי

פרופ' מאיר מידב

ד"ר אילת אטינגר

גב' אזאר טאהא

### עורכת אחראית

ד"ר אילת אטינגר

### גרפיקה והבאה לדפוס

מר שרבל אליאס





## תוכן העניינים

7	דבר נגיד המכללה
9	דבר נשיאת המכללה
11	דבר ראש רשות המחקר
13	דבר העורכים
<b>15</b>	<b>חינוך - הוראה ומחקר</b>
16	חייר-עבאס, רנדה
21	אבו רחמון, גרימאן
22	דלומי, אירית
23	זידאן, וופא
25	זידאן, ראיד
29	ח'טיב אבו-ליל, עולא
30	ממן, יוסף
33	נג'אר, זוהיירה
34	סלמאן, אסמאעיל
38	עבד אלגני, יוסף
39	עסאקלה, עיסאם
40	עשת, יובב
43	פטום, אמתיאז
48	קאסם, עאליה
49	שמא, פתחי
<b>52</b>	<b>מדיניות, חברה ותרבות</b>
53	חייר-עבאס, רנדה
56	דהאמשה, עאמר
59	דלומי, אירית
60	ממן, יוסף
62	נג'אר, זוהיירה
63	עסאקלה, עיסאם
65	פסה, תום



66	קאסם, עאליה
67	שמא, פתחי
<b>68</b>	<b>מדעים מדויקים והוראתם</b>
69	אבו מוך, ריאם
72	בשיר, אחמד
77	גיוראן, פדיל
78	זידאן, ראיד
79	זכנון, מארון
81	חוג'יראת, מוחמד
85	סח'ניני, סוהיר
88	סייד אחמד, וורד
100	סלמאן, אסמאעיל
104	ספדי, ראפע
109	עבד אלגני, יוסף
118	עבדו, הישאם
119	עבוד, אליאס
121	קאסם, עאליה
122	קורטאם, נאג'י
128	רסלאן-שריף, אמאל
<b>134</b>	<b>שפות וספרות והוראתן</b>
136	ח'יר-עבאס, רנדה
138	אטינגר, אילת
143	אסדי, איברהים
153	בסל, אברההים
157	דהאמשה, עאמר
159	וייס, ישראלה
161	חנא-ארשיד, האלה
162	סרחהן, רבאב
164	עאסלה בדאונה, עביר



165	עסאקלה, עיסאם
169	עקל, ורד
170	עשת, יובב
171	קאסם, עאליה
173	שגיא, שרה
176	שחברי קאסם, עביר
177	שחייבר ריזק, שאדן
178	שיך-חשמה, לינה





## דבר נגיד המכללה

קובץ פרסומי הסגל האקדמי 2016-2021 הנוכחי, מיישם את מפת הדרכים, אשר הבאתי בשנת 2007 בפני הוועד המנהל וחבר הנאמנים ובה אושר הקמת רשות המחקר במכללה והוקצו תקציבים לכך.

אין חולקין כי מוסד אקדמי בר-קיימא נשמת אפו הינה המחקר בתחומים של המדעים המדויקים, החינוך והחברה. אכן, המכללה צועדת בצעדים ראויים להערכה בהעמקת המחקר וזאת בהכוונת ובראשות פרופ' רנדה ח'יר עבאס, נשיאת המכללה ולידה ד"ר ראפע ספדי ראש הרשות וסגל אקדמי מן השורה הראשונה מדעית ואקדמית.

תכניהם של המחקרים אשר מוצגים בקובץ זה נוגעים לתחומים רבים של אקדמיה, חברה, חינוך ותרבות ולאוו דווקא נושאים סקטוריאליים בלבד, נהפוך הוא, חוקרי המכללה והסגל האקדמי פועלים נחרצות להתמודד עם טובי המדענים ואנשי האקדמיה בארץ ובעולם במגוון של מחקרים בעלי ערך ותרומה מדעית והשכלתית.

אין כל ספק ספיקא כי, חשיבותו של המחקר במכללה בפרט, ובאקדמיה בכללה, הינה הדומיננטיות בעולם האקדמיה, ובעיני חשיבות של המחקר אינה מסתכמת בפירותיו האקדמיים והמחקריים, אלא שהמחקר טומן בחובו ערכים נוספים שהם סך כל המרכיבים והתכונות אשר מגדירים את החוקר ומדרבנים אותו להמשיך לחקור, לחתור קדימה ולפעול לגילוי עולמות חדשים, סקרנות מדעית בריאה ומתחדשת, הרפתקנות, מנהיגות, אכפתיות, אהבה ונתינה, המשכיות וגמישות. אלה הם הערכים שעומדים בבסיס אישיותם של המוצלחים באנשים והמצליחים בין החוקרים.

אלה גם תכונותיו של כל מנהיג אקדמי ופורץ דרך, ומכאן שהחוקר הוא מנהיג, שמאמין כי אין גבול לידע וכי בענייני מדע ומחקר גם השמיים אינם הגבול. אני מאמין שחוקר טוב ככל שיהיה, אין ערובה להצלחתו ללא כושר מנהיגותו, והוא ורק הוא חייב להנהיג ולקבוע את תהליך המחקר, אופן ותדירות השימוש במיומנויות, בידע ובכישורים טכנולוגיים, פיתוח מסוגלות עצמית, יכולות חשיבה מחקרית, והבנה רחבה של שלבי המחקר וניתוח התהליכים המביאים לפריצת הדרך. הגם שעלולים כאלה אשר יערערו ואף יבטלו את חשיבות המחקר ותוצאותיו.

כדי להבטיח למכללה מקום של כבוד בשדה המחקר החינוכי והמדעי, הקמנו כאמור את רשות המחקר ועודדנו את חברי הסגל להשתמש בשירותיה ובתקציביה,



והעמדנו לכך את מיטב האמצעים האקדמיים, הניהוליים והתקציביים למחקרים בעלי ערך אקדמי ובינלאומי.

ברוכה ומבורכת השתתפותכם במקבץ מאמרים זה, המבטא רוח חדשה ורעננה המנשבת במכללה בשנים האחרונות, שבבסיסה השייכות והנאמנות האקדמית, השאיפה למצוינות הן אקדמית והן מחקרית, לרבות החתירה לגילוי עולמות חדשים שחשיפתם הינה אתגר אינטלקטואלי, אנושי ומדעי מרתק ומבורך כאחד. ייגעתם ומצאתם, חקרתם וגיליתם דברים חדשים, הוכחתם דבקות במשימה ומעל לכל יכולתכם המדעית - מחקרית - אקדמית - איננה נופלת מטובי החוקרים והמדענים בעולם.

אין לי כל ספק ספיקא כי מחקריכם יהוו זרז למחקרים נוספים, אני סמוך ובטוח שמהם תצמח תועלת ומכם תבוא ברכה ובשורה מחקרית ומדעית לטובת האנושות ויש לי אימון מוחלט שפרופ' רנדה חייר עבאס נשיאת המכללה בעזרתם של ד"ר ראפע ספדי וטובי החוקרים במכללה שתמשיכו להוביל את המכללה ביד רמה והישגים אקדמיים כבירים ומחקרים בעלי ערך לאנושות. חזקו ואמצו, עלו והצליחו.

שלכם

בהוקרה ובהערכה,

**זכי כמאל, עו"ד**

נגיד המכללה

חיפה, אוקטובר 2022



## דבר נשיאת המכללה

אתחיל את דברי ב"אני מאמין" האישי והאקדמי שלי, לאורו הלכתי לאורך כל הקריירה האקדמית והמחקרית שלי, אותו אני מיישמת הלכה למעשה ומבטאת חדשות לבקרים, ובכל הזדמנות: מאמינה אני שעל שתי רגליים עומדת ההוראה האקדמית, הוראה דיציפלינארית ומחקר, וכי אין תוחלת להוראה אקדמית שבעליה אינם עוסקים במחקר במגוון הדיציפלינות וההתמחויות, הרי אמרו שהוראה ללא מחקר סופה שתאבד את הרלבנטיות ואת החדשנות שלה, וכך גם הלימודים האקדמיים, הרי אין מקום היום, ובעשרות השנים האחרונות, להוראה פרונטלית תיאורטית יבשה ומסורתית, ללא טיפוח יצר המחקר, השאיפה לגלות עולמות חדשים, גם בקרב הסטודנטיות והסטודנטים, כבר בשנות הלימודים האקדמיות הראשונות.

אין זה סוד כי אחת מנקודות התורפה של מערכת ההשכלה הגבוהה בישראל היא שהמערכת רחוקה מלעודד הצטיינות ומחקר, רמת ההוראה בחלק ממוסדותיה נמוכה ואיננה מספקת, גם כשיש אוכלוסייה הולכת וגדלה של סטודנטים שמגיעים להשכלה הגבוהה מתוך תאוות ידע ורצון להרחיב את השכלתם.

סטודנטים אלה, הבאים למערכת ההשכלה הגבוהה מתוך רצון לצבור ידע, להשכיל ולהעביר את הידע שלהם הלאה, הן כמורים והן כחוקרים, מהווים קרקע פורייה לעידוד הנטיות המחקריות, תוך התחברות לאתגר האינטלקטואלי, לחדוות המחקר, כפי שמוכיח במכללתנו המספר ההולך וגדל של סטודנטיות וסטודנטים הבוחרים להצטרף ללימודי התואר השני עם תזה, בתחומי הדעת השונים ובמיוחד המדעיים, כשחלקם עושה זאת לאו דווקא מתוך אספירציה לתואר שלישי שאולי יבוא בהמשך, אלא מתוך רצון להעשיר את עולמם. המספרים עולים בהדרגה, וכמי שהקדישה את חייה לאקדמיה ולמחקר משמח אותי לראות זאת.

מרצות ומרצי המכללה, במיוחד בשנים האחרונות, הגדילו משמעותית ובאופן מבורך את תרומתם, תחומי פעילותם וקשריהם המחקריים בארץ ובעולם, ויעידו על כך כאלף עדים הכנסים המדעיים בשיתוף עם אוניברסיטאות מובילות בעולם ובארץ ובהשתתפות פעילה של זוכי פרסי נובל מהארץ ומחול"ל, כשהאחרון בהם הינו הכנס המחקרי הבינלאומי תחת הכותרת: "צדק חברתי בחברה רב תרבותית" שהתקיים בין כתלי המכללה ביוני 2022 ולאורך 3 ימים, בהשתתפות חוקרים מהמכללה לצד חוקרים ממוסדות אקדמיים ואוניברסיטאות בארץ וחוקרים בעלי שם עולמי מארה"ב, קנדה, איטליה, הולנד, פינלנד, טורקיה, אזרביג'אן ועוד, כהוכחה לכך שהמכללה הניצבת בחזית העשייה האקדמית



בישראל בכלל ובחברה הערבית בפרט, ניצבת גם ברשימה המכובדת של מוסדות המעודדים, מיישמים, מבצעים ומפרסמים מחקרים בכל תחומי הדעת ובמגזיני מחקר מובילים בעולם, תוך פרסום ספרים המכילים מאמרים ומחקרים פרי עטם של מרציה, בנוסף לשילוב בוגריה בכלל מערכת החינוך והאקדמיה, כשייחודה האנושי- חברתי, הוא בשילוב התרבותי והאישי בין גווניה של החברה בישראל, וייחודה האקדמי הוא בשילוב שבין ההוראה הדיסציפלינארית-אקדמית, ההתנסות הקלינית והפיתוח המקצועי-אקדמי של סגל ההוראה שלה.

מוקד מרכזי בעשייה המכללתית הוא טיפוח קשרים עם הקהילה האקדמית, הן הקרובה ברמה המקומית והן הרחוקה במישור האזורי והבינלאומי ואלה מתקיימים בעיקר ע"י הירתמות קבועה ועיסוק מתמיד במחקר האקדמי והפרקטי באמצעות פרסומים בכתבי עת מובילים, והשתתפות בקבוצות מחקר בינלאומיות. עברנו כברת דרך משמעותית בתחום זה, ומקבץ פרסומי הסגל בשנים 2016-2021 הוא עדות לפעילות זו ולפיתוח המקצועי והקידום האקדמי.

העיסוק במחקר היישומי והתיאורטי, מהווה ביטוי של שייכות וקשר של חברי הסגל עם הקהילה וסביבתה; מודל של קשר אנושי איכותי המוביל אל אופק הקיים בשאיפות ואל מימושם, וקובץ המאמרים הנוכחי מציג את ההיקף רב הטווח של פעילות חברי הסגל, שאחד מביטוייה היה כנס עבודות המרצים בפברואר 2022. מדינות רבות משקיעות הון עתק בחינוך, מתוך אמונה שבחינוך טמון בסיס קיומה של החברה, וכי ההשכלה מהווה את החוט המקשר בין היסודות המרכיבים אותה – כלכלה, תרבות, ערכים וטכנולוגיה. ההשכלה היא המפתח והדרך להבטיח לא רק את עתידם של הילדים אלא את עתידה.

אנו כמכללה מציבים את העשייה המחקרית לצד ההוראה האקדמית במעמד שווה, ומנגישים את הדרך ליוזמה מחקרית, על-ידי הפעלתה של רשות המחקר והושטת סיוע ותמיכה לנענים לאתגר, ונוסיף לעשות זאת גם בעתיד. אני מבקשת להודות לחברי הסגל המכללתי על עבודתם בשנים האחרונות ולחברי המערכת שעמלו על הפקת הקובץ הנוכחי, ולרבים וטובים שעמלו רבות כדי להוציא כנס זה ובצידו חוברת מאמרים מרשימה זו, א הפועל ומאחלת שניפגש כאן, שוב ושוב.

בברכה,

פרופ' רנדה ח'יר-עבאס

נשיאת המכללה



## דבר ראש רשות המחקר

מחקר מהווה חלק בלתי נפרד מהעשייה האקדמית המתנהלת בכל מוסד אקדמי. רשות המחקר במכללה האקדמית הערבית לחינוך בישראל – חיפה מייחסת חשיבות רבה לקידום התרבות המחקרית בין כותלי המכללה, במטרה להעצים את מעמדה של המכללה כמוסד אקדמי חוקר. לצורך זה, רשות המחקר פועלת להרחבה ולהעמקה של הפעילות המחקרית בקרב חברי הסגל ורואה בסגל האקדמי במכללה גוף חוקר המעבד ידע קיים, מייצר ידע חדש ומפיץ אותו בארץ ובחו"ל, במאמרים המתפרסמים בספרים ובכתבי עת אקדמיים ומקצועיים כמו- גם בכנסים ובמפגשי חוקרים.

הרחבת הפעילות המחקרית במכללה והעמקתה, נחוצות הן לצורך התפתחותו המקצועית של סגל ההוראה והן להעלאת רמת ההכשרה במכללה. כל זאת, מתוך ציפייה ומודעות לכך שמעורבות בפעילות מחקרית משפיעה על טיב ההוראה במכללה ועל האווירה האינטלקטואלית בה ותורמת להתפתחות המקצועית של חברי הסגל.

רשות המחקר במכללה זוכה בשנים האחרונות לתמיכתם של עו"ד זכי כמאל, נגיד המכללה, ופרופ' רנדה ח'יר-עבאס, נשיאת המכללה, הרואים את העשייה המחקרית של חברי הסגל כחלק אינטגרלי בעבודה האקדמית שלהם, ובקידום המקצועי. תמיכה ועידוד אלה באו לידי ביטוי במהלך ביצוע המחקרים, בכתבתם ובהכנתם לפרסום בכתבי עת מוערכים ובכנסים בינלאומיים וארציים.

מדיניות זו הניבה תוצרים רבים שחלקם בא לידי ביטוי בלקט פרסומי הסגל הנוכחי, ובכנס המחקר המכללתי "חינוך בחזית המחקר", שהפך להיות אירוע מחקרי מרכזי המתקיים מידי שנה בין כותלי המכללה, וכן בזכייתם של חוקרי המכללה במענקי מחקר, בין היתר, כאלה המוגדרים כמענקים תחרותיים ויוקרתיים.

לקט פרסומי הסגל שבידיכם מושק במהלך הכנס "חינוך בחזית המחקר" המתקיים בתשפ"ג זו השנה השנייה ומכנס בתוכו את כל פרסומיהם המחקריים של חברי הסגל שפורסמו במהלך חמש השנים בין 2017 עד 2021. המחקרים התפרסמו בספרים שפטים כמו-גם בעיתונות המכובדת והשפיטה, הן הבינלאומית והן המקומית.

לקט פרסומי הסגל, יחד עם הכנס השנתי "חינוך בחזית המחקר", מתקיימים תחת המטריה של קידום ועידוד האווירה והתרבות המחקרית בין כותלי המכללה. מטרותיהם:

לחשוף את החוקרים והחוקרות במכללה ואת מחקריהם בפני עמיתים



וסטודנטים ;  
לחזק את הקשר בין השדה החינוכי למחקר התאורטי ולשלבם זה בזה ;  
לקדם את איכות המחקר במכללה ;  
לעודד את החוקרים והחוקרות במכללה להציג את מחקריהם בכנסים בינלאומיים  
ולפרסם אותם בכתבי עת יוקרתיים ;  
להפגיש את סטודנטים והסטודנטיות, בעיקר הללו הלומדים לתואר שני,  
באוירה המחקרית, ולפתוח צוהר להשתלבות עתידית שלהם בעולם האקדמי  
בהקשר המחקרי.  
להציג בפני הסטודנטים והסטודנטיות בתואר השני חוקרים ומחקריהם  
כפוטנציאל התקשרות לעבודת הגמר שלהם.  
להוות מפגש בין החוקרים הצעירים לחוקרים בעלי ניסיון רב וליצור תשתית  
לשיתופי פעולה במחקרים משותפים.  
רשות המחקר היא הבית לתמיכה מקצועית ותקציבית לפעילות מחקרית לגוונה  
– הן בפרסום עצמאי, הן בפנייה לקרנות ולקולות קוראים והן בסיוע ליוזמות של  
שיתופי פעולה אישיים ובין מוסדיים.  
הנכם מוזמנים לפנות אלינו, ככל שתראו לנכון.

בהוקרה ובהערכה,  
**ד"ר ראפע ספדי**  
ראש רשות המחקר



## דבר המערכת

הקובץ שבידיכם כולל את תקצירי המאמרים והספרים שכתבו חברות וחברי סגל המכללה וראו אור בין השנים 2017 ועד 2021.

גם החינוך וגם המחקר הם מנשמת אפה של מכללה אקדמית לחינוך. מהצד האחד, אנו מכללה שמטרתו היא להכשיר סטודנטיות וסטודנטים באופן מיטבי להיותם מורים בפועל, ולצורך זה מושם דגש על איכות ההוראה, שימוש בכלים טכנולוגיים חדישים ומתן דוגמה אישית על-ידי המרצות והמרצים. מהצד השני, המחקר הוא שמפתח, ממצב ומעצים אותנו, הסגל, בתחומים שאותם אנו מלמדים. הוא מתחזק את המקצועיות שלנו, מאפשר לנו להעביר לסטודנטים ידע עדכני, והוא אף מצופה מאיתנו מעצם השתייכותנו למוסד אקדמי, והכרחי לצורך התקדמותנו בדרגה.

המחקר וההוראה כרוכים זה בזה, ואת הקשר ביניהם ניתן לראותו בקיומם של מחקרים שבמרכזם עומדת ההתנהלות במרחב הכיתה (בבחינת 'המורה כחוקר כיתתי'), ובמחקרים שתחילתם ברעיון שנבט בתוך הכיתה, כתולדה של השיח עם הסטודנטים במהלך ההוראה בפועל.

לקט התקצירים שלפנינו מאפשר לנו להציג את ההתלהבות האישית שלנו ולשתף עמיתים וסטודנטים בחידושים ובגילויים פרי עמלנו האקדמי המחקרי. מתוך כך נוכל להכיר זה את זה טוב יותר, אולי אף למצוא קוים משיקים ולשתף פעולה במחקר עתידי. הלקט שבידיכם כולל כותרים, תקצירים ומראי מקום של מאמרים אקדמיים וספרים, שאותם שלחו חברי סגל במענה לקול הקורא מטעם רשות המחקר המכללתית. לא נכללו בו תקצירי הרצאות שהתפרסמו בספרי כנסים, או כתבות שהתפרסמו בעיתונות היומית. הפרסומים חולקו לארבעה שערים המוצגים לפי סדר א"ב: (1) חינוך - הוראה ומחקר; (2) מדיניות, חברה ותרבות; (3) מדעים מדויקים והוראתם; (4) שפות וספרות והוראתן. חברי סגל שמחקריהם עוסקים בתחומים שונים מופיעים לפיכך יותר מפעם אחת, בשערים שונים. בתוך כל שער, מקובצים הפרסומים לפי סדר א"ב של כותביהם. תחת כל כותב מחולקים המאמרים לפי שפות: אנגלית, עברית וערבית, ובתוך כל שפה לפי סדר כרונולוגי מהמוקדם ועד למאוחר. מאמרים של מחבר שהתפרסמו באותה השנה ובאותה השפה, סודרו לפי סדר א"ב של כותריהם.

במהלך עריכת הספר נפעמנו לראות את מגוון התחומים העשיר שבו עוסקים העמיתים במכללה, שמחנו לראות שיתופי פעולה פוריים בין חברי סגל, והתרשמנו מהכמות הרבה של פרסומים שנכתבו במהלך חמש שנים. אנו תקווה כי תתרשמו, כמונו, מקריאת הדברים, ושתפיקו מהספר הנאה ותועלת.

**בברכת כתיבה פורייה ומהנה  
חברי המערכת**





## חינוך - הוראה ומחקר





## ח'יר-עבאס, רנדה

### **Teacher Training in the Arab Sector in Israel - the Story of The Arab Academic College of Education In Israel, Haifa**

This paper presents a concrete case of a teacher education program planned and executed by an ethnic minority. The main goal of this program is to integrate pedagogical and professional aspects of teacher education with the unique characteristics of a teacher education college serving the Arab community in Israel. In other words, the college strives to maintain its uniqueness and simultaneously provide students an opportunity for full integration in the majority, Israeli, society. The research portrays striving for integration without giving up special characteristics. It seems that for teacher education in multicultural societies, the best way to serve both individuals and communities of minorities living in a dominant culture is to integrate both the unique and the general in the preparation of teachers.

#### **Published**

Ilaiyan, S., Toren, Z., & Abbas, R. (2017). Teacher training in the Arab sector in Israel - The story of the Arab Academic College of Education in Israel, Haifa. In. M. Ben-Peretz & S. Feiman-Nemser (Eds.), *The role of ideology and political movements in designing teacher education programs* (pp. 37-48). Lanham, MD Rowman & Littlefield with the MOFET institute.

### **"We Don't Talk About That Here" - Teachers, Religion, Public Elementary Schools and the Embodiment of Silence, a National United States and Israel Study**

Globally religious diversity is on the rise yet the place of religion in public schools is often heatedly debated. The study examined the experiences of fifth graders regarding religion in public schools in the United States and Israel. The juxtaposition of diverse countries and school settings opens the dialogue to examine how children and their teachers perceive the impact of religion while in school. The findings suggest that the impact of minority status, school curriculum, and the political and geographical contexts of schools impact the ways that religion is conceptualized in public elementary schools. In addition, the uniqueness between religions and teacher views concerning the place of religion in public schools should be explored further.



### Published

Keller, T., Camardese, A., & Abbas, R. (2017). "We don't talk about that here" - teachers, religion, public elementary schools and the embodiment of silence, a national United States and Israel study. *Journal of Childhood and Religion*, 7, 1-41.

DOI [https://mosaic.messiah.edu/edu\\_ed/27/](https://mosaic.messiah.edu/edu_ed/27/)

### **Primary Teachers' Use of Communicative Strategies for Linguistically Diverse Learners - A Cross-Cultural Case Study**

The purpose of the study was to investigate the use of communicative strategies employed by two primary grade teachers whose students' home language differed from the language of instruction. The communicative strategies examined included verbal, gestural, and other visual modes of interaction within classroom discourse to promote student learning. One school we studied was in Northern Israel and one was in New Jersey in the US. In Israel, the teacher taught using formal Modern Standard Arabic while the children were familiar only with Spoken Arabic. In New Jersey, the teacher taught using English while the students were largely from Spanish-speaking homes. Neither teacher had special training in working with diverse language learners. Findings generated two major categories of communicative strategies utilized by both teachers *Concretization* of abstract concepts and *Situational Language Use*. The significance of The study is that it addresses the need identified by practitioners and researchers worldwide for improved literacy and mathematics teaching and learning for diverse.

### Published

Mongillo, G., Feola, D., Kaplan, R., Vaknin-Nusbaum, V., & Abbas, R. (2019). Primary teachers' use of communicative strategies for linguistically diverse learners - A cross-cultural case study. *The Language and Literacy Spectrum*, 29(1/5).

Doi <https://digitalcommons.buffalostate.edu/lls/vol29/iss1/5>



## How Do School-Based Ceremonies Contribute to Adolescents' Identity Design? A Case Study in Two Druze High Schools

This article discusses the contribution of school-based ceremonies in two Israeli Druze schools to shaping identity and deepening the sense of citizenship among Druze students. The Druze have a unique position in Israel as opposed to other Arabic-speaking Israelis, serving in the army and generally maintaining high levels of patriotism. State ceremonies, especially the memorial ceremonies of the IDF (Israel Defense Forces), have gradually come to occupy a central place in the Israeli education system since 1948. The memorial ceremonies combine the cognitive and emotional dimensions. The historical information conveyed through them is combined with feelings of bereavement and loss and with stories of heroism and sacrifice. The study found that great emphasis is placed on these activities in the two Druze schools studied and that they strengthen the students' Druze Israeli identity and sense of civic pride and responsibility, together with their unique Druze identity.

### Published

Abbas-Khair, R. (2020). How do school-based ceremonies contribute to adolescents' identity design? A case study in two Druze high schools. *Citizenship Teaching and Learning*, 15(3), 323-340.

DOI [https://doi.org/10.1386/ctl\\_00037\\_1](https://doi.org/10.1386/ctl_00037_1)

## Is there Indeed a Commitment in Trainee Teachers of Israel's Arab Sector to Education for Multiculturalism?

This research discusses the instruction of multiculturalism in Arab-Israeli teacher training colleges and seeks to discover whether its trainees are committed to educate for multiculturalism. It is a pioneering project as it inquires how Arab students at departments of teacher education in Israeli Colleges learn about multiculturalism. On the theoretical level, the study contributes to the understanding of multicultural research. On the practical level, it provides help in preparing students as multiculturally tolerant teachers equipped with the tools needed for educating for pluralism and social tolerance.

### Published

Khair-Abbas, R., & Ilaiyan, S. (2021). Is there indeed a commitment in trainee teachers of Israel's Arab sector to education for multiculturalism? *Intercultural Education*, 32(3), 311-325. DOI <https://doi.org/10.1080/14675986.2021.1882943>



## Motivation And Attitudes Of Israeli - Druze School Children Toward L2 Hebrew Compared To Modern Standard Arabic

The study examines the extent to which sociohistorical and political contexts influence the language attitudes of Israeli-Druze students to Hebrew as L2 and to Modern Standard Arabic (MSA) in Arabic-speaking schools. It is a pioneer explorative research study that compares students' attitudes toward diglossia and L2. Using the Foreign Languages Attitudes and Goals Survey (FLAGS), the attitudes of second, fifth, and ninth graders in two different Druze schools were assessed. The results indicate a positive attitude towards L2 Hebrew, not only for instrumental purposes but also for integration into Israel's multicultural society. The positive attitude to L2 Hebrew is greater in older students, while the attitude to MSA becomes more negative among older students. Their low motivation to learn cultural heritage MSA may contribute to an understanding of how to teach it better or differently, as well as how to encourage future generations to learn it.

### Published

Khair-Abbas, R., & Vaknin-Nusbaum, V. (2021). Motivation and attitudes of Israeli-Druze school children toward L2 Hebrew compared to modern standard Arabic. *Pragmatics and Society*, 12(4), 591-611.

DOI <https://doi.org/10.1075/ps.18056.abb>

## Real Time Experience of Participants in Higher Education During the Coronavirus - A Case Study

This case study explored the real-time experience of participants in the Arab Academic College for Education in Haifa, Israel, during the coronavirus pandemic. Nineteen in-depth interviews were conducted with management, administrative staff, faculty and students. Participants' stories reveal that feelings stress and isolation gave way to new learning and self-discovery, a new relationship with time, and the creation of new knowledge on the personal and institutional levels. Strong, coordinated leadership, combined with legal and financial security, facilitated the transition to on-line learning and allowed then college to emerge from the crisis successfully. Implications are drawn for dealing with future crises.



### Published

Khair-Abbas, R.; Abu Hanna, E., Zoabi, Kh., Marey-Sarwan, I. & Abu Ahmad, H. (2021). Real time experience of participants in higher education during the coronavirus - a case study. *Curriculum and Teaching*, 36(1), 51-70. DOI <https://doi.org/10.7459/ct/36.1.05>



## אבו רחמון, נרימאן

### Teacher Evaluation Policy In Arab-Israeli Schools Through The Lens of Micropolitic:s Implications For Teacher Education

As part of a larger mixed-method study on teacher evaluation, this paper explores how cultural and socio-political contexts of the Israeli Arab public schools inform principals' high-stakes evaluation processes for attaining tenure. Concepts from micropolitical theory were used to analyze data from in-depth semi-structured interviews with twenty novice teachers and twenty principals. Findings from the qualitative data suggest that power relations and contextual features of Israeli-Arab society such as collectivism and face-keeping direct how decisions are made and limit the work of the actors involved. The study provides insights into how principals exercise their power to attain what they interpret as teacher quality while evaluating teachers, and how the latter interpret such power relations in their local contexts. It also suggests the need for substantive groundwork in preparing prospective teachers for the high-stakes teacher evaluation processes that characterize the Israeli-Arab education system and the efforts to maintain teacher quality.

#### Published

Abu Rahmoun, N., Goldberg, T., & Orland-Barak, L. (2021) Teacher evaluation policy in Arab-Israeli schools through the lens of micropolitics: implications for teacher education, *European Journal of Teacher Education*, 443, 348-364. DOI 10.1080/02619768.2021.1947238



## דלומי, אירית

### כוח לכו"ח - מורות כבדות שמיעה וחירשות בישראל

מורות חירשות במגזר הציבורי חשופות בו בזמן לשלושה סוגים של אפליה אפליה מגדרית, אפליה מעמדית ואפליה על רקע מוגבלות. כנשים חירשות העובדות במערכת החינוך, המורות נתונות למצב מתמשך של אפליה, סירוב והדרה. קשה להן להתקבל לעבודה, הן אינן מקבלות קביעות, מסרבים להעסיק אותן במשרות מלאות ולתת להן תפקידי חינוך, והן מנותבות ללמד ילדים חירשים בלבד. ראיונות עומק במחקר איכותני עם מורות חירשות מגלים את המכשולים הניצבים בפניהן ואת דרכי הפעולה שלהן בהתמודדות עם מציאות מגבילה ומצמצמת. המורות מתארות מגוון של אתגרים שעמדו בדרכן בלימודים לתואר בחינוך, בניסיונות להתקבל לעבודה, במאבק על שפת הסימנים, ביחסי העבודה ועוד. על אף הדיכוי שהן חוות, והניסיונות של החברה להתאים את החירשות למודל של אנשים שומעים (שמיעתנות, audism), מצליחות המורות ליישם מודל פוליטי וחברתי של קבוצת מיעוט, קבוצת החירשים. כדי להיטיב את מצבן של המורות החירשות בפרט, ושל אנשים עם מוגבלות בשוק העבודה בכלל, מוצעות דרכי פעולה לקדם את ההכרה בשפת הסימנים הטבעית; לאכוף את החקיקה למען ייצוג הולם בתעסוקה; להגביר את ההנגשה והשימוש באמצעים טכנולוגיים; להיאבק על תנאי העסקה טובים יותר; לדרוש מהמדינה לקבל אחריות לרווחת הנשים בעולם העבודה; לעבור מ'תיקון הפרט' לתיקון הכלל.

#### פורסם

דלומי, א' (2021). כוח לכו"ח - מורות כבדות שמיעה וחירשות בישראל. מגדר, 8.





## זידאן, ראיד

### Attitudes of Teachers Towards Principal's Evaluations and Its Effects on their Teaching Performances

This research is pioneer research, which examined the attitudes and feelings of teachers to the evaluation process they go through by their principals, and the effect that the principals' evaluation of the teachers' work has on their function and performances on both the pedagogic and didactic levels. Two hundred and seventy-three Arab and Jewish teachers, who teach at different schools, have participated in the research. A structured questionnaire has been used in the current research. Based on the literature review, seven hypotheses that produced the following findings have been formulated the Jewish teachers express and report more positive standpoints toward the evaluation of the principals than Arab teachers. They also report that the principal conducts more evaluation processes than Arab teachers, moreover, they report that their managers make more use of the evaluation tools than Arab teachers. It was also found that the managers' evaluation of teachers by conducting and implementing evaluation processes, improves the function and performances of the teachers on both pedagogic and didactic levels, the effect on the function of the Jewish teachers is higher than the function of the Arab teachers. Positive standpoints of teachers toward their managers' evaluation of them affect the teacher's function and performances on both the pedagogic and didactic levels, regardless of nationality.

#### Published

Zedan, R. (2019). Attitudes of teachers towards principal's evaluations and its effects on their teaching performances. *Journal of Education and Culture Studies*, 3(3), 206-226.

Doi <http://www.scholink.org/ojs/index.php/jecs/article/view/2115/2342>



## **Parental Involvement as a Predictor of Classroom Climate, Motivation for Learning, and Learning Achievements**

The present study examined the ability of parental involvement to predict classroom climate as perceived by pupils, as well as their motivation level and academic achievements. 726 pupils were randomly sampled. Three questionnaires were employed to measure the research variables. The findings indicate that the more learners include their parents in the school day and believe that they support them and believe in the importance of education, and the more the parents participate in school activities and maintain contact with teachers and become involved when a problem arises, their children's motivation and achievement level will be higher.

### **Published**

Zedan, R. (2021). Parental involvement as a predictor of classroom climate, motivation for learning, and learning achievements. *Journal of Classroom Interaction*, 56(1), 56-74.

## **Student Feedback as a Predictor of Learning Motivation, Academic Achievement and Classroom Climate**

This research was conducted to examine students' perceptions of their teachers' dominant characteristics - the feedback they provide, how feedback is related to students' achievements and learning motivation level, and how all of these relate to classroom climate. It was conducted with 2,599 elementary school, junior high and high school students. Data were collected by means of structured questionnaires. The results were significant learners attribute much importance to the feedback they give their teachers and they evaluate them positively regarding pedagogy and didactics. In addition, learners reported an average or slightly above average score for the general classroom climate. Girls reported more positive perceptions than boys at all age levels. Elementary school students reported more positive perceptions than junior high and high school students. Mathematics was more highly rated than other disciplines. Female teachers were preferred to male teachers and younger teachers to older teachers. Positive teacher evaluations resulted in a higher motivation level and improvement in learning achievements, as well as a positive perception of classroom climate, but teacher feedback and motivation were found to be the most important factors in predicting learning achievement.



## Published

Zedan, R. (2021). Student feedback as a predictor of learning motivation, academic achievement and classroom climate. *Education and Self Development, 16*(2), 27-46.

## طرائق بحث في العلوم التربوية والاجتماعية (שיטות מחקר במדעי חינוך וחברה)

يُدلُّ مصطلح «طرائق ومناهج البحث» على مجموعة من الاستراتيجيات والقواعد والخطوات والإجراءات التي يعتمدها العلم للتوصل إلى فهم مواضيع وقضايا علمية، اجتماعية، نفسية، سلوكية وغيرها. ومن الجدير بذكره أنَّ المصطلح وما يعنيه، يشير إلى اتساع الموضوع وكثرة تفرعاته، وبذلك فإنَّ الإحاطة به من كلِّ جوانبه تبدو صعبة ومركبة، لما يتطلبه الأمر من معرفة للقواعد، والخطوات، والإجراءات المعتمدة في العلم، وفي تفسير عالمنا وما يحيط بنا بشكل علمي.

من هنا جاء الكتاب متناولاً طرائق ومناهج البحث في العلوم التربوية والاجتماعية، والأساليب والاستراتيجيات المعتمدة في دراسة الظواهر والقضايا التربوية، والاجتماعية والإنسانية، ولكيفية إنتاج المعرفة في هذه المجالات، بحلته المُنَهجة ومضمونه السُّلس التطبيقي الغني بالأمثلة العملية لمواضيع بحثية في مجالات التربية العلمية، التربية اللغوية، التدريس والتعلم، ومجالات علمية واجتماعية مختلفة.

يحوي الكتاب تسعة فصول، تتلاءم ومركبات البحث العلمي، وهي كالآتي  
الفصل الأول العلم، البحث العلمي وطرائقه.

مقدمة وتعريفات البحث، البحث العلمي وأهدافه، طرق اكتساب المعرفة، أهمية التساؤلات، محفزات البحث، سببورة منهج البحث العلمي، طريقة التفكير العلمي وركائزها الأساسية ومميزاتها، العلم وأهدافه، قضية البحث وأمثلة لقضايا بحثية.

الفصل الثاني نماذج، أنواع ومناهج البحث

البحث الكمي وأنواعه - الاستطلاع، البحث الوصفي، البحث الترابطي/التلازمي، البحث السببي المقارن، البحث السببي شبه التجريبي، البحث التجريبي. البحث الكيفي وأنواعه - البحث السردية، البحث الإجرائي، بحث (تحليل) الحوار، بحث حالة خاصة، البحث التاريخي، البحث الأثنوجرافي، البحث الاستكشافي. ومنهج البحث المختلط (المدمج). زمانية البحث (البحث العرضي والبحث الطولي).

الفصل الثالث المتغير (مصطلح البحث)

المتغير الكمي والمتغير الكيفي (النوعي)، المتغير المستقل، التابع والمتدخل، سلام ومستويات القياس (الاسمي، التدريجي/الرتبي، الأبعاد/الفنوي، النسبي)، التعريف النظري والتعريف العملي (الإجرائي القياسي) لمتغيرات (مصطلحات) البحث.

الفصل الرابع أسئلة البحث وفرضياته

أنواع الأسئلة والفرضيات ومميزاتها، مصادر اشتقاقها، وطريقة صياغتها.

الفصل الخامس أدوات البحث وطرق جمع المعلومات



الاستبانة، الاختبار، المقابلة، المشاهدة، الوثائق والسجلات، الصور والتسجيلات، الكتب والمناهج وغيرها.

#### الفصل السادس الصدق/المصادقية والثبات

الصدق الظاهري/المرئي، صدق المضمون، صدق المقياس، الصدق المتزامن/الموازي/ التلازمي، صدق التنبؤ، صدق البناء أو الصدق النظري.

الثبات الزمني، امتحان إعادة، الثبات بواسطة الصيغ/الصور المتكافئة أو المتوازية، ثبات اختبار منصف، الثبات عن طريق موافقة محكمين، ثبات الاتساق (التناسق/التماسك) الداخلي،

#### الفصل السابع مجموعة/جمهور/مجتمع البحث، العينة وأنواعها وطرق اختيارها

عينة منهجية، عينة طبقات، عينة طبقات نسبية و غير نسبية، عينة عناقيد

عينة كرة الثلج، عينة متوفرة/مريحة، عينة غطاء، عينة موجهة

#### الفصل الثامن إعداد وكتابة مقترح (خطة) بحث

مقدمة، أهداف البحث، أهميته وفائدته، الخلفية النظرية - المسح الأدبي (علمي)، أسئلة البحث/ فرضيات البحث، طريقة البحث، جمهور (مجموعة) البحث، العينة/المشركون، طريقة اختيار العينة/المشركون، طريقة جمع البيانات (المعلومات) - أداة البحث، مبنى البحث، مجرى (سيرورة) البحث، طريقة تحليل البيانات (المعلومات)، محدودية البحث، جدول زمني، قائمة مصادر، ملاحق. تنفيذ البحث وإتمامه وكتابة نتائجه.

#### الفصل الأخير أمثلة لقضايا بحث

وبهذا فالكتاب عبارة عن مرشد وموجه لإعداد وتحضير وإجراء بحث علمي أكاديمي.

### نشر

زيدان، راند (2018). *طرائق بحث في العلوم التربوية والاجتماعية*، معهد موفيت.



## ח'טיב אבו-ליל, עולא

### Writing Between Languages - the Case of Arabizi

The purpose of this paper was to explore the properties of Arabizi as a system with a 'bottom-up' orthography that emerged in the specific context of Computer-Mediated Communication (CMC). The study focuses on the dialects spoken in the city of Nazareth and the villages surrounding it ( $N=75$ ). We examined the consistency of choice of Latin letters and Arabic numerals for Spoken Arabic (SA) phonemes from two complimentary perspectives subjective reports and the corpus-based analysis of a unique writing sample in Arabizi, elicited texts. Our results show a consensus on conventions in the transcription process, with some expected variation reflecting differences between regional dialects. This indicated a high degree of normativity or standardization in Arabizi orthography.

#### Published

Abu-Liel, A. K., Eviatar, Z., & Nir, B. (2019). Writing between languages - the case of Arabizi. *Writing Systems Research*, 11(2), 226-238.

### Arabic Teenagers' Attitudes to Electronic Writing in Arabizi

The globalization of English-based technology has caused the present-day Arab generation to rely on the use of the Latin script as the main writing system when communicating through the electronic medium in Spoken Arabic (SA). This has raised fears for the preservation of Modern Standard Arabic (MSA), the traditional orthography of Arabic. The study presents the attitudes of Arab adolescents in northern Israel towards the use of Arabizi (Latinized Arabic) in Computer-Mediated Communication (CMC), and towards MSA. The data were collected via a questionnaire completed by 8th grade students. The questions were divided into three different themes (1) Demographic data, (2) The degree of control of communication with Arabizi in CMC, and (3) Subjects' attitude towards Arabizi and MSA. The results show that although the students all use Arabizi and report that it is easier and more accessible to them, they consider MSA important and valuable, as it is related to their identity as Arabs.

#### Published

Khatteb Abu-Liel, A., Eviatar, Z., & Nir, B. (2020). Arabic teenagers' attitudes to electronic writing in Arabizi. *Journal of Cultural Cognitive Science*, 5 (2) 1-18.



## ממן, יוסף

### The Social Adjustment of Girls Circassian Students in State Elementary Schools

The Circassians are Sunni Muslims, originated in the Caucasus, a part of the former Soviet Union. During the rule of the Ottoman Sultan Abd al-Hamid II in the 1860s, many Circassians joined the Ottoman Army; some of them were settled in Israel and worked as farmers or as the maintainers of the Hejaz railway's route from attacks of Bedouin tribes (Shabsu, 1993). Since 1948, Circassian men had begun serving in the Israel Defense Forces on the order of their leaders. The Circassians live in two villages in the Galilee area, in the Village of Kama and in Rihania. These two villages have elementary schools, in which, most of the teachers are Circassians. They belong to the Druze Education Department that is separated from the regular Israeli educational system. At the end of the elementary school phase, the Circassian pupils go to Jewish schools. This article emphasizes on the difficulties of the Circassian students, who are forced to leave their local school in the village to a Jewish one, to be adjusted to new society and culture, while preserving their own culture and origin. The emphasis would be on the viewpoint of the Circassian students, the extent of adjustment and the option to develop a "built-in model" that would facilitate the absorption of these students (of different origins and cultures) at school. Furthermore, the article emphasizes on the importance of school's staff exposure to students' standings, in a manner that would lead towards sensitivity and empathy to these special ethnic groups of students in school.

#### Published

Maman, Y., Falah, J., & Napso, E. (2018). The social adjustment of girls Circassian students in state elementary schools. *Open Journal of Social Sciences*, 6, 230-245.

DOI.org/10.4236/jss.2018.61017



## **"Pioneers" - The Druze Women School Principals as Role Models and Generators of Social Change**

The purpose of this preliminary study is to examine the attitudes of Druze women-school principals in relation to their role and its social significance. The research is qualitative, a "case study" of the phenomenon (Behrendt, 2017). Thus, in the "Holistic" research approach (Abuhav, 2013), the researcher is interested in revealing, learning and understanding the internal world of "subjects" from their point of view. By this approach, the origin of behavior is affected by definitions, beliefs, values and ideologies of the "subjects" (Pelto & Pelto, 1978). The main field work is based on in-depth ethnographic structured interviews as a primary source for information, enabling the interviewee to tell her story freely and still being focused on the research questions. The interviews include 5 Druze women school principals to describe their own personal experiences (Spradley, 1979).

### **Published**

Faraj-Falah, J., & Maman, Y. (2019). "Pioneers" - the Druze women school principals as role models and generators of social change. *Creative Education*, 10, 1573-1588.

DOI.org/10.4236/ce.2019.107114

## **Students' Violence against Teachers in the Arab Sector in Israel - a Case Study**

The study deals qualitatively with one of the most concerning issues in contemporary education-the violence of students against teachers, a growing phenomenon that has not yet been thoroughly studied. It considers the phenomenon in question with relation to the diminishing status of the teacher's authority, as part of the transformation in adult authority. The theoretical framework presents information on students' violence against teachers at schools, while criticizing the incompetent coping with the phenomenon. In the methodological section, we present the interviews section and the list of questions we asked interviewees, such as what types of violence are common in the school? What are the characteristics of the violent student? The findings describe the school where the research was conducted, and analyze the teachers' responses, while at the discussion summarizing the prominent points addressed by the interviews, to establish an applied model for dealing with the phenomenon at schools.



### Published

Maman, Y., Yaffe, Y., & Falah, J. F. (2019). Students' violence against teachers in the Arab sector in Israel - a case study. *Sociology Mind, 9*, 207-221.

DOI.org/10.4236/sm.2019.93014

### **The Interview as a Reflective Tool in Preschool Female Teachers' Work with Children from Different Cultures Significance of Communication and Acquiring Hebrew in Preschool**

In this article, the theoretical background was chosen to focus on three directions the first, reflective thinking as a professional need, as the focus of this research is the reflection the staff performs during the in-depth interview while referring to the immigrant child's difficulties and coping with the new environment, and the coping of the staff working with the children and their families. The second, broad reference to the significance of communication and acquiring the Hebrew language in preschool is during the encounter with a new, foreign environment. We will also address the significance of developing social efficacy skills, which immigrant children need in order to function in preschool and develop as a mature person in the new country.

### Published

Mamman, Y., Falah, J. F., & Shlush-Levy, R. (2019). The interview as a reflective tool in preschool female teachers' work with children from different cultures significance of communication and acquiring Hebrew in preschool. *Creative Education, 10*, 700-713.

DOI.org/10.4236/ce.2019.104052



## נג'אר, זוהיירה

### **The Challenge of Diversity in Teacher Education Institutions in Israel: Students' Sense of Relatedness and Perceptions Regarding Being a Minority or Majority**

In Israel, students from various minority groups study together in teacher education institutions. The study examines how students from different minority groups perceive the social-cultural relationships with other groups, whether they feel relatedness, and what characterizes their perceptions regarding being a minority or majority within and outside the college. The research paradigm is qualitative and the genre is phenomenological. The participants are 50 students from various minority groups from 7 teacher education colleges. The results show that most participants report good relationships with students and lecturers from other ethnic groups, which leads to a deep sense of relatedness in the college. Among Ethiopian and Arab students, social connections in the college form mostly with students from the same ethnic group. Among Arab students, the sense of relatedness draws from interactions with friends from the same culture and from studying in Arabic. Our findings indicate distinct views among Arabs and Jews regarding being a minority or majority. The Jewish students defined the terms minority and majority mostly in quantitative terms, while Arab students referred to their social meaning, considering themselves as an underprivileged minority outside the college but as a majority in the college. In general, the results show that colleges facilitate caring conditions, detached from the reality outside the college. The findings have implications on the role of teacher education colleges in promoting equal opportunities and a sense of relatedness among their students, both within the college and in the general society.

#### **Published**

Kaplan, H., Najjar, Z., Kalnisky, E., & Kynan, A. (2020). The challenge of diversity in teacher education institutions in Israel: students' sense of relatedness and perceptions regarding being a minority or majority. *Journal of Diversity in Higher Education*. Advance online publication.

DOI <http://dx.doi.org/10.1037/dhe0000288>



## סלמאן, אסמאעיל

### Teaching Quality Evaluation Online Vs. Manually - Facts and Myths

The study aimed to examine whether there is a difference between manual feedback and online feedback with regard to feedback quality, respondents' percentage, reliability and the number of verbal comments written by students.

The quality of teaching is an important component of academic work. There are various methods for testing the quality of teaching; one of these methods is through students' feedback.

The study used a quantitative approach, including the quantification of qualitative verbal data collected through an open question in the questionnaire. A sample of 180 courses was randomly chosen, 90 courses were evaluated manually and 90 were evaluated online. The number of students ranges from 7 to 60 students per course. In total 4678 students participated in the study.

No significant differences were found between manual feedback and online feedback in the students' evaluation of the lecturer/course. The percentage of respondents was significantly higher in the manual feedback than in the online feedback. The number of qualitative comments was significantly greater in the online feedback than in the manual feedback.

The findings refute the claims with regard to the unreliability of an online teaching evaluation. These findings reflect the advantages of using online feedback, such as cost savings, granting more time to students in order to provide feedback, and reducing disturbance during lectures.

It would be of great importance to explore if any differences would be found in evaluating students' feedback according to their learning disciplines.

#### Published

Salman, E. (2017). Teaching quality evaluation online vs. manually - facts and myths. *Journal of Information Technology Education Innovations in Practice*, 16(1), 277-290. Informing Science Institute. Retrieved November 20, 2018 from DOI <https://www.learntechlib.org/p/181990/>.

IDO <https://doi.org/10.28945/3904>



## Digital Textbooks in the Classroom - Challenges and Opportunities

The innovative pedagogy of digital textbooks offers teachers who have used the printed textbooks a new challenge by a facing of using ways of interacting with massively shared, adaptive and dynamic books. Teachers are the key players in the successful implementation of digital textbooks to foster a sensible, balanced solution in the convincing and ambient classroom environment. ICT skills is an essential and central layer of using digital textbooks in learning, teaching, and assessment process, which greatly affects the success of that process (Salman & Fattum, 2013). Despite the technological changes in society and in education, in scenarios of significant changes, we can claim with certainty that some educational resources, although undergoing a profound revolution, have survived, in fact, this is the case of the printed textbooks. Understanding how students learn and how teachers teach, helps and shapes the structures and essence of contemporary textbooks. Intending to stay away from the "here and now" trend, which accompanies many government programs to "force" systemic changes. On top of that and because of the suspicion that teachers' answers will be influenced by trend's inertia of the ICT program and the general sense of everyone in this successful project, we decided to conduct The study far away about 3-4 years from this supposed influencing point on teachers' responses and reports.

### Published

Salman, E., Sharif-Rasslan, A., Fattum, A., & Awad, N. (2019). Digital textbooks in the classroom - challenges and opportunities. In A. D. Navide, S. Koch, & W. Stankowski (Eds.), *Theory and Practice in Education. Science, Experience and Knowledge*. (pp. 340-361). Düsseldorf: Lambert Academic Publishing.



## The Impact of Preservice and New Teachers' Involvement in Simulation Workshop and their Perceptions about the Concept of Conflict in Education

In the modern world, simulation has become a new phenomenon in education, which conveys new and innovative ideas of curriculum, instruction, and classroom management. It makes certain of Aristotle's words when he said that "The things we have to learn before we do them, we must learn by doing them". One might think that simulation in education is one of these technologies. The study examined preservice and new teachers' perceptions about the concept of conflict and educational conflict management in a simulation workshop conducted at the Academic Arab College's Simulation Center in Haifa, Israel. Simulation provides an alternative real-world experience. As part of our work at the Educational Simulation Center in the Arab Academic College in Haifa, Israel, we examined the performance and contribution of educators who visit the center and participate in educational conflict management simulation workshops.

A mixed methods study was conducted. A total of 237 participants of preservice teachers from diverse professions were divided into 15 groups to examine the research question How does the experience of participating in a simulation workshop affect preservice teachers' perception about the concept of conflict? The findings indicate that there is a high degree of satisfaction (more than 90%) among preservice teachers in participating in the workshop. It also indicates a positive and significant change in participants' perceptions of the concept of conflict and the management of conflict situations.

In light of the study findings, it is recommended that new teachers be exposed to simulation workshops with a variety of scenarios dealing with different conflict situations. This exposure could contribute to their professional development and conduct in a more efficient and convenient manner in schools.

### Published

Salman, E., & Fattum, A. (2019). The impact of preservice and new teachers' involvement in simulation workshop and their perceptions about the concept of conflict in education. *Interdisciplinary Journal of e-Skills and Lifelong Learning*, 14, 105-120.

DOI <https://doi.org/10.28945/4247>.



## The Effectiveness of Using Collaborative Distant Online Assignments to Improve Social Connections and Motivation of Preservice Teachers During COVID19 and Beyond

The study aims to review and analyze the issue of Online distant collaborative assignments and the extent of its impact on pre-service teachers' motivation and to strengthen the relationships and social interaction between them during the performance of the task. A total of 158 students participated in this study, from different educational academic colleges and from different departments such as Mathematics and sciences.

The study examined the level of academic motivation and the effectiveness of social relations and communication between participants through personal reports from students and their answers to open-ended questions sent to them, in addition to a questionnaire prepared by the researchers. The validity and reliability of the questionnaire were assessed by academic experts in the field. The role and presence of the lecturer in running an online collaborative assignment is perceived as very important by the students in relation to pedagogical, social, organizational and technological aspects.

The findings highlight the importance of running an online collaborative assignment, and the importance of requirements a clarity and division of roles among learners both in the task execution phase and in the plenary presentation stage, to lead learners towards a successful completion of said task. These results highlight the effectiveness of performing collaborative distant tasks, improving social relationships and learning motivation among participants, which are of paramount importance during the period of social distance in the shadow of the COVID-19 pandemic.

### Published

Salman, E., Sharif-Rasslan, A., Awad, N., & Fattum, A. (2020). The effectiveness of using collaborative distant online assignments to improve social connections and motivation of preservice teachers during COVID19 and beyond. In K. Bory, D. Nevide (Eds.), *Modern Critical Trends in Education*. (pp.77-100). Düsseldorf: Lambert Academic Publishing. (ISBN 978-620-3-19548-4).



## עבד אלגני, יוסף

### Arab Teachers' Attitudes towards the Issue of Violence at Schools in Israel

The study examines the teachers' attitudes and feelings concerning the issue of violence in Arab schools in Israel, the teachers' reactions towards that issue and ways of expressing them. The choice to focus on teachers' attitudes and feelings towards violent behavior patterns, which is of paramount importance, must be taken into account when assessing the issue of school violence and ways of dealing with that. The researchers adopted the qualitative approach. The findings of the interviews are divided into five main categories lack of learning, alienation and low emotional appreciation, lack of strategies and methods of intervention of the educational staff, which receive inappropriate attention at school, as well as personal and family factors, which lead toward violence. The importance of the study stems from the increase in the violence rate in the Arab sector in Israel.

#### Published

Abd Algani, Y., Eshan, J., Ishan-younis, N., & Haj, A. (2020). Arab teachers' attitudes towards the issue of violence at schools in Israel. *Academy Journal of Educational Sciences*, 4(1), 31-43.

DOI 10.31805/acjes.681402.



## עסאקלה, עיסאם

### Online Education - A Change or an Alternative?

Online education connects a teacher/lecturer and a student/pupil or who is not in the same physical location and not necessarily even in the same time zone. This system can operate through almost any electronic device connected to the internet. Students engaged in distance learning in real time, with teachers giving live streaming classes via the internet, are performing "synchronous learning" . "Asynchronous learning" offers prerecorded classes that are always available to students. Students access these recordings when convenient for them and study and practice at their own pace. Online education has advantages, e.g., increased access to knowledge and learning and reduced teaching costs, takes less time and enables learning at one own speed, but it also has disadvantages e.g., decreasing the "market value" of an academic degree, weakening the learning quality, limiting dialogue with lecturers/teachers, and hurting academic research. Its success depends on the optimal combination of technology and pedagogy-two aspects that demand training. Regarding technology, practitioners (teachers/lecturers) must have a strong grasp of the system underlying the online courses; and regarding pedagogy, they must understand approaches for integrating technology and pedagogy, to advance innovative teaching paradigms, and promote partnership and peer learning and workshop and modular learning. The effectiveness of online education can be assessed at a number of levels: the reactions of learners when asked about their satisfaction with the learning, knowledge or ability acquisition, improvement in implementation/application, development of life skills, the degree of economic worthwhileness, the relevance of the content, etc.

#### Published

Asaqli, E. (2020). Online education - a change or an alternative? *Creative Education, 11*, 2384-2403.

DOI 10.4236/ce.2020.1111175



## עשת, יובב

### **Predictors of Academic Dishonesty among Undergraduate Students in Online and Face-To-Face Courses**

Unethical behaviors within the academic environment, academic dishonesty (AD), is a well-researched phenomenon. Various factors explain this phenomenon. The study investigates and presents a new structural model for determinants of AD, linking types of motivation, students' attitudes, personality traits, and cultural backgrounds (presented by country according to Hofstede's cultural dimensions theory) as predictors of AD in the context of traditional and distance-learning courses in higher education. The study was conducted using a survey method of 2475 students in six different academic institutes. Using structural equation modeling (SAM) the results indicate that, contrary to the traditional views and the research literature, the surveyed students tend to engage less in AD in online courses than in face-to-face courses. Accordingly, this research has substantial, practical implications for educators, institution and researchers dealing with course design development and institutional policy concerning pedagogical uses of digital technology.

#### **Published**

Peled, Y., Eshet, Y., Barczyk, C., & Grinautski, K. (2019). Predictors of academic dishonesty among undergraduate students in online and face-to-face courses. *Computers & Education, 131*, 49-59.

### **No Anxious Student is Left Behind: Statistics Anxiety, Personality Traits, and Academic Dishonesty - lessons from COVID-19**

Abstract: Scholarly studies have revealed that exposure to statistics courses affect students' anxiety levels and that this has been associated with unethical misconduct. Thus, the present research's main objective is to comprehend the mediating role Statistics Anxiety plays on the relationship comprising students' personality traits and academic dishonesty as manifesting before and during the COVID-19 pandemic. Its aim is to understand this phenomenon and provide theoretical tools for fostering sustainably personalized distance learning and instruction. Data were collected from students studying for a bachelor's degree in the social sciences at three different Israeli colleges. The sample comprises 316 participants and data were analyzed using Structural

Equation Modelling (SEM). The results show a significant mediation manifested by an indirect effect between personality traits and academic dishonesty via statistics anxiety only in emergency remote teaching, although no parallel significant mediation was observed in the face-to-face course. These results could be explained by differences in delivery methods. Thus, we recommend that in the emergency remote teaching environment instructors' presence include: (1) supportive, emphatic interaction to reduce virtual distance and (2) Social Emotional Learning (SEL) strategies, which foster students' learning challenges and prevent anxiety and academic dishonesty.

### **Published**

Steinberger, P., Eshet, Y., & Grinautski, K. (2021). No anxious student is left behind: statistics anxiety, personality traits, and academic dishonesty - lessons from COVID-19. *Sustainability*, 13(9), 4762.

## **Relationship between Statistics Anxiety and Academic Dishonesty - A Comparison between Learning Environments in Social Sciences**

The current research examines the impact of Statistics Anxiety on academic ethical behavior as manifesting in undergraduate social science students attending introductory statistics courses in different learning environments COVID-19-Emergency Remote Teaching (ERT), Planned Online Environment (POE), and Face-to-Face (F2F) courses. Data were collected from students in academic institutions studying for a bachelor's degree in the social sciences. Structural Equation Modeling (SEM) was used to examine the relationship between students' previous academic achievements and Academic Dishonesty mediated by Statistics Anxiety. The results of multi-group analysis show that path coefficients differ between the three learning environments (POE, F2F, and ERT). Specifically, the results support a model in which previous math and academic achievements are significantly related to Academic Dishonesty mediated by Statistics Anxiety in a POE context only. Accordingly, POE statistics learning is less effective than F2F instruction and practice. Our research shows that instructors' presence in the learning process reduces students' anxiety levels and unethical behavior.

Thus, we recommend that in POE, the instructor's presence includes supportive, emphatic, and interpersonal interaction to reduce virtual distance. We conclude that introductory courses in statistics need to empower students experiencing Statistics Anxiety for a better sustainable statistical literacy population.



### Published

Eshet, Y., Steinberger, P., & Grinautsky, K. (2021). Relationship between statistics anxiety and academic dishonesty - a comparison between learning environments in social sciences. *Sustainability*, 13(3), 1564.



## פטום, אמתיאז

### Digital Textbooks in the Classroom - Challenges and Opportunities

The innovative pedagogy of digital textbooks offers teachers who have used the printed textbooks a new challenge by a facing of using ways of interacting with massively shared, adaptive and dynamic books. Teachers are the key players in the successful implementation of digital textbooks to foster a sensible, balanced solution in the convincing and ambient classroom environment. ICT skills is an essential and central layer of using digital textbooks in learning, teaching, and assessment process, which greatly affects the success of that process (Salman & Fattum, 2013). Despite the technological changes in society and in education, in scenarios of significant changes, we can claim with certainty that some educational resources, although undergoing a profound revolution, have survived, in fact, this is the case of the printed textbooks. Understanding how students learn and how teachers teach, helps and shapes the structures and essence of contemporary textbooks. Intending to stay away from the "here and now" trend, which accompanies many government programs to "force" systemic changes. On top of that and because of the suspicion that teachers' answers will be influenced by trend's inertia of the ICT program and the general sense of everyone in this successful project, we decided to conduct the study far away about 3-4 years from this supposed influencing point on teachers' responses and reports.

#### Published

Salman, E., Sharif-Rasslan, A., Fattum, A., & Awad, N. (2019). Digital textbooks in the classroom - challenges and opportunities. In A. D. Navide, S. Koch, & W. Stankowski (Eds.). *Theory and practice in education. Science, experience and knowledge*. (pp. 340-361). Düsseldorf: Lambert Academic Publishing.



## The Impact of Preservice and New Teachers' Involvement in Simulation Workshop and Their Perceptions about the Concept of Conflict in Education

In the modern world, simulation has become a new phenomenon in education, which conveys new and innovative ideas of curriculum, instruction, and classroom management. It makes certain of Aristotle's words when he said that "The things we have to learn before we do them, we must learn by doing them". One might think that simulation in education is one of these technologies. The study examined preservice and new teachers' perceptions about the concept of conflict and educational conflict management in a simulation workshop conducted at the Academic Arab College's Simulation Center in Haifa, Israel. Simulation provides an alternative real-world experience. As part of our work at the Educational Simulation Center in the Arab Academic College in Haifa, Israel, we examined the performance and contribution of educators who visit the center and participate in educational conflict management simulation workshops.

A mixed methods study was conducted. A total of 237 participants of preservice teachers from diverse professions were divided into 15 groups to examine the research question How does the experience of participating in a simulation workshop affect preservice teachers' perception about the concept of conflict? The findings indicate that there is a high degree of satisfaction (more than 90%) among preservice teachers in participating in the workshop. It also indicates a positive and significant change in participants' perceptions of the concept of conflict and the management of conflict situations.

In light of the study findings, it is recommended that new teachers be exposed to simulation workshops with a variety of scenarios dealing with different conflict situations. This exposure could contribute to their professional development and conduct in a more efficient and convenient manner in schools.

### Published

Salman, E., & Fattum, A. (2019). The impact of preservice and new teachers' involvement in simulation workshop and their perceptions about the concept of conflict in education. *Interdisciplinary Journal of e-Skills and Lifelong Learning*, 14, 105-120.

DOI <https://doi.org/10.28945/4247>



## The Level of ICT Literacy and Communication in Teaching-Learning and Assessment Processes among Mathematics Teachers

The purpose of the study was to examine the relationship between the level of information, communication and technology (ICT) literacy and communication in teaching-learning and assessment processes, and the attitudes of mathematics teachers toward the integration of ICT into teaching and the characteristics of mathematics teachers in the Arab sector in Israel. A structured mathematics-based questionnaire was distributed to 63 mathematics teachers.

The findings revealed that among mathematics teachers in the Arab sector 1) Gender, age and professional development significantly affected the level of use of ICT literacy in teaching-learning and assessment processes; moreover, novice teachers show higher readiness to integrate ICT in teaching mathematics; 2) The more positive the teachers' attitudes toward ICT integration in teaching, the more the use of ICT literacy in teaching-learning and assessment processes. In addition, Word processing predicts more than the Spreadsheets (Excel) the cognitive attitudes of the mathematics teachers; 3) The use of office and communication tools influence significantly the pedagogical use of an online environment 43.2% of the variance in using office skills and 52.3% of the variance in using internet skills are explained by attitudes towards ICT. Moreover, 84.3% of the variance in pedagogy in technological environment can be explained by using literacy in office and using internet literacy.

### Published

Sharif-Rasslan, A., Salman, E., & Fattum, A. (2019). The level of ICT literacy and communication in teaching-learning and assessment processes among mathematics teachers. In A.D. Navide, S. Koch, & W. Stankowski (Eds.), *Theory and Practice in Education. Science, Experience and Knowledge* (pp. 150-162). Düsseldorf: Lambert Academic Publishing.



## Effectiveness of ICT Integration among East Jerusalem Mathematics Middle School Teachers

The study aims to find out the extent to which the middle school mathematics' teachers in East Jerusalem schools are familiar with ICT, and to expose the scope of teaching in an online environment among these mathematic teachers, and their attitudes toward ICT use in teaching-learning and assessment process. Also, examine the impact of the research variables (gender, number of professional development courses, age, seniority, school type, computer availability and use, and daily time for computer use) toward ICT and the attitudes of mathematics' teachers in East Jerusalem schools.

A structured mathematics-based questionnaire was distributed to 102 middle school mathematic teachers (43% males), from East Jerusalem who participated in the current study, and were distributed 70%, 20% and 10% according to the school type Municipal (Israeli ministry of Education), Recognized- unofficial (Palestine Authority), and Private schools (Waqf-sponsored and church schools) respectively.

The findings revealed that there are no significant differences in the use of an online environment in the context of variables gender, school type, age, professional development courses in ICT. Statistically significant differences were found out between the mathematics teachers who have a bachelor's degree ( $2.22 \pm 0.48$ ), and the teachers who hold a high diploma ( $2.47 \pm 0.38$ ),  $p < 0.001$ . Moreover, statistical differences were found between teachers with low seniority (less than 11 years) ( $2.43 \pm 0.46$ ) and those with more seniority (more than 12 years) ( $2.25 \pm 0.463$ ),  $p < 0.001$ . A middle positive correlation was found between the attitudes of East Jerusalem schools' mathematic teachers towards using ICT in teaching-learning and assessment process in an online environment,  $r = 0.4$ ,  $p < 0.05$ .

### Published

Sharif-Rasslan, A., Salman, E., & Fattum, A. (2020). Effectiveness of ICT integration among East Jerusalem mathematics middle school teachers. In K. Bory, & D. Nevide (Eds.), *Modern Critical Trends in Education*. (pp.429-445). Düsseldorf: Lambert Academic Publishing. (ISBN 978-620-3-19548-4).



## The Effectiveness of Using Collaborative Distant Online Assignments to Improve Social Connections and Motivation of Preservice Teachers During COVID-19 and Beyond

The study aims to review and analyze the issue of Online distant collaborative assignments and the extent of its impact on pre-service teachers' motivation and to strengthen the relationships and social interaction between them during the performance of the task. A total of 158 students participated in this study, from different educational academic colleges and from different departments such as Mathematics and sciences.

The study examined the level of academic motivation and the effectiveness of social relations and communication between participants through personal reports from students and their answers to open-ended questions sent to them, in addition to a questionnaire prepared by the researchers. The validity and reliability of the questionnaire were assessed by academic experts in the field. The role and presence of the lecturer in running an online collaborative assignment is perceived as very important by the students in relation to pedagogical, social, organizational and technological aspects.

The findings highlight the importance of running an online collaborative assignment, and the importance of requirements a clarity and division of roles among learners both in the task execution phase and in the plenary presentation stage, to lead learners towards a successful completion of said task. These results highlight the effectiveness of performing collaborative distant tasks, improving social relationships and learning motivation among participants, which are of paramount importance during the period of social distance in the shadow of the COVID-19 pandemic.

### Published

Salman, E., Sharif-Rasslan, A., Awad, N., & Fattum, A. (2020). The effectiveness of using collaborative distant online assignments to improve social connections and motivation of preservice teachers during COVID-19 and beyond. In K. Bory, & D. Nevide (Eds.), *Modern Critical Trends in Education*. (pp.77-100). Düsseldorf: Lambert Academic Publishing. (ISBN 978-620-3-19548-4).





### **Assessing Instructors' Usage of Emojis in Distance Education During the COVID-19 Pandemic.**

The research assessed instructors' usage of emojis in distance education for high diploma students. A quantitative approach was employed comprising an e-survey consisting of 11-items, one closed-ended question, and two open-ended questions. The participants were a randomly selected sample of 343 high diploma students, 243 attending Al al-Bayt University (AABU) in Jordan and 100 students attending the Arab Academic College in Haifa (AAC). The results indicated that instructors' usage of emojis in distance education was moderate in both universities. All students strongly preferred instructors to use emojis to express what is on their minds as an alternative to facial expressions, and female instructors were more active in using emojis in virtual lectures. The emoji used most frequently by distance education instructors for the sample was the thumbs-up emoji. Based on the results, several recommendations are put forth that will be of value for researchers and workers in this field.

#### **Published**

Al Zou'bi, R., & Shamma F., (2021). Assessing instructors' usage of emojis in distance education during the COVID-19 pandemic. *Cypriot Journal of Educational Science*. 16(1), 201-219.

DOI <https://doi.org/10.18844/cjes.v16i1.5520>

### **Investigating Attitudes and Feelings Towards Volunteering - A Comparison of Arab and Non-Arab Students**

Volunteer activities play an important role in shaping students with various skills including self-identity and soft skills. The study aimed to explore the attitudes of outstanding students at the Arabic Academic College for Education in Israel and Students at Other Colleges in Israel towards voluntarism Methodology There were two questionnaires used in the study to collect data from 100 students selected through the purposive sampling technique. The first included 34 items, which collected data on the motives of volunteers and the second involved 9 items on their perception about volunteerism. The descriptive and inferential statistical methods were used to analyze the data, Findings The results indicate that Arabic College students perceive





## מדיניות, חברה ותרבות





## ח'יר-עבאס, רנדה

### **Running Between the Raindrops - Research, Culture, and my Life in Two Worlds.**

This chapter is embedded in a book that deals with Conducting Qualitative Research in Multicultural Settings. In it, I describe my own challenges in conducting research in multicultural settings. The chapter is infused with the idea of researcher reflectivity in order to see beyond my personal cultural worldview. Examples of research studies are provided, and the chapter concludes with questions and exercises for critical thought.

#### **Published**

Abbas, R. (2017). Running between the raindrops - Research, culture, and my life in two worlds. In D. Court, *Qualitative research and intercultural understanding Conducting qualitative research in multicultural settings* (93-97). London and New York Routledge.

### **What Do They Want From My Life? The Perception of parent-child Relationships among Druze adolescents in Israel**

This research examined Druze adolescents' perception of their relationships with parents in Israel. Israeli Druze is a small group accounting for only 2% of Israel's population. The Druze society is patriarchal; it demands absolute loyalty to the values of religion, family, and clan. Our goal was to explore the impact of increasing intercultural contact with modern Israeli society and the outside world on parent-child relationships in a traditional society that demands absolute loyalty and obedience to elders. The researchers used the phenomenological approach to understand parent-child relationships from the perspective of the adolescents themselves. Twelve Druze adolescents, six females and six males ranging in age from 16 to 18, completed a semi-structured interview in which they were asked to describe their relationships with parents. Participants were prompted to describe a recent conflict, if any, and the way in which the conflict was resolved, as well as a positive and a negative interaction with parents in the past year. Thematic analyses revealed intergenerational conflict related to perceived acculturation gaps. Other consistent themes portrayed supportive parent-child relationships and the adolescents' commitment to Druze heritage. Overall, findings suggest that





transition? Can their religion, and their very identity, survive the meeting with the modern, technological world? What resources do the young and the not-so-young bring to the task of preserving their community and helping it to flourish as the world changes around them?

The people in this text answer these questions through the telling of their stories, in which they express their values, opinions, beliefs and aspirations. The book draws out theoretical, practical, religious and sociological implications from this analysis, in order to shed light on the challenges faced by other traditional societies meeting modernity.

### Published

Khair Abbas, R., & Court, D. (2021). *The Israeli Druze Community in Transition: Between Tradition and Modernity*. Newcastle upon Tyne, UK Cambridge Scholars Publishing.

## **Why Don't Druze Families Homeschool?**

In recent decades there has been a considerable increase in the scope of homeschooling in many Western countries. However, it has not been consistent among all sectors of society, but rather concentrated in certain groups. It is a growing trend among Jewish Israeli society, but has not taken hold among Israeli Druze. This article examines the reasons that Druze society in Israel has not been part of the considerable increase in the practice of teaching children at home. Several theoretical perspectives for understanding these differences are suggested and investigated, focusing on the unique characteristics of Druze society in Israel and of the secret Druze religion, as well as on feminist perspectives and the developments in Druze women's status in recent decades.

### Published

Khair-Abbas, R., Gutermen, O., & Neumann, A. (2021). Why don't druze families homeschool? *Religion and Spirituality in Society*, 11(2), 191-200.

DOI <https://doi.org/10.18848/2154-8633/CGP/v11i02/191-200>.



## דהאמשה, עאמר

### **Symbolic Distinctions in Traditional Palestinian Toponymy - Class, Gender and Village Prestige in Palestinian Space in Israel**

The article analyzes the Arabic toponymy of Palestine, based on folktales and memories of Palestinians living in Israel. The discussion that follows is interpretive and has a twofold purpose. First, it aims to shed light on class and gender power relations and the issue of the village's image. Second, it examines the differential relation of Palestinian society to the landscape, as reflected in names of places versus natural features. Our starting point is the assumption that toponymy is the result of two parallel processes names articulate reality and identity but, at the same time, they are also profoundly influenced by the approach of the naming culture to its space.

My reading of Palestinian names in Israel is also a tactic that gives space to popular and peripheral knowledge categories. It also exposes the limitations of toponymical research in Israel that has tended to focus on the names recently imposed top-down by Zionism, to the neglect of Palestinian spatial constructions. Finally, it empowers the indigenous population by giving voice to their perception of space.

The names evoking this perception testify to the ideological and cultural uses of place names, as opposed to the names of natural features used by Palestinian society. The system for naming was a complex system of spatial distinctions and classifications that privileged hegemonic class and gender values by marginalizing feminine or lower-class images.

#### **Published**

Dahamshe, A. (2018). Symbolic distinctions in traditional Palestinian toponymy - class, gender and village prestige in Palestinian space in Israel. *Narrative Culture*, 5(1), 95-120.



## More than a Mere "Welcome" - The Linguistic Landscape of Welcome Signs in Palestinian Localities in Israel

The article offers a critical reading of the linguistic landscape of welcome signs in communities of the Palestinian-Arab minority in Israel, which has so far received little scholarly attention. It examines their visual aspects together with their written content. Together, these shed light on the links between the linguistic landscape and the sociopolitical status of the Palestinian minority, as well as on the perceptions of Palestinian citizens regarding their relationship with the Jewish majority. The study reveals that despite the official status of welcome signs, their linguistic landscape presents an entire array of approaches to coping with Israeli reality and its injustices. The discussion shows how the local Arab political leadership in Israel mobilizes the linguistic authority delegated by the Israeli sovereign as a platform for negotiation with the Other.

### Published

Dahamshe, A. (2019), More than a mere "welcome" - the linguistic landscape of welcome signs in Palestinian localities in Israel. *Journal of Levantine Studies*, 9.157-180 .



## הסדרה לשונית ישראלית ברחובות המיעוט הערבי - טורעאן זרעאן כמקרה מבחן

שלטי שמות הרחובות משמשים כלי פוליטי בעל עוצמה פוליטית בעיצוב הנוף הלשוני והם יכולים להעיד על מציאות חברתית-פוליטית ולשקף אותה. הדבר נכון במיוחד בחברות דו-לשוניות ורב-לשוניות, כמו ישראל, שבה הייצור של הנוף הלשוני ניצב בלבה של מחלוקת היסטורית.

בין השנים 2008-2013 כיהן בטורעאן ראש מועצה יהודי ממונה לאחר פיזור המועצה הנבחרת. תחת כהונתו מונתה ועדת שמות, נקבעו שמות לרחובות והוצבו שלטי שמות ברחבי הישוב. מטרת מאמר זה היא לאפיין ולנתח את השמות ואת השילוט בטורעאן. המאמר בוחן את הרכב ועדת השמות המקומית ודיוניה, את תוכן השמות, והמאפיינים החזותיים של השלטים. כמו כן הוא סוקר תגובות של התושבים המקומיים לשילוט הרשמי. באמצעות אפיון הנוף הלשוני המשתקף משלטי השמות בטורעאן יחשוף המאמר כיצד הפוליטיקה הממסדית הישראלית פועלת להשפיע על עיצוב התודעה הילידית ועל עיצוב הזהות התרבותית במרחב הפיסי הערבי. באמצעות הייצור הלשוני המשתקף בשלטים שהציבה המועצה אצביע על המאמצים של הממסד לעצב זהות, אשר נעה בין מתן ביטוי למורשת הלשונית התרבותית הערבית הכללית, ובין היענות למדיניות המרחבית הישראלית, תוך הזרת הזיכרון הקולקטיבי של הפלסטינים.

### פורסם

דהאמשה, ע' (2019). הסדרה לשונית ישראלית ברחובות המיעוט הערבי - טורעאן זרעאן כמקרה מבחן. אל-חצאד, 9, 87-118.

## דלומי, אירית

### "ליזום חוק שחובה לקבל חירש" נשים חירשות וכבדות שמיעה - בעולם העבודה בישראל

במפגש עם עולם העבודה ובהשתלבות בו נתונות נשים חירשות וכבדות שמיעה בהצטלבות ייחודית של שלוש קטגוריות זהות מעמד (עולם העבודה) מגדר (נשים) ומוגבלות חושית (חירשות וכבדות שמיעה). דרך עדויותיהן של נשים אלה, מועסקות וגמלאיות בעלות השכלה אקדמית, שהשתתפו במחקר איכותני נרטיבי, מתבהר אופי מפגשן עם עולם העבודה, מהתבררות לעולם זה וההסללה שעברו בנעוריהן, דרך ניסיונות להתקבל לעבודה והתמודדות עם מיעוט האפשרויות הפתוחות לפנייהן, והתמודדות עם עמדות הסובבים, ועד השתלבות בשגרת העבודה. מפגש זה כרוך בכל שלביו בהתמודדות מתמשכת עם שינויים ועם החמרה במצב המוגבלות ובלבטים בנוגע להנכחת לקות השמיעה או להסתרתה.

במאמר זה ניתן לראות כיצד מתגבשות, בהשפעת השתלבותן בעולם העבודה, זהותן ותפיסתן של נשים אלה את עצמן. המניע שלהן הוא החתירה לשינוי חברתי ואישי. הן פועלות על פי עקרון הייצוג העצמי והקבוצתי, ומשנות את סביבתן, הן כיחידות והן כנציגות של קבוצת החירשים בפרט ואנשים עם מוגבלות בכלל. הנשים החירשות וכבדות השמיעה יוצרות מודעות פוליטית מתוך מאבקן האישי.

#### פורסם

דלומי, א' (2017). "ליזום חוק שחובה לקבל חירש" - נשים חירשות וכבדות שמיעה בעולם העבודה בישראל. *ביטחון סוציאלי*, 102, 359-400.





## **"To Believe in God and in Own Personal Competencies" - The Family Life of Arab Muslim Widowed Women in Israel**

The study is about five Muslim widowed women from the Arabic city of "Tabula" (a fictitious place for ethical reasons) from the north of Israel, out of a desire that they would expose their personal experiences (Spradley, 1979). It deals with women's personal status, the widows' difficulties, and the conflicts between the Arab Muslim traditional society and modernity. The Arab society is a traditional, collective, patriarchal and religious society. The women's status is considered inferior to that of the men's and their main role is conceived as raising children and taking care of the house. Following are the stories of Muslim women who became civilian widows by the ages 30 to 40. The study examines the way widows coped with their situation in a time in which the society underwent great changes, moving from a traditional society to a more modern one. By dealing with these situations 1) The personal changes; 2) The main difficulty of being lonely; 3) The return to religion; 4) Coping with the loss of the husband; 5) The women' expectations out of the Arab society.

### **Published**

Maman, Y., Falah, J., & Hijazi, I. (2019) "To believe in God and in own personal competencies" the family life of Arab Muslim widowed women in Israel. *Open Journal of Social Sciences*, 7, 37-48.

Doi.org/10.4236/jss.2019.78003



## נג'אר, זוהירה

### המגוון האנושי במכללות לחינוך - תקווה או שחזור של המציאות?

מחקר זה עוסק במגוון האנושי בהרכבן של המכללות לחינוך היהודיות והערביות, במטרה לבחון, תוך כדי בדיקת תפיסותיהם של בני קבוצות מהפריפריה החברתית שבחרו ללמוד בהן, האם הגישה ההומניסטית שלאורה נוסדו המכללות, באה לידי ביטוי בהתפתחות האישית והמקצועית של הסטודנטים, באינטראקציה חברתית שלהם, בהשתלבותם במכללה ובתחושות השייכות שלהם למכללה ולמדינה. ההנחה היא כי חוויותיהם הלימודיות של המורים לעתיד יועברו לתלמידים בבתי הספר שילמדו בהם, ובכך הם עשויים להשפיע על המפגש הרב-תרבותי בין הקבוצות השונות בחברה.

המחקר נערך בגישה איכותנית והנתונים נאספו באמצעות ראיונות עומק חצי מובנים עם 48 סטודנטים משבע מכללות לחינוך (חמש יהודיות ושתיים ערביות). הקבוצות שנחקרו ערבים ובדואים, ויהודים-צאצאים ממהגרים או מהגרים בעצמם מאתיופיה ומצפון אפריקה המתגוררים בישוים פריפריאליים ובעירות פיתוח.

נמצא כי סטודנטים מכל הקבוצות מהפריפריה החברתית במכללות להכשרת מורים, מפתחים תפיסות אישיות ובין אישיות, אשר עוזרות להם להתמודד עם קשיי ההסתגלות והלמידה. הם מצוידים במשאבים בין-אישיים הכוללים את המשפחה והחברים כמקורות עיקריים לתמיכה ועזרה, ומשאבים אישיים כתחושה של מסוגלות עצמית, בטחון בהצלחה בלימודים ובהשגת המטרות העתידיות שלהם. רוב הסטודנטים מבטאים תחושת שייכות עמוקה למכללה. במקביל, נמצאו הבדלים בין סטודנטים ערבים לסטודנטים יהודים בתחושות השייכות שלהם למדינה ובתפיסת מושגי רוב ומיעוט. בנוסף, נמצאו מקרים של תחושת אפליה וגזענות על רקע לאומי ותרבותי.

מהממצאים משתמע שהאתגר החינוכי שבהקמתן של המכללות לשילוב קבוצות אוכלוסייה מהפריפריה בהשכלה גבוהה, טופל רק באופן חלקי על-ידי המכללות לחינוך, בעזרת גישות של אכפתיות וחינוך הומניסטי. מעבר לכך, ובפרט בכל הנוגע לשייכות וליחסי רוב ומיעוט, המציאות החברתית הכללית של הפרדה משוחזרת גם במכללות בהן לומדים סטודנטים ממוגזרים שונים. לעומתן, במכללות ערביות שבהן כל הסטודנטים שייכים לאותו לאום ותרבות, סוגיות השייכות למדינה ויחסי רוב-מיעוט לא עולים לשיח.

### פוסט

נג'אר, ז', קליניצקי, א', קפלן, ח' וקינן, ע' (2020). המגוון האנושי במכללות לחינוך - תקווה או שחזור של המציאות? *עיונים בחינוך*, 20, 197-220.



## עסאקלה, עיסאם

### **Obligations versus Rights: the Views of Arab Teachers in Israel Regarding Serving in The Israel Defense Forces or Volunteering in the National-Civic Service**

The study showed six main findings. The first finding showed that the majority of interviewees see themselves as Israelis, yet in parallel view the Palestinians as their brothers. Second finding revealed that the majority of interviewees did not agree with compulsory military service but do not reject serving in the IDF or volunteering to do national service if one chooses to do so. Our third hypothesis was that not the draft itself would produce changes in the relationships between the societies, but that a change in government policy towards the Arab sector. Fourth finding showed that the Arab community believes that the rights are universal and not contingent on the fulfillment of obligations. The fifth hypothesis stressed that there is no agreement regarding the social implications that may follow the drafting of the young men. The final finding showed that Arab schools do not hold discussions about compulsory military service on their own initiative.

#### **Published**

Asaqli, E. (2017). Obligations versus rights: the views of Arab teachers in Israel regarding serving in the Israel Defense Forces or volunteering in the national-civic service. *Journal of Education & Social Policy*, 7(1), 112-125.

### **Al-Sayyid Min Ḥaql Al-Sabānikh - Personal Freedom Versus Mechanical System**

The study deals with the issue of conflict between the programmed mechanical system and the rebellious human being against this system as reflected in the science fiction novel *al-Sayyid min Ḥaql al-Sabānik* (The Mister from the Spinach Field) by the Egyptian writer Ṣabrī Mūsā. The novel describes a society divided into classes, committees, centers and bodies run by a general system, which establishes a fixed daily program for everyone from the moment each person rises until they go to bed. Thus, the mechanical robotic human being becomes the master of the universe, while the real human being turns into a mechanical slave that obeys and performs without thinking. The hero of the novel, Homo, tries to break this programmed track because it





## פסח, תום

### "קרבות לא קשים" - איך הגדירו חיילים ישראלים את גירוש הפלסטינים ב-1948

בשנת 1948 גורשו מרבית הפלסטינים מן השטח שהפך למדינת ישראל בשנת 1948. ההסבר הנפוץ ביותר של היסטוריונים לגירוש הוא השפעת האידיאולוגיה הציונית על ההנהגה או על כלל הציבור הישראלי, באופן שהכשיר את הגירוש. פרשנות זו איננה מסבירה מקרים רבים מן התקופה שבהם הגירוש הוגדר באופן דו-משמעי ומעורפל, באופן שבני התקופה עצמה הגדירו אותו כ"שקר". באמצעות יומנים ומקורות כתובים אחרים מן התקופה, וכן באמצעות דפוסים חוזרים על עצמם מראיונות עם 29 לוחמים מבוגרים שלא הכירו זה את זה, המאמר משחזר הגדרת מצב (במונחי של גופמן) של עימות צבאי שנלוותה לגירוש המאורגן של האזרחים. הגדרת מצב זו גישרה על מחלוקות פנימיות בקרב החברה הציונית של התקופה שהתעוררו סביב הגירוש. המאמר מסתיים בהשוואה לחברות מתיישבים אחרות בהן התרחשו גירושים דומים, ובאופן שבו גירושים אלו הוגדרו על ידי בני התקופה.

#### פורסם

פסח, ת' (2019). "קרבות לא קשים" - איך הגדירו חיילים ישראלים את גירוש הפלסטינים ב-1948. בתוך ד' הירש (עורכת), *מפגשים היסטוריה ואנתרופולוגיה של המרחב הישראלי-פלסטיני* (עמ' 147-175). מכון ון-ליר והקיבוץ המאוחד.





## שמא, פתחי

### **Outstanding Students Volunteering During COVID-19 - Comparative Research Among Several Israeli Colleges**

Voluntarily work is very significant. Due to the significance of such work, the researchers explored the attitudes of outstanding students at the Arab Academic College for Education in Israel and students at other colleges in Israel towards voluntarily work during the COVID-19 crisis. Students filled in two scales. The first scale included 34 items. It collected data on the motives of volunteering. The second scale involved 10 items. It collected data about the benefits of volunteering in the future. The researchers used quantitative research methods. Data were collected from 100 students. The researchers used descriptive and inferential statistical methods. The results indicate that there is a correlation between the feelings of outstanding students at the Arab college and other excellent students in other colleges; they feel that by volunteering they express their values and talents, and that they are granted independency in making decisions and salient reasons for volunteering creating a better society, meeting the expectations of the program coordinator, feeling good, volunteering in a field in which they will closely engage in the future and identifying the goals of the program and the project in which they are participating

#### **Published**

Shamma, F., & Kassem A. (2021) Outstanding students volunteering during COVID-19 - comparative research among several Israeli colleges. *Cypriot Journal of Educational Science*, 16(4), 1737-1749.

DOI <https://doi.org/10.18844/cjes.v16i4.6038>





## מדעים מדויקים והוראתם





## אבו מוך, ריאם

### **Making the Learning of Acid Base Concepts More Relevant - A Research Study**

The study examines how learning acid-base concepts can be made more relevant for students. It analyzes how the concepts learned in chemistry by tenth graders are aligned with their everyday lives. Two approaches to teaching are compared the *Low Relevance Approach (LRA)* and the *High Relevance Approach (HRA)*. The *HRA* approach emphasizes learning how chemistry materials are relevant to students' daily life. The subject taught was "acids and bases". Following the intervention program, a perception-type motivation and satisfaction questionnaire was administered to the students in order to determine the effect that the "relevant experiential" teaching style had on students' attitudes towards chemistry, regarding their motivation for and satisfaction when studying chemistry, and on their academic achievements in the chemistry. Based on the assessment of students' cognitive and scholastic performance, it is clear that relevance-oriented experiments in chemistry significantly contribute to these learning variables.

#### **Published**

Hugerat, M., Najami, N., Abu-Much, R., Khatib, W., & Hofstein, A. (2018). Making the learning of acid-base concepts more relevant - a research study. *Journal of Laboratory Chemical Education*, 6(2), 36-45.

<http://10.5923/j.ljce.20180602.04>

### **Simple Method for the Demonstration of Drug-Loaded Nano-Liposomes**

A pioneering way for performing drug-loaded liposome nano-structures is presented. Aqueous solutions of liposome structures were prepared by a simple way and used as a model for exploring cell membrane structure and drug carriers. Drug solutions of Acamol and Optalgin were prepared, colored by food dye and then penetrated into the hydrophilic interior part of the liposome structure. In a second step of the experiment, the size of drug-loaded liposome structures were minimized from micro-scale to nanometer scale (400 nm, 100 nm) using Mini-Extruder apparatus.



### Published

Abu-Much, R., Najami, N., Hugerat, S., & Hugerat, M. (2018). Simple method for the demonstration of drug-loaded nano-liposomes. *International Journal of Chemical Sciences*, 15(4), 1-9.

## **Heterojunction-Based Hybrid Silicon Nanowires Solar Cell**

It is known that defect-free, oxide-free, Si nanowires exhibit lower defect density emissions than unmodified Si NWs. This is successfully established by grafting organic molecules on the surface. In this research, we show that by using a two-step chlorination/alkylation process, we are able to graft organic molecules on Si NWs for solar cell applications. Afterward, we show the electronic properties of the molecular surface. Finally, we correlate these properties to the solar cell performance.

### Published

Much, R. A., Natarajan, P., Shalabny, A., Sadhujan, S., Harilal, S., & Bashouti, M. Y. (2019). Heterojunction-based hybrid silicon nanowires solar cell. In M. Nayeripour, M. Mansouri, & E. Waffenschmidt (Eds.), *Solar Cells* (pp. 1-20). IntechOpen. doi <https://doi.org/10.5772/intechopen.84794>

## **Nanotechnology among Teachers and Students in the Arab Sector in Israel - Awareness and Attitudes**

The study investigates awareness and attitudes towards nanotechnology among teachers and students from the Arab sector in Israel. The research was based on distributing a questionnaire and a semi-structured interview. The results revealed that both the teachers and students have a basic knowledge of nanotechnology. Moreover, different variables including gender, grade, years of experience, and level of education, have revealed no effect, considering the fact that nanotechnology is not introduced as a subject in teaching curriculum in schools.

### Published

Much, R. A., Basheer, A., Zahaika, S., & Hugerat, M. (2019). Nanotechnology among teachers and students in the Arab sector in Israel - awareness and attitudes. *Creative Education*, 10(6), 1140-1154.

<http://dx.doi.org/10.4236/ce.2019.106086>



## From Redox Reactions to Nanomaterials: Visual Lab Activity for Exploring the Stabilization and Aggregation of Silver Nanoparticles

The study proposes a lab experiment consisting of three consecutive steps designed to expose undergraduate students to the fundamental aspects of nanoscience. Two different procedures for the reduction of silver ions were provided the first resulted in a precipitate, and in the second reaction a colored suspension of silver nanoparticles was obtained. Next, the students explored the aggregation process of silver nanoparticles by converting one solution to the other, which produced interesting color changes. The present discussion centers on the role of this lab activity as a visual means to introduce students to basic concepts related to nanomaterials metal nanoparticles, colloidal suspension, colloid stability, surface plasmon resonance of metal nanoparticles, zeta potential, electric double layers, and the aggregation process. The experiments were carried out by a group of second-year college students majoring in chemistry.

### Published

Abu-Much, R. (2021). From redox reactions to nanomaterials: visual lab activity for exploring the stabilization and aggregation of silver nanoparticles. *Journal of Chemical Education*, 98(12), 4037-4045.

doi <https://doi.org/10.1021/acs.jchemed.1c00777>



## בשיר, אחמד

### **The Effectiveness of Demonstrations on Students' Achievements and their Learning the Oxidation-Reduction Topic**

In This study we explored whether the use of teachers' demonstrations significantly improves students' understanding of redox reactions compared with control group counterparts who were not exposed to the demonstrations. The sample consisted of 131 Israeli 8th graders in middle schools (junior high school). Students' attitudes and achievements as well as their understanding of redox and electrolysis were assessed by administering a questionnaire that investigated their attitudes (perceptions) towards a demonstration in chemistry. The findings showed that the experimental group's achievements and understanding of the subject were statistically significantly better than those of their control group counterparts.

#### **Published**

Basheer A., Kortam N., Hugerat M., & Hofstein A. (2017). The effectiveness of demonstrations on students' achievements and their learning the oxidation-reduction topic. *EURASIA Journal of Mathematics, Science and Technology Education*, 13(3), 555-570.

### **How Project-Based Learning Promotes 7th Grade Students' Motivation and Attitudes towards Studying Biology**

This study examines how Project-Based Learning (PBL) influences the attitudes and motivation of middle-school biology students in the Arab sector of Israel to learn biology. The research population consisted of 7th grade students (n=178) from six biology classes in northern Israel. The two-month study used a mixed methods research design: quantitative (questionnaires) as well as qualitative (a semi-structured interview with students). The two research hypotheses were as follows: (1) PBL increases student motivation; and (2) PBL improves student attitudes. The study's findings indicate that an intervention that combines the teaching of biology with PBL results in both increased motivation among students and more positive attitudes towards studying biology. Students reported greater pleasure, curiosity, interest, and cooperation when PBL was used. The findings suggest that introducing PBL can bring about improvements in both student motivation and their



attitudes. The conclusions derived from these findings can help in formulating recommendations for applying PBL in biology and perhaps in other subjects as well, especially in the Arab sector of Israel.

### **Published**

Kortam, N., Basheer, A., Hofestein, A., & Hugerat, M. (2018). How Project-Based Learning promotes 7th grade students' motivation and attitudes towards studying biology, *Action Research and Innovation in Science Education*, 1(2), 9-17.

## **Misconceptions among Middle School Students Regarding the Conservation of Mass During Combustion**

The study focuses on the misconceptions of eighth-grade students in the Arab sector compared to the Jewish sector regarding the conservation of mass during combustion in a closed system and in an open system before the subject is taught, and to what extent the misconceptions change after it is taught. Students (N=195) from six heterogeneous classes were asked to fill in a ten-question questionnaire twice once before the subject was taught and again afterwards. The findings indicated that students' understanding improved more with respect to closed systems compared with open systems; before the subject had been taught the situation was very similar for both cases. The students' explanations were based on visual arguments and showed that there was confusion concerning the effect of chemical, physical, and state of matter changes on the conservation of mass during combustion. Regarding the comparison between the conceptions of eighth-grade students in the Arab and Jewish (N=105) sectors, students in the Arab sector had better achievements in closed systems, whereas Jewish students gave more correct answers to questions in open systems. The study's findings can help middle-school students and their teachers understand that physical and chemical changes do not affect mass in a closed system, and that students should learn to distinguish between conservation of mass in open and in closed systems.

### **Published**

Basheer, A., Kortam, N., Zahran, N., Hofestein, A., & Hugerat, M. (2018). Misconceptions among middle school students regarding the conservation of mass during combustion. *EURASIA Journal of Mathematics, Science and Technology Education*, 14(7), 3109-3122.



## **Nanotechnology among Teachers and Students in the Arab Sector in Israel - Awareness and Attitudes**

The present study investigates awareness and attitudes towards nanotechnology among teachers and students from the Arab sector in Israel. The research was based on distributing a questionnaire and a semi-structured interview. The results revealed that both the teachers and students have a basic knowledge of nanotechnology. Moreover, different variables including gender, grade, years of experience, and level of education, have revealed no effect, considering the fact that nanotechnology is not introduced as a subject in teaching curriculum in schools.

### **Published**

Much, R. A., Basheer, A., Zahaika, S., & Hugerat, M. (2019). Nanotechnology among teachers and students in the Arab sector in Israel - awareness and attitudes. *Creative Education*, 10(6), 1140-1154.

<http://dx.doi.org/10.4236/ce2019.106086>.

## **The Educational Effectiveness of Didactical Games in Project-Based Science Learning among 5<sup>th</sup> Grade Students**

The purpose of the study was to examine how the use of didactic games in teaching science affects the learning environment, achievement, and motivation among primary school students. The research population consisted of 188 5<sup>th</sup> grade students from two primary schools. This group was divided into an experimental group and a control group. The research tools consisted of two questionnaires one to determine the motivation to study science, and the other to determine the learning environment. Moreover, a pre-test in science was administered before the intervention and a post-test was administered afterwards. In addition, 20 pupils were interviewed. It was found that the use of didactic games in teaching significantly increases student motivation to learn science and that it has a positive effect on all the components of the "learning environment", as perceived by the students. In classes in which didactic games were used, the classroom atmosphere improved more than in classes where such games were not used.

### **Published**

Hugerat, M., Kortam, N., Maroun, N. T., & Basheer, A. (2020). The educational effectiveness of didactical games in project-based science



learning among 5<sup>th</sup> grade students. *EURASIA Journal of Mathematics, Science and Technology Education*, 16(10), em1888.

### **The Historical Story behind the Discovery: How Does It Affect Students' Attitude towards the Scientific Endeavor?**

The study examined changes in students' attitudes towards the scientific endeavor by exploring the impact of introducing historical stories and rationales into the science curriculum. The stories referred to discoveries by four scientists Galvani (the discovery of the electrical current), Fleming (the discovery of penicillin), Archimedes (the discovery of the floating principle), and Kekulé (the discovery of the structure of the benzene ring). The participants comprised 542 Arab students from northern Israel between the ages of 12 and 16. Out of the 542 students, 270 studied a curriculum that included historical stories approach (the experimental group), and 272 studied a curriculum without historical stories approach (the control group). A questionnaire was used to examine the students' attitudes towards the scientific endeavor. The results provide evidence for the view that relating the story behind the discovery significantly improves students' attitudes towards science in comparison with those who study according to a traditional approach. The students noticed that certain circumstances must be present in order to enable a scientist to make his discovery. The main conclusion is that the scientific curriculum should include adequate scientific subject matter, integrating historical stories in order to encourage students to develop positive attitudes towards and perceptions of science.

#### **Published**

Kortam N., Basheer A., Drawshe H., Drawshe S., & Hugerat M. (2020). The historical story behind the discovery: how does it affect students' attitude towards the scientific endeavor? *Creative Education*, 11(8), 1243-1260.



## הבדלים בתפיסות (אמונות) הוראה ולמידה בקרב מורי מדעים, מורים-סטודנטים לתואר שני במכללה ופרחי הוראה - במערכת החינוך הערבית בישראל

המאמר מנסה לבחון את התפיסות הקיימות בקרב מורי מדעים ערבים בארץ, ולעמוד על הבדלים בתפיסת מטרות הלמידה ותפיסה אפיסטמולוגית. ההוראה והלמידה הן בעלות השפעה על החברה שאנו חיים בה. איכות ההוראה והלמידה תקבע אם יצליח בית הספר להכשיר את תלמידיו לחיים בעידן הפוסט מודרני או שמא ייכשל. מערכת החינוך הערבית הינה עדיין, על אף השינויים שחלו, בעלת אופי מסורתי, וההוראה בה בעיקרה פרונטאלית ממוקדת מורה, כאשר לתלמיד יש מעט מקום בשיעור. המחקר מנסה לעמוד על ההבדלים שהוזכרו בקרב 154 מורי מדעים, משלוש קבוצות שונות: מורים בפועל, מורים-סטודנטים לתואר שני ופרחי הוראה, ולבדוק את ההבדלים הללו גם מבחינת הקשר לגילם של המורים. הממצאים שהתקבלו איששו את השערות המחקר. בבחינת תפיסת מטרות הלמידה נמצא הבדל: המורים בפועל מפתחים תפיסה מודרנית כלפי מטרות הלמידה יותר מאשר פרחי ההוראה ויותר מאשר המורים-סטודנטים. כן נמצא, כי קיים הבדל בתפיסת מטרות הלמידה בין פרחי ההוראה לבין המורים-סטודנטים לתואר שני: האחרונים מפתחים תפיסה יותר מודרנית. גם בבחינת התפיסה האפיסטמולוגית נמצא הבדל בין המורים בפועל לבין פרחי ההוראה: המורים בפועל מפתחים תפיסה אפיסטמולוגית מסורתית יותר לעומת פרחי ההוראה. נמצא גם הבדל בתפיסה זו בין פרחי ההוראה לבין המורים-סטודנטים לתואר שני: האחרונים מפתחים תפיסה מסורתית יותר. בנוסף, נמצא ככל שגיל המורה עולה, התפיסה האפיסטמולוגית שלו היא מסורתית יותר ותפיסת מטרות הלמידה שלו היא מודרנית יותר.

### פורסם:

קורטאם, נ', בשיר, א', זועבי ר' וחוג'יראת מ' (2019). הבדלים בתפיסות (אמונות) הוראה ולמידה בקרב מורי מדעים, מורים-סטודנטים לתואר שני במכללה ופרחי הוראה - במערכת החינוך הערבית בישראל. *עיניים בחינוך*, 19, 687-712.

## ג'ובראן, פדיל

### High School Teachers' Perceptions Regarding Inquiry-Based Science Curriculum in the United States, Georgia, and Israel.

The study explores high school science teachers' perceptions and current practices of inquiry-based science curriculum and the challenges facing teachers in implementing such a curriculum in three different countries-the Georgia, Israel, and the United States-as a means of identifying instructional barriers to implementation that may be hampering widespread adoption. Science is a discipline in which curriculum designers draw topics from a similar database. Teachers' perception and practices could reflect global trends as well as the unique characteristics of each of the countries. Data for this qualitative study were collected from 15 high school science teachers in each of the three countries using semi-structured interviews. The findings indicate a gap between teachers' desire and capacity to effectively implement an inquiry-based science curriculum. Common barriers to implementation mentioned by teachers in the three countries included a lack of time, official exams, and class size. Other country-specific reasons included lack of materials in the Georgian language or English language barriers in highly diverse classrooms in the United States. In order to make changes in the curriculum and create more opportunities for implementing an inquiry-based science curriculum, all obstacles identified by teachers should be taken into consideration. Potential interventions could include professional development, mentoring, and developing assessment tools for inquiry-based implementation.

#### Published

Sheety, A., Kapanadze, M., & Joubran, F. (2018). High school teachers' perceptions regarding inquiry-based science curriculum in The United States, Georgia, and Israel. In *Intercultural Studies of Curriculum* (pp. 59-83). Palgrave Macmillan, Cham.

doi [https://doi.org/10.1007/978-3-319-60897-6\\_4](https://doi.org/10.1007/978-3-319-60897-6_4)



## זידאן, ראיד

### Mathematical Creativity among Excellent 8th Grade Pupils

Creativity is finding a new way within a given frame and it is the ability to connect between segments of information, materials and experience, which exists in their own right, or were previously connected with different patterns. The current research engaged in solving problems that can be resolved in various ways or that they have several solutions, by excelling students and this in order to measure the level of mathematical creativity related to solving mathematical problems, by measuring the three elements of mathematical creativity flexibility (multiple solutions), fluency (time needed to solve the problem), innovation (originality of ideas). It is important to emphasize that the way of solving tasks by using as many ways as possible, considered to be as one of the most efficient ways to the discovering and development of mathematical creativity. In the current research, 24 8<sup>th</sup> grade pupils from several schools have participated, every student received three diverse mathematical problems and was requested to suggest and raise as many solutions or ways to solve as possible for each problem without teacher intervention, while measuring the required time to solve every problem separately for every student by a stopwatch. Additionally, a semi-structured interview was held with each student separately regarding his or her approach to each problem, the interview focused on identifying the mathematical language, in the process of resolving and in the exposure of the pupil's mathematical thinking process until he or she reached the solution. The research findings indicate that there are differences between the pupils regarding flexibility, as multiple solutions were suggested by the pupils for each problem individually. Differences were also found in the level of innovation among the pupils, hence original solutions and new ideas to solve problems have been received. Moreover, a difference in fluency has been found so that pupils solved in a different time rates, this is .despite the fact that all pupils have a very high level of achievement

#### Published

Zedan, R. & Jarmas, B. (2017). Mathematical creativity among excellent 8th grade pupils. *European Journal of Education Studies*, 3(6), 374-395.



## זכנון, מארון

### Algorithms and Convergence Results of Projection Methods for Inconsistent Feasibility Problems: A Review

The convex feasibility problem (CFP) is to find a feasible point in the intersection of finitely many convex and closed sets. If the intersection is empty then the CFP is inconsistent and a feasible point does not exist. However, algorithmic research of inconsistent CFPs exists and is mainly focused on two directions. One is oriented toward defining other solution concepts that will apply, such as proximity function minimization wherein a proximity function measures in some way the total violation of all constraints. The second direction investigates the behavior of algorithms that are designed to solve a consistent CFP when applied to inconsistent problems. This direction is fueled by situations wherein one lacks a priori information about the consistency or inconsistency of the CFP or does not wish to invest computational resources to get hold of such knowledge prior to running his algorithm. In this paper we bring under one roof and telegraphically review some recent works on inconsistent CFPs.

#### Published

Censor, Y., & Zaknoon, M. 2018. Algorithms and convergence results of projection methods for inconsistent feasibility problems: A review. *Pure and Applied Functional Analysis* 3(4) 565-586.



## Data-Compatibility of Algorithms for Constrained Convex Optimization

The data-compatibility approach to constrained optimization, proposed here, strives to a point that is "close enough" to the solution set and whose target function value is "close enough" to the constrained minimum value. These notions can replace analysis of asymptotic convergence to a solution point of infinite sequences generated by specific algorithms. We consider a problem of minimizing a convex function over the intersection of the fixed-point sets of nonexpansive mappings and demonstrate the data-compatibility of the Hybrid Subgradient Method (HSM). A string-averaging HSM is obtained as a by-product and relevance to the minimization over disjoint hard and soft constraints sets is discussed.

### Published

Censor, Y., Zaknoon, M., & Zaslavski A. J. (2021). Data-compatibility of algorithms for constrained convex optimization. *Journal of Applied and Numerical Optimization*, 3(1) 21-41.



## חוג'יראת, מוחמד

### The Future of Science Laboratories

Laboratory activities have long had a distinctive and central role in science curriculum a means of making sense of the natural world and as making the learning of science more relevant and more motivating. Some science educators suggested that the science laboratory help the students to learn the scientific concepts with understanding and at the same time engage in the process of constructing knowledge by doing science. In other words, to integrate and combine in the same time both hands-on and minds-on activities. Over the past 60 years we have observed several changes and reforms regarding the goals of laboratory work. Most of these reforms focused on practical work that generally refer to experiences in school setting in which practical students in schools interact with equipment and materials in a room called laboratory. In the following chapter we suggest that practical work in science education should better be aligned to modern science and technology. Several ideas are suggested (mostly from chemistry teaching and learning) to illustrate these to include The use of solar energy, earth and space (to include experiments in spaceship), and Nano chemistry. In other words, we expand the laboratory from an activity that takes place in a room to the great nature. The question whether this will happen in 10 or 50 years remains to be seen. However, we as science educators need to hope and dream.

#### Published

Hugerat, M., & Hofstein, A. (2019). The future of science laboratories. In B. Akpan (Ed.), *Science Education Visions of the Future* (pp. 179-214). Rotterdam, The Netherlands: Sense Publishers.



## **Incorporating Sustainability into Chemistry Education by Teaching through Project-Based Learning**

Currently, human beings are interfering needlessly with the environment; this can have both direct and indirect impacts on our quality of life and well-being. As a result, this chapter goes to great lengths to explain the depth of human damage to the environment and how such damage can be reduced. Options for reducing environmental damage include promoting education for green behavior, such as recycling, decreasing consumption, and transitioning to renewable energy sources. Schools are ideal places to deal with environmental issues. Any changes and improvements to schools are highly visible and closely followed. In this chapter, three projects are presented "*Green Scientific Stories*," "*The Solar Village*," and "*Microscale Chemistry Techniques*" all of which were designed to incorporate sustainability into chemistry education via project-based learning. It is demonstrated how participation in these projects in school and at home has increased student awareness of sustainability and other environmental issues. Involvement in carrying out the projects has motivated students to advocate for changes to protect the environment and our planet in the future.

### **Published**

Hugerat, M. (2020), Incorporating sustainability into chemistry education by teaching through project-based learning. In O. S. Obare, C. Middlecamp, & K. E. Peterman (Eds.), *Chemistry Education for a Sustainable Society Volume 1 High School, Outreach, & Global Perspectives* (Chapter 7, pp. 79-96). American Chemical Society, USA. DOI 10.1021/bk-2020-1344.ch007

## **The Educational Effectiveness of Didactical Games in Project-Based Science Learning among 5<sup>th</sup> Grade Students**

The purpose of the study was to examine how the use of didactic games in teaching science affects the learning environment, achievement, and motivation among primary school students. The research population consisted of 188 5<sup>th</sup> grade students from two primary schools. This group was divided into an experimental group and a control group. The research tools consisted of two questionnaires one to determine the motivation to study science, and the other to determine the learning environment. Moreover, a pre-test in science was administered before the intervention and a post-test was administered



afterwards. In addition, 20 pupils were interviewed. It was found that the use of didactic games in teaching significantly increases student motivation to learn science and that it has a positive effect on all the components of the "learning environment", as perceived by the students. In classes in which didactic games were used, the classroom atmosphere improved more than in classes where such games were not used.

### Published

Hugerat, M., Kortam, N., Maroun, N. T., & Basheer, A. (2020). The educational effectiveness of didactical games in project-based science learning among 5<sup>th</sup> grade students. *EURASIA Journal of Mathematics, Science and Technology Education*, 16(10), em1888.

### **The Laboratory as a Vehicle for Enhancing Argumentation among Pre-Service Science Teachers**

A study was conducted on how scientific laboratory lessons contribute to building arguments, both cognitively and socially. The population consisted of 12 second-year pre-service teachers at a college of education specializing in the teaching of biology and chemistry in middle school. The study examines the nature of the argument's students raise when conducting a laboratory experiment and how conducting an experiment contributes to curricular science teaching in the laboratory. For this purpose, a number of methodologies were used observations, experiment reports, and statistical analysis. The findings showed that groups conducting an open-ended experiment made more claims in their discourse than did groups that conducted a confirmatory experiment and that the level of argumentation in the open-ended experiment group was higher than in the confirmatory experiment group. Interestingly, despite the significant difference in the level and quantity of arguments in the discourses in the two types of experiments, no significant difference was found regarding the level of argumentation in the two groups' experiment reports. However, students confirmed the great importance of scientific laboratory lessons to the development of argumentative thinking, meaningful learning, and the students' relationship with their classmates.

### Published

Najami, N., Hugerat, M., Kabya, F., & Hofstein, A. (2020). The laboratory as a vehicle for enhancing argumentation among pre-service science teachers. *Science and Education*, 29, 377-393.





## סח'ניני, סוהיר

### **Finding the Connections between a High-School Chemistry Curriculum and Nano Science and Technology**

The high-school chemistry curriculum is loaded with many important chemical concepts that are taught at the high-school level and it is therefore very difficult to add modern contents to the existing curriculum. However, many studies have underscored the importance of integrating modern chemistry contents such as nanotechnology into a high-school curriculum. When students are exposed to nanotechnology, they perceive chemistry as more relevant to their life, and more modern than the chemistry they usually study at school, and consequently, their continuous motivation to study chemistry and related subjects increases. In the current study we identified topics in the high-school chemistry curriculum in Israel into which the essential nano-scale science and technology (NST) concepts can be integrated. Insertion points for all 8 NST essential concepts were found. We discuss the importance of ways in which chemistry educators can implement the results for updating the chemistry curriculum, thus making it more modern and relevant to the actual chemistry research that is conducted.

#### **Published**

Blonder, R., & Sakhnini, S. (2017). Finding the connections between a high-school chemistry curriculum and nano-scale science and technology. *Chemistry Education Research and Practice*, 18(4), 903-922. doi <https://doi.org/10.1039/c7rp00059f>.



## Insertion Points of The Essential Nanoscale and Technology (Nst) Concepts in the Israeli Middle School Science and Technology Curriculum.

If we wish to integrate modern science such as nanotechnology into the school science curriculum, we need to find the natural insertion point of modern science with the science, technology, engineering and math curriculum. However, integrating nanoscale science and technology (NST) essential concepts into the middle school science curriculum is challenging. The current study was designed to identify the insertion points of the eight NST essential concepts in the middle school science and technology curriculum. Middle school science and technology teachers underwent a course that included all eight NST essential concepts, aiming to help them understand the NST essential concepts in depth. Then, they were asked to identify a natural insertion point in the existing science and technology curriculum for each of the NST essential concepts. To support research validation, two different groups of teachers participated in two sequential stages of the study (the identification stage and the validation stage). The teachers in the identification stage identified the insertion points of all eight NST essential concepts in the subjects of the science and technology curriculum, which reflects the relevance of the NST concepts from the teachers' perspective in terms of pedagogical level. The majority of the identified insertion points were validated in the second stage. Forty-two insertion points of the NST essential concepts were suggested to be integrated in middle school science and technology curriculum. All the insertion points that were suggested in the identification stage were confirmed in the validation stage. Another 11 new insertion points were added at the validation stage. The connections to the different scientific subjects in the curriculum are as follows 19 insertion points were suggested by the teachers in the chemistry part of the chemistry curriculum, 12 in the life science, four in the physics-energy, and seven in technology-systems and products. The results present the opportunity to expose middle school students to contemporary science using the existing science and technology curriculum. The study serves as an example of integrating NST concepts into a middle school science curriculum in Israel, but it can be applied in other science curricula worldwide, taking into consideration the topics included in each curriculum.

### Published

Sakhnini, S., & Blonder, R. (2018). Insertion points of the essential nanoscale science and technology (NST) concepts in the Israeli middle school science and technology curriculum. *Nanotechnology Reviews*, 7(5), 373-391. doi <https://doi.org/10.1515/ntrev-2018-0026>



## יישומים בתעשייה הכימית והביוטכנולוגית

הספר הינו ספר לימודי דיגיטלי, לתלמידי תיכון, הלומדים במגמת ביוטכנולוגיה. הספר חושף את התלמידים לתעשייה הכימית והביוטכנולוגית בישראל, ולהבדלים בין כימיה תעשייתית ותעשייה כימית. הספר כולל הסברים על ההתפתחות הכרונולוגית של התעשייה הכימית והביוטכנולוגית בארץ, על המפעלים הכימיים והביוטכנולוגיים הקיימים בה, על מגוון הכימיקלים והמוצרים העיקריים המיוצרים בתעשייה. הספר מתמקד במאפייני התעשייה הכימית והביוטכנולוגית בארץ (מקורות אנרגיה, חומרי גלם, לוגיסטיקה, השפעת האדם על הסביבה). בנוסף הספר דן בחשיבות המחקר ובתרומתו לתעשייה. מוצגים בו עקרונות כימו-פיזיקליים וביוטכנולוגיים של תהליכים תעשייתיים, תהליכים עיקריים של הפרדה וניקוי, מחקר ופיתוח ושלבי מחקר כימי, טוקסיקולוגיה, שיטות אנליטיות לאבחון איכותי וכמותי של תוצרי המחקר והתעשייה, מהמבחנה לתעשייה Scaling up מהמעבדה למפעל פיילוט לתעשייה, השוואה בין התעשייה הכימית לתעשייה הביוטכנולוגית. כל זאת בצירוף דוגמאות לתהליכים בתעשייה הכימית והביוטכנולוגית. בספר קיימות המלצות לסירים ומעבדות, כגון מעבדות חקר תומכות, סירים בתעשייה, ימי עיון במוסדות אקדמיה (שיטות אנליזה במוסדות אקדמיה / מכוני מחקר - מיקרוסקופיה, NMR, קריסטלוגרפיה, AA, GC+HPLC). בסוף הספר כלולה משימת כימו-אינפורמטיקה.

### פורסם

סחיני, ס' וסחיניני, א' (2019). *יישומים בתעשייה הכימית והביוטכנולוגית*. ירושלים: המנהל לתקשוב, טכנולוגיה ומערכות מידע. משרד החינוך, פורטל עובדי הוראה, מרחב פדגוגי (גרסה אלקטרונית).



## סייד אחמד, וורד

### **Dimethylated Sulfur Compounds in Symbiotic Protists - a Potentially Significant Source for Marine Dms(P) Plankton Symbiosis and Dms(P) Cycling**

Symbiosis with micro-algae (photosymbiosis) is a common feature among marine planktonic protists, but very little is known about the physiology and ecological significance of these associations. High concentrations of dimethylsulfoniopropionate (DMSP), a metabolite produced by marine microalgae, are commonly observed in coral-microalgae symbiosis, where DMS(P) is involved in multiple physiological functions. Knowledge on concentration and role of DMSP in analogous photosymbiosis in plankton is lacking. Here, we assess the total DMSP (DMSPt = DMSP + DMS) concentration and natural stable isotopes of sulfur across ecologically relevant symbiotic plankton groups, the Radiolaria and Foraminifera. We found that intracellular DMSPt concentrations in microalgal symbionts were among the highest recorded (range = 170-702 mmol L<sup>-1</sup>), while lower concentrations (range = 0.1-23 mmol L<sup>-1</sup>) were characteristic of the holobiont (i.e., host-microalgae). The contribution of symbiotic Radiolaria to the water column particulate DMSPt concentration ranged 0.1-8%. Sulfur isotopic composition (<sup>34</sup>S) of DMSPt in the Collodaria holobionts was significantly higher than their symbiotic microalgae isolated in culture. Despite their high intracellular DMSPt content, uptake in these holobionts throughout 3-d incubations was not detected. We observed a systematic <sup>34</sup>S depletion (~ 1.5‰) of DMS relative to DMSP in experimental incubations containing filtered seawater, which we hypothesize is related to the bacterial preference for the uptake of <sup>34</sup>S-depleted DMS. Overall, the results indicate that plankton symbiosis can, at times, represent a potentially important source of DMS(P). Specific differences in <sup>34</sup>S provided new insights into sulfur isotopic fractionation associated with DMS(P) biotransformation processes, with potential implications for current interpretations of isotopically tracked biogenic sources of marine aerosols.

#### **Published**

Carnat, G., Pillet, L., Biard, T., Said-Ahmad, W., Amrani, A., Simo, R., & Not, F., (2017). Dimethylated sulfur compounds in symbiotic protists - A potentially significant source for marine DMS(P) Plankton symbiosis and DMS(P) cycling. *Limnology and Oceanography*, 62, 1139-1154.



## Effects of thermal maturation and thermochemical sulfate reduction on compound-Specific Sulfur Isotopic Compositions of Organosulfur Compounds in Phosphoria Oils from the Bighorn Basin, USA

Compound-specific sulfur isotope analysis was applied to a suite of 18 crude oils generated from the Permian Phosphoria Formation in the Bighorn Basin, western USA. These oils were generated at various levels of thermal maturity and some experienced thermochemical sulfate reduction (TSR). This is the first study to examine the effects of thermal maturation on stable sulfur isotopic compositions of individual organosulfur compounds (OSCs) in crude oil. A general trend of  $^{34}\text{S}$  enrichment in all of the studied compounds with increasing thermal maturity was observed, with the  $\delta^{34}\text{S}$  values of alkylbenzothiophenes (BTs) tending to be enriched in  $^{34}\text{S}$  relative to those of the alkyl-dibenzothiophenes (DBTs) in lower-maturity oils. As thermal maturity increases,  $\delta^{34}\text{S}$  values of both BTs and DBTs become progressively heavier, but the difference in the average  $\delta^{34}\text{S}$  value of the BTs and DBTs ( $\Delta^{34}\text{S}$  BT-DBT) decreases. Differences in the isotopic response to thermal stress exhibited by these two compound classes are considered to be the result of relative differences in their thermal stabilities. TSR-altered Bighorn Basin oils have OSCs that are generally enriched in  $^{34}\text{S}$  relative to non-TSR-altered oils, with the BTs being enriched in  $^{34}\text{S}$  relative to the DBTs, similar to the findings of previous studies. However, several oils that were previously interpreted to have been exposed to minor TSR have  $\Delta^{34}\text{S}$  BT-DBT values that do not support this interpretation. The  $\delta^{34}\text{S}$  values of the BTs and DBTs in some of these oils suggest that they did not experience TSR, but were derived from a more thermally maturity source. The heaviest  $\delta^{34}\text{S}$  values observed in the OSCs are enriched in  $^{34}\text{S}$  by up to 10‰ relative to that of Permian anhydrite in the Bighorn Basin, suggesting that there may be an alternate or additional source of sulfate in some parts of the basin. These results indicate that the sulfur isotopic composition of OSCs in oil provides a sensitive indicator for the extent of TSR, which cannot be determined from other bulk geochemical parameters. Moreover, when combined with additional geochemical and geologic evidence, the sulfur isotopic composition of OSCs in oils can help to identify the source of sulfate for TSR alteration in petroleum reservoirs.

### Published

Ellis, G. S., Said-Ahmad, W., Lillis, P. G., Shawar, L., & Amrani, A. (2017), Effects of Thermal Maturation and Thermochemical Sulfate Reduction on Compound-specific sulfur isotopic compositions of organosulfur compounds in Phosphoria oils from the Bighorn Basin, USA. *Organic Geochemistry*, 103, 63-78.



## Study of thermal maturation processes of Sulfur-Rich Source Rock using Compound Specific Sulfur Isotope Analysis

Semi-open pyrolysis experiments were conducted on a thermally immature, organic and sulfur-rich source rock (Ghareb Formation, Israel). Structural and sulfur isotope ratio ( $^{34}\text{S}/^{32}\text{S}$ ) changes in specific organic sulfur compounds were studied along with bulk sulfur phases ( $\text{H}_2\text{S}$ , kerogen, oil) during thermal maturation and oil formation. Oil, gas and rock samples were collected sequentially at several points along the maturation path and were analyzed. In addition, four natural crude oils from Israel were analyzed and the results were compared to the pyrolytic oils. The results showed relatively large  $\delta^{34}\text{S}$  variability ( $\sim 10\%$ ) of the organic sulfur compounds (OSCs) in the bitumen of the unheated rock and first pyrolytic oil. This variability was probably a remnant of the original sulfur isotopic signature acquired during the sulfurization of the organic matter in the early diagenetic process. At later stages of thermal maturation, the variability of the sulfur isotopic values in the kerogen gradually decreased to  $\sim 2\%$ . Three mechanisms were suggested to explain the structural changes and isotopic fractionations of OSCs in the kerogen and generated oils (A) Cleavage of weak SAS and CAS bonds leading to the release of large amounts of  $\text{H}_2\text{S}$  and to cyclization of the precursors in the kerogen with small fractionations. Thus, the OSCs released by this mechanism preserved their distinct  $\delta^{34}\text{S}$  values. (B) Re-reaction of the released S species with hydrocarbons and generation of new OSCs within the kerogen (or bitumen) matrix. (C) Cleavage of stronger CAC bonds and transformation of OSCs to create more stable compounds (e.g. dibenzothiophenes) from multiple sulfur sources. Mechanisms (B) and (C) homogenized the  $\delta^{34}\text{S}$  values of the different OSCs which reflected that of the bulk kerogen. The bulk organic sulfur phases (bitumen, oil, kerogen) were  $^{34}\text{S}$  enriched by  $< 1\%$  despite large amounts of  $^{34}\text{S}$ -depleted  $\text{H}_2\text{S}$  (53% of total S) that was released continuously ("open system"). Therefore, the preferential loss of  $\text{H}_2\text{S}$  during thermal maturation may not be responsible to the  $^{34}\text{S}$  enrichment of oils as reported in some petroleum basins. The overall outcome of the maturation process yields OSCs with  $\delta^{34}\text{S}$  values that closely reflect the kerogen and can be used as a fingerprint for oil-oil and oil-source rock correlation over wide ranges of thermal maturity. The applicability of such correlation is demonstrated by the very good correlation of  $\delta^{34}\text{S}$  values of specific OSCs between artificial and natural oil samples.



## **Published**

Rosenberg, Y. O., Meshoulam, A., Said-Ahmad, W., Shawar, L., Dror, G., Reznik, I. J., Feinstein, S., & Amrani, A. (2017). Study of Thermal Maturation Processes of sulfur-rich source rock using compound specific sulfur isotope analysis. *Organic Geochemistry*, 112, 59-74.

## **Dynamics of Pyrite Formation and Organic Matter Sulfurization in organic-Rich Carbonate Sediments**

Organic-rich carbonate sediments are deposited in a range of environments today and in the geologic past. A significant part of organic matter (OM) degradation in such sediments often occurs by microbial reduction of seawater sulfate, and the sulfide product may be preserved in pyrite and in organic sulfur (S) compounds. The isotopic composition ( $\delta^{34}\text{S}$ ) of these phases can provide valuable information about S cycling in the ocean and in sediment porewaters, but only insofar as the processes governing these  $\delta^{34}\text{S}$  values are understood. To this end, we investigated the pathways, timing and interactions between pyrite and organic S formation during the deposition of organic-rich chalks. As a test case, we studied cores representing the thickest (~350 m) and most complete Late Cretaceous organic-rich sequence along the southern Paleotethyan margin (central Israel). The organic S and OM contents show an inverse relation with the pyritic S content, which together with the uniform FePy/FeHR ratio (~40%), suggest competition between organic S and pyrite formation. Both kerogen and pyritic S are  $^{34}\text{S}$ -depleted relative to Late Cretaceous marine sulfate ( $\delta^{34}\text{S}$ ~17-20‰), but the kerogen S is consistently and unusually  $^{34}\text{S}$ -enriched relative to coexisting pyrite by up to ~38‰. Large S isotope fractionation (~60‰) during microbial sulfate reduction necessary to reproduce the lowest pyrite  $\delta^{34}\text{S}$  values in the core, and relatively invariant  $\delta^{34}\text{S}$  values in organic S suggests that this large fractionation was approximately constant during deposition of the chalks in the core. Higher pyrite  $\delta^{34}\text{S}$  values observed in the most organic-rich parts of the core may be explained by Fe-limited pyrite formation, perhaps due to the reaction of Fe (e.g., complexation, sorption) with organic compounds. Lesser Fe availability, relative to the OM available for sulfate reduction, limits the ultimate abundance of pyrite, but importantly, it delays the formation of pyrite to deeper below the sediment-water interface, from  $^{34}\text{S}$ -enriched sulfide produced by Rayleigh distillation of a dwindling sulfate reservoir. Thus, it appears that competing Fe-OM, S-OM and Fe-S reactions can significantly affect the  $\delta^{34}\text{S}$  values recorded in pyrite in organic-rich carbonate sediments despite large and relatively constant microbial S isotope fractionation.



### Published

Shawar, L., Halevy, I., Said-Ahmad, W., Feinstein, S., Boyko, V., Kamyshny, A., & Amrani, A., (2018). Dynamics of pyrite formation and organic matter sulfurization in organic-rich carbonate sediments. *Geochimica et Cosmochimica Acta*, 241, 219-239.

## **Variability in Sulfur Isotope Composition Suggests Unique Dimethylsulfoniopropionate Cycling And Microalgae Metabolism in Antarctic Sea Ice**

Sea ice microbial communities produce large amounts of the sulfur metabolite dimethylsulfoniopropionate (DMSP), a precursor of the climate cooling gas dimethylsulfide. Despite their importance to the polar sulfur cycle, drivers and metabolic pathways of sea ice DMSP are uncertain. Here we report the first measurements of sea ice DMSP sulfur isotopic composition ( $^{34}\text{S}/^{32}\text{S}$  ratio,  $\delta^{34}\text{S}$ ).  $\delta^{34}\text{S}$  values in ice cores from the Ross Sea and Weddell Sea reveal considerable variability across seasons and between ice horizons (from +10.6 to +23.6‰). We discuss how the most extreme  $\delta^{34}\text{S}$  values observed could be related to unique DMSP cycling in the seasonally extreme physiochemical conditions of isolated brine inclusions in winter-spring. Using cell cultures, we show that part of the DMSP  $\delta^{34}\text{S}$  variability could be explained by distinct DMSP metabolism in sea ice microalgae. These findings advance our understanding of the sea ice sulfur cycle and metabolic adaptations of microbes in extreme environments.

### Published

Carnat, G., Said-Ahmad, W., Fripiat, F., Wittek, B., Tison, J. L., Uhlig, C., & Amrani, A. (2018). Variability in sulfur Isotope Composition Suggests Unique Dimethylsulfoniopropionate Cycling and Microalgae Metabolism in Antarctic Sea ice. *Communications Biology*, 1, 1-9.



## Kinetics and Mechanism of the Abiotic Decomposition of Dimethyl Polysulfides with Three, Four And Five Sulfur Atoms Under Dark, Oxic Conditions

Environmental context Dimethyl polysulfides are malodorous compounds formed from decomposing algal matter. The decomposition of dimethylpolysulfides with 3-5 sulfur atoms was studied in aqueous solution under dark, oxygenated conditions and compared with observations of natural systems. The half-lives of dimethyl tri- and tetrasulfides are very long (176-100000 years), while the half-life of dimethyl pentasulfide (<2 years) is similar to the observed time of its removal from natural aquatic systems. The presence of malodorous dimethyl polysulfides (DMPSs) has been documented in various aquatic systems. In this work, we studied the kinetics and mechanisms of the chemical decomposition of DMPSs with 3-5 sulfur atoms in aqueous solutions in the presence of oxygen and absence of light. DMPSs are shown to undergo reaction with hydroxyl ions, which results in their decomposition. The orders of the decomposition reactions with respect to dimethyl trisulfide (DMTS), dimethyl tetrasulfide (DM4S) and dimethyl pentasulfide (DM5S) are  $2.0 \pm 0.3$ ,  $1.7 \pm 0.3$  and  $2.0 \pm 0.2$ , respectively. The reaction orders with respect to  $\text{OH}^-$  are  $0.59 \pm 0.06$ ,  $0.56 \pm 0.08$  and  $0.58 \pm 0.11$ , respectively. The activation energies of these reactions are  $170 \text{ kJ mol}^{-1} \text{ K}^{-1}$ ,  $114 \text{ kJ mol}^{-1} \text{ K}^{-1}$  and  $75 \text{ kJ mol}^{-1} \text{ K}^{-1}$ , respectively. The initial products of the decomposition are  $\text{Me}_2\text{S}_{n-1}$  and  $\text{Me}_2\text{S}_{n+1}$  and the apparent final products are elemental sulfur and dimethyl disulfide (DMDS). DMDS, which is formed during the decomposition of DMTS, is depleted in  $^{34}\text{S}$  ( $\epsilon = -13.2 \text{ ‰}$ ), while the DM4S is enriched  $^{34}\text{S}$  ( $\epsilon = 4.7 \text{ ‰}$ ). A mechanism for the decomposition of DMPSs is proposed based on the results. Under these conditions, half-lives for the decomposition of DMPSs in Lake Kinneret vary from 2 months for DM5S to 100000 years for DMTS. The relatively short time scale of the reported odour episodes indicates that other chemical, photochemical or biological processes are responsible for the decomposition of DMTS and DM4S.

### Published

Buchshtav, T., Amrani, A., Said-Ahmad, W., & Kamyshny, A. (2019). Kinetics and mechanism of the abiotic decomposition of dimethyl polysulfides with three, four and five sulfur atoms under dark, oxic conditions. *Environmental Chemistry*, 16(7), 450-495.



## Sulfur Isotopes Ratio of Atmospheric Carbonyl Sulfide Constrains its Sources

Carbonyl sulfide (COS) is the major long-lived sulfur bearing gas in the atmosphere, and is used to estimate the rates of regional and global (both past and current) photosynthesis. Sulfur isotope measurements ( $^{34}\text{S}/^{32}\text{S}$  ratio,  $\delta^{34}\text{S}$ ) of COS may offer a way for improved determinations of atmospheric COS sources. However, measuring the COS  $\delta^{34}\text{S}$  at the atmospheric concentrations of  $\sim 0.5$  ppb is challenging. Here we present high-accuracy  $\delta^{34}\text{S}$  measurements of atmospheric COS done by gas chromatograph (GC) connected to a multicollector inductively coupled plasma mass spectrometer (MC-ICPMS), after pre-concentrating from 2-liters of air. We showed that the precision of COS  $\delta^{34}\text{S}$  measurement for gas standards is  $\leq 0.2\%$ , and that  $\text{N}_2$  and  $\text{CO}_2$  in the gas standard mixture had no effect on the measured  $\delta^{34}\text{S}$ . Natural air samples were collected in Israel and in the Canary Islands. The COS  $\delta^{34}\text{S}$  values in both locations were found to be  $13.2 \pm 0.6\%$ , and are believed to represent the background tropospheric value. This  $\delta^{34}\text{S}$  value is markedly different from the previously reported value of  $4.9\%$ . We estimate the expected isotopic signature of COS sources and sinks, and use the  $\delta^{34}\text{S}$  value of atmospheric COS we measured to estimate that  $\sim 48\%$  of it originates from the ocean.

### Published

Angert, A., Said-Ahmad, W., Davidson, C. & Amrani, A. (2019). Sulfur isotopes ratio of atmospheric carbonyl sulfide constrains its sources. *Scientific reports*, 9, 741

## Sulfur Isotopic Composition of Gas-Phase Organic Sulfur Compounds Provides Insights into the Thermal Maturation of Organic-Rich Rocks

Volatile and gas phase organic sulfur compounds (VOSCs) are important components in subsurface reservoir fluids and despite their relatively low concentrations, can provide important information about organic matter origin, diagenetic transformation, thermal maturation, and oil and gas generation, expulsion, and migration. We present an approach for the utilization of VOSC concentration and compound specific S isotopes ratio ( $\delta^{34}\text{S}$ ) data as a new geochemical tool to study natural gas origin and formation. We studied the formation pathways of VOSCs, their  $\delta^{34}\text{S}$  values, and interaction with an organic-rich sedimentary rock (or 'source rock') from the Ghareb Formation (Type II-S kerogen) deposited in an upwelling marine environment. The immature



source rock was subjected to laboratory controlled thermal maturation. We used a semi-open, non-isothermal pyrolysis system heated between 200 and 440 °C, and analyzed the molecular composition and compound specific  $\delta^{34}\text{S}$  values of the evolved gases at various thermal maturity stages. Formation of VOSCs commenced at 206 °C, a temperature generally associated with less thermally mature systems, and typically before the onset of oil generation for similar organic-rich source rocks, allowing study of low thermal maturity conditions ( $\sim 0.3\% R_{\text{o,eq}}$ ). Overall, the VOSCs obtained had  $\delta^{34}\text{S}$  values similar to the bulk kerogen values (mostly within 4‰). However, thiol (or mercaptan)  $\delta^{34}\text{S}$  values closely followed those of  $\text{H}_2\text{S}$  ( $\Delta^{34}\text{S}_{\text{thiols-H}_2\text{S}} = -1 \pm 1\text{‰}$ ) throughout the experiment. Ab-initio calculations for the S isotopic exchange between  $\text{H}_2\text{S}$  and thiols were close to the experimental observations. This suggests that thiols rapidly attained equilibrium with  $\text{H}_2\text{S}$  despite their very short residence time in the system (minutes to hours). Furthermore, throughout the experiment, the concentrations of the six different thiols were found to be proportional to the coexisting, concentration ratio of  $[\text{H}_2]/[\text{H}_2\text{S}]$ . The proportionality factors of the 6 different thiols strongly correlate with reported heats of formation ( $\Delta H_f^\circ$ ), further supporting the notion that the generation of thiols in the system rapidly reached equilibrium. At pyrolysis temperatures up to 350 °C,  $\delta^{34}\text{S}$  and concentration values of other VOSCs produced in the gas phase, including sulfides and thiophenes, probably represent generation from S-containing moieties in kerogen and bitumen with limited interaction with co-existing  $\text{H}_2\text{S}$ . The reaction of hydrocarbons and  $\text{H}_2\text{S}$  to produce VOSCs is inversely correlated with thermal stability, i.e. thiols > sulfides > thiophenes. Therefore, the  $\delta^{34}\text{S}$  values, concentrations and distributions of VOSCs can be utilized as a proxy for reaction extent and formation mechanism of petroleum and  $\text{H}_2\text{S}$ , including primary generation by thermal maturation, or potentially other processes such as migration and thermochemical sulfate reduction. This work demonstrates a novel and useful geochemical tool to study the source and fate of natural gas in the subsurface.

### Published

Amrani, A., Oved, Y., Meshoulam, A., Said-ahmad, W., Turich, C., Luu, N., Jacksier, T., Stankiewicz, A., Feinstein, S., & Shurki, A. (2019). Sulfur isotopic composition of gas-phase organic sulfur compounds provides insights into the thermal maturation of organic-rich rocks. *Geochimica et Cosmochimica Acta*, 259, 91-108.



## Sulfur Isotope Composition of Individual Compounds in Immature Organic-Rich Rocks and Possible Geochemical Implications

We applied compound-specific sulfur isotope analysis (CSSIA) to organic matter (OM) extracted from ancient and immature organic-rich rocks from the Cretaceous Ghareb (Shefela Basin locality, Israel) and Miocene Monterey (Naples Beach locality, California, USA) Formations. Large variations in the  $\delta^{34}\text{S}$  values of different organosulfur compounds (OSCs), that reach up to 28‰ and 36‰, were observed in the Ghareb and Monterey samples, respectively. Additionally, some common OSCs in both locations showed consistent  $^{34}\text{S}$  trends relative to each other. The consistent enrichment in  $^{34}\text{S}$  of C35 hopane thiophene relative to iC20 thiophene in the studied sections probably resulted from differences in the timing of OM sulfurization. Reactive organic precursors quickly consume the most  $^{34}\text{S}$ -depleted reduced S, while less reactive species incorporate the heavier residual S at a later time. Despite the differences in the depositional environments, ages, and the initial  $\delta^{34}\text{S}$  values of the reduced S (represented by the  $\delta^{34}\text{S}$  of pyrite) between the Ghareb and the Monterey Formations, the sulfurization order of common organic compounds seems to be similar. All of the  $\delta^{34}\text{S}$  values of OSCs are  $^{34}\text{S}$  enriched relative to that of the coexisting pyrite with the exception of the C25 highly branched isoprenoid (HBI) thiophene in several samples from the Monterey Formation. The existence of  $^{34}\text{S}$ -depleted sulfurized HBI may point to OM sulfurization that occurred at or near the sediment-water interface during the deposition of the Monterey. Moreover, the  $\delta^{34}\text{S}$  of steroid sulfides shows an inverse trend with the pristane/phytane ratio, which may indicate that the sulfurization mechanism of these OSCs are affected by redox conditions. Further investigation of CSSI values in immature rocks from other basins may help constrain the OM sulfurization process, timescale, and depositional conditions and their possible use as paleoenvironmental proxies.

### Published

Shawar, L., Said-Ahmad, W., Ellis, G. S., & Amrani, A. (2020). Sulfur isotope composition of individual compounds in immature organic-rich rocks and possible geochemical implications. *Geochimica et Cosmochimica Acta*, 274, 20-44.



## Experimental and Theoretical Study on The Formation of Volatile Sulfur Compounds Under Gas Reservoir Conditions

Volatile organic sulfur compounds (VOSC) are found in petroleum natural gas and condensates at trace levels. The abundance and  $\delta^{34}\text{S}$  values of VOSC were proposed as a proxy for thermal processes such as oil and gas generation during thermal maturation, thermochemical and microbial sulfate reduction, migration and expulsion. The understanding of VOSC formation and degradation mechanisms is needed to refine the use of  $\delta^{34}\text{S}$  values of VOSC as proxies for thermal processes over geological timescales in the subsurface. We therefore conducted pyrolysis experiments at  $360^\circ\text{C}$  for 4, 12 and 72 h using pentane and  $\text{H}_2\text{S}$  or pentanethiol as model compounds to study the formation and degradation pathways of VOSC and associated variations in  $\delta^{34}\text{S}$  values. The main products of these experiments are C1-C4 alkanes along with a variety of thiols and thiophenes, the most dominant VOSC formed. Most thiols were in equilibrium with  $\text{H}_2\text{S}$  after 4 h based on their  $\delta^{34}\text{S}$  values. Thiophenes were first  $^{34}\text{S}$  depleted relative to  $\text{H}_2\text{S}$  and only reached equilibrium at the 72 h. The products and  $^{34}\text{S}$  fractionations in the pyrolysis experiment of pentanethiol at  $360^\circ\text{C}$  and 12 h were similar to those of the experiment with  $\text{H}_2\text{S}$  and pentane at the same conditions. This similarity suggests that pentanethiol is an intermediate product in the formation of aromatic VOSC during pyrolysis of pentane and  $\text{H}_2\text{S}$ . Benzo- and dibenzothiophenes (BTs and DBTs) were formed in the liquid phase and their  $^{34}\text{S}$  depleted values relative to  $\text{H}_2\text{S}$  indicated that they had not reached equilibrium. Ab-initio calculations of the thermodynamic properties of thiols, thiolanes, thiophenes BTs and DBTs were used to explain the relative abundance of products in the system and predict their abundance and S isotopic signature at reservoir conditions. The thermodynamic data suggests that at equilibrium, only small quantities of thiols and even smaller quantities of thiolanes can exist under our experimental conditions. Unlike thiols, the free energy of formation of thiophenes, benzothiophenes, and dibenzothiophenes is negative under these conditions indicating that the formation of these compounds is thermodynamically favored. The result suggests that the  $\delta^{34}\text{S}$  values of thiols are controlled by a very rapid equilibrium isotopic effect (EIE). On the other hand, aromatic sulfur compounds can preserve the  $\delta^{34}\text{S}$  value of the kinetic isotopic effect (KIE) associated with their formation longer. However, under typical petroleum reservoir conditions, the formation of aromatic VOSC in the gas phase from short alkanes ( $<\text{C}_5$ ) and  $\text{H}_2\text{S}$  is not thermodynamically preferred and thus their presence is expected to be either as kinetic products or due to influx and charge from a different source where the reactions were



thermodynamically favorable. Thus, the abundance and  $\Delta^{34}\text{S}$  between  $\text{H}_2\text{S}$  and VOSC can be used as a new approach to evaluate charge history within sulfur containing reservoirs.

### Published

Meshoulam, A., Said-Ahmad, W., Turich, C., Luu, N., Jacksier, T., Shurki, A., & Amrani, A. (2021). Experimental and theoretical study on the formation of volatile sulfur compounds under gas reservoir conditions. *Organic Geochemistry*, 152, 104175-104188.

## **The Molecular and Sulfur Isotope Distribution of Volatile Compounds in Natural Gases and Condensates from Alberta, Canada**

Compound-specific S isotope analysis (CSSIA) of volatile organic sulfur compounds (VOSC) in petroleum gases was applied for the first time to two natural gas samples from the Triassic section of the Alberta Basin in Canada. For comparison, CSSIA was conducted for five condensate samples from adjacent wells. The analysis of VOSC in the gas samples revealed similarity in the sulfur isotope composition for thiols, sulfides, and  $\text{H}_2\text{S}$  suggesting an isotopic equilibrium during the reaction between  $\text{H}_2\text{S}$  and hydrocarbons in the reservoir. In contrast, one of the gas samples contained alkyl thiophenes with distinct  $\delta^{34}\text{S}$  values that suggest a different source, probably from oil or bitumen. The molecular and isotopic analysis of condensates revealed several phases of thiol interaction with  $\text{H}_2\text{S}$  bearing similar  $\delta^{34}\text{S}$  value as the  $\text{H}_2\text{S}$  in Gas A and B. Thermally stable OSC such as alkyl-, benzo- and dibenzothiophenes of all condensate samples kept their previous  $\delta^{34}\text{S}$  values and not the ones expected in isotopic equilibrium, indicating a recent migration of  $\text{H}_2\text{S}$  to the reservoirs. The  $\delta^{34}\text{S}$  value of the  $\text{H}_2\text{S}$  reacting with the gas and condensate samples is isotopically similar to  $\text{H}_2\text{S}$  which could have generated during complete microbial or thermochemical sulfate reduction of the Charlie Lake anhydrite in the Triassic section, therefore making this process the likely source of the  $\text{H}_2\text{S}$ . The study demonstrates the potential of sulfur isotope analysis of VOSC to interpret origin, migration pathways and provide a relative time frame for in-reservoir processes impacting present day natural gas properties.



### Published

Kutuzov, I., Said-Ahmad, W., Turich, C., Jiang, C., Luu, N., Jacksier, T., & Amrani, A. (2021). The molecular and sulfur isotope distribution of volatile compounds in natural gases and condensates from Alberta, Canada. *Organic Geochemistry*, 151, 104129-104143.



## סלמאן, אסמאעיל

### **Integrating Teachers to Teach an Interdisciplinary STEM-Focused Program about Sound, Waves and Communication Systems**

The insufficiency of teachers who teach integrative science, technology, engineering and mathematics (STEM) courses is a major challenge facing science education today. Many teachers lack adequate expertise to combine disciplines and choose effective instructional approaches. The study examines how and to what extent teachers might succeed in teaching an innovative STEM program about a sound, waves and communication systems course in an information and communication technology-based environment. This research adopted a qualitative method to understand better the experience of three teachers who taught the course for the first time. Data collection tools included documenting mentoring meetings, observing in the classrooms and interviewing the teachers. The data were transcribed and analyzed using the content analysis method. The findings show that the teachers had only partial knowledge and, initially, even misconceptions about sound. However, their technological pedagogic content knowledge improved significantly due to the researcher's gradual but continual guidance. Four major factors contributed to the teachers' professional development (a) dealing with innovative contents, (b) using different (advanced) teaching methods, (c) pre-designing the instructional course materials and (d) offering the researcher-mentor's developmental supervision.

#### **Published**

Awad, N. A., Salman, E., & Barak, M. (2019). Integrating teachers to teach an interdisciplinary STEM-focused program about sound, waves and communication systems. *European Journal of STEM Education*, 4(1), 05. [doi https://doi.org/10.20897/ejsteme/5756](https://doi.org/10.20897/ejsteme/5756).



## The level of ICT literacy and communication in teaching-Learning and Assessment Processes among Mathematics Teachers

The purpose of the study was to examine the relationship between the level of information, communication and technology (ICT) literacy and communication in teaching-learning and assessment processes, and the attitudes of mathematics teachers toward the integration of ICT into teaching and the characteristics of mathematics teachers in the Arab sector in Israel. A structured mathematics-based questionnaire was distributed to 63 mathematics teachers.

The findings revealed that among mathematics teachers in the Arab sector

- 1) Gender, age and professional development significantly affected the level of use of ICT literacy in teaching-learning and assessment processes; moreover, novice teachers show higher readiness to integrate ICT in teaching mathematics;
- 2) The more positive the teachers' attitudes toward ICT integration in teaching, the more the use of ICT literacy in teaching-learning and assessment processes. In addition, Word processing predicts more than the Spreadsheets (Excel) the cognitive attitudes of the mathematics teachers;
- 3) The use of office and communication tools influence significantly the pedagogical use of an online environment 43.2% of the variance in using office skills and 52.3% of the variance in using internet skills are explained by attitudes towards ICT. Moreover, 84.3% of the variance in pedagogy in technological environment can be explained by using literacy in office and using internet literacy.

### published

Sharif-Rasslan, A., Salman, E., & Fattum, A. (2019). The Level of ICT Literacy and Communication in teaching-learning and assessment processes among mathematics teachers. In A.D., Navide, S., Koch, W., Stankowski (Eds.), *Theory and Practice in Education. Science, Experience and Knowledge*. (pp. 150-162). Düsseldorf: Lambert Academic Publishing.



## Effectiveness of ICT Integration among East Jerusalem Mathematics Middle School Teacher

The study aims to find out the extent to which the middle school mathematics' teacher in East Jerusalem schools are familiar with ICT, and to expose the scope of teaching in an online environment among these mathematic teachers, and their attitudes toward ICT use in teaching-learning and assessment process. Also, examine the impact of the research variables (gender, number of professional development courses, age, seniority, school type, computer availability and use, and daily time for computer use) toward ICT and the attitudes of mathematics' teachers in East Jerusalem schools.

A structured mathematics-based questionnaire was distributed to 102 middle school mathematic teachers (43% males), from East Jerusalem who participated in the current study, and were distributed 70%, 20% and 10% according to the school type Municipal (Israeli ministry of Education), Recognized- unofficial (Palestine Authority), and Private schools (Waqf-sponsored and church schools) respectively.

The findings revealed that there are no significant differences in the use of an online environment in the context of variables gender, school type, age, professional development courses in ICT. Statistically significant differences were found out between the mathematics teachers who have a bachelor's degree ( $2.22 \pm 0.48$ ), and the teachers who hold a high diploma ( $2.47 \pm 0.38$ ),  $p < 0.001$ . Moreover, statistical differences were found between teachers with low seniority (less than 11 years) ( $2.43 \pm 0.46$ ) and those with more seniority (more than 12 years) ( $2.25 \pm 0.463$ ),  $p < 0.001$ . A middle positive correlation was found between the attitudes of East Jerusalem schools' mathematic teachers towards using ICT in teaching-learning and assessment process in an online environment,  $r = 0.4$ ,  $p < 0.05$ .

### Published

Sharif-Rasslan, A., Salman, E., & Fattum, A. (2020). Effectiveness of ICT Integration Among East Jerusalem Mathematics Middle School Teachers. In K., Bory, D., Nevide (Eds.), *Modern Critical Trends in Education*. (pp.429-445). Düsseldorf: Lambert Academic Publishing. (ISBN 978-620-3-19548-4).



## לימוד מושגים בסיסיים בתכנות מונחה עצמים בסביבה ויזואלית אינטראקטיבית תלת-ממדית לתלמידי חטיבת הביניים

המאמר מציג ממצאים שהתקבלו ממחקר חלוץ בנושא לימוד מושגי יסוד בתכנות מונחה עצמים (תמ"ע) באמצעות סביבת לימוד ויזואלית אינטראקטיבית תלת-ממדית לתלמידי חטיבת הביניים.

המחקר התנהל סביב תכנית התערבות להקניית מושגים בתכנות מונחה עצמים לתלמידים בחטיבת הביניים. המרכיבים העיקריים בתוכנית ההתערבות היו (1) פיתוח קורס בתמ"ע "תכנות מונחה מטלות בסביבה אינטראקטיבית ויזואלית תלת ממדית", (2) הפעלת הקורס והוראת הנושא לתלמידים בחטיבת הביניים, (3) הערכת הישגי התלמידים בלימוד מושגים בסיסיים בתמ"ע.

בהתבסס על הגישה הקונסטרוקטיביסטית, התבססה הלמידה בקורס על (א) למידה עצמית מכוונת מטלות סגורות אשר כוללות הסברים והנחיות מפורטות לתלמיד, (ב) פתרון והגשת מטלות פתוחות שכוללות שאלות אתגר, (ג) למידה סביב פרויקט מסכם.

לשם איסוף הנתונים ובהתאם לצרכי המחקר השונים השתמשנו בכלים הכמותיים הבאים (1) דיווח עצמי של התלמידים על ביצוע 10 מטלות סגורות, (2) הישגי התלמידים ב- 10 מטלות פתוחות עם שאלות אתגר, (3) ציונים התלמידים בפרויקט מסכם ובנוסף (4) ציוני התלמידים בשני מבחנים בתמ"ע.

אנו מציגים כאן סיכום של תוצאות המחקר אודות הישגי התלמידים בלימוד מושגים בסיסיים בתמ"ע בהתייחס לשלושת סוגי הידע הצהרתי (Declarative), הליכי (Procedural) ומושגי (Conceptual).

### הערה:

המאמר מבוסס על מחקר חלוץ שמהווה חלק ממחקר מקיף במסגרת עבודת דוקטורט המתבצעת במחלקה להוראת המדעים באוניברסיטת בן-גוריון בנגב, בהנחייתם של פרופ' משה ברק ראש המחלקה להוראת המדעים ופרופ' ג'יהאד אלסאנע ראש המחלקה למדעי המחשב, באוניברסיטת באר שבע - בנגב.

### פורסם

סלמאן, א', ברק, מ' ואלסאנע, ג' (2017). לימוד מושגים בסיסיים בתכנות מונחה עצמים בסביבה ויזואלית אינטראקטיבית תלת ממדית לתלמידי חטיבת הביניים. *היבטים בהוראת מדעי המחשב*, 45, 6-16.



## ספדי, ראפע

### **Designing Efficient Self-Diagnosis Activities in the Physics Classroom. *The Physics Teacher***

Self-diagnosis (SD) activities require students to self-diagnose their solutions to problems that they solved on their own. This involves identifying where they went wrong and then explaining the nature of their errors-why they went wrong-aided by some form of support. Worked examples (WEs) are often used to support students in SD activities. A WE is a step-by-step demonstration of how to solve a problem. One unresolved issue is why students fail to exploit WEs in SD exercises. Yerushalmi et al., for instance, provided students with written WEs and asked them to self-diagnose their solutions with respect to these WEs. These authors found no correlation between students' SD performance and their subsequent problem-solving performance on transfer problems, suggesting that students had only superficially exploited the written WEs. The aim of this article is to describe a new SD activity that was developed to prompt students to effectively use written WEs when self-diagnosing, and to examine its effectiveness in advancing students' learning in physics.

#### **Published**

Safadi, R. (2017). Designing efficient self-diagnosis activities in the physics classroom. *The Physics Teacher*, 55(9), 453-457.

### **Reflection on Solutions in the Form of Refutation Texts versus Problem Solving - The Case of 8<sup>th</sup> Graders Studying Simple Electric Circuits**

The study compared students' learning in troubleshooting and problem-solving activities. The troubleshooting activities provided students with solutions to conceptual problems in the form of refutation texts; namely, solutions that portray common misconceptions, refute them, and then present the accepted scientific ideas. They required students to individually diagnose these solutions; that is, to identify the erroneous and correct parts of the solutions and explain in what sense they differed, and later share their work in whole class discussions. The problem-solving activities required the students to individually solve these same problems, and later share their work in whole class discussions. We



compared the impact of the individual work stage in the troubleshooting and problem-solving activities on promoting argumentation in the subsequent class discussions, and the effects of these activities on students' engagement in self-repair processes; namely, in learning processes that allowed the students to self-repair their misconceptions, and by extension on advancing their conceptual knowledge. Two 8th grade classes studying simple electric circuits with the same teacher took part. One class (28 students) carried out four troubleshooting activities and the other (31 students) four problem solving activities. These activities were interwoven into a twelve-lesson unit on simple electric circuits that was spread over a period of 2 months. The impact of the troubleshooting activities on students' conceptual knowledge was significantly higher than that of the problem-solving activities.

### Published

Safadi, R., Safadi, E., & Meir, M. (2017). Reflection on solutions in the form of refutation texts versus problem solving - The case of 8th graders studying simple electric circuits. *Physics Education*, 52(1), 015013.

### **Self-Diagnosis as a Tool for Supporting Students' Conceptual Understanding and Achievements in Physics - The Case of 8th-Graders Studying Force and Motion.**

The purpose of the study was to examine the impact of a self-diagnosis activity on students' conceptual understanding and achievements in physics. This activity requires students to self-diagnose their solutions to problems that they have solved on their own-namely, to identify and explain their errors-and self-score them-that is, assign scores to their solutions-aided by a rubric demonstrating how to solve each problem step by step. I also examined a common practice in the physics classroom in which teachers manage a whole class discussion during which they solve, together with their students, problems that students had solved on their own. Three 8th-grade classes studying force and motion with the same teacher participated. Students were first taught the unit in force and motion. Then a first summative exam was administered. Next, two classes (59 students) were assigned to the self-diagnosis activity and the other class to the whole class discussion (27 students). To assess students' learning with these activities, a repeat exam was administered. Results suggest that at least for teachers who are not competent in managing argumentative class discussions, the self-diagnosis activity is more effective than the whole class discussion in advancing students' conceptual understanding and achievements. I account for these results and suggest possible directions for future research.



### Published

Safadi, R. (2017). Self-diagnosis as a tool for supporting students' conceptual understanding and achievements in physics - The case of 8th-graders studying force and motion. *Physics Education*, 52(1), 014002.

### **Knowledge-Integration Processes and Learning Outcomes Associated with a Self-Diagnosis Activity - The Case Of 5th-graders Studying Simple Fractions**

I examined how well a self-diagnosis activity engages students in knowledge-integration processes, and its impact on students' mathematical achievements. The self-diagnosis activity requires students to self-diagnose their solutions to problems that they have solved on their own-namely, to identify where they went wrong and to explain the nature of their own errors-and self-score them, aided by a rubric demonstrating how to solve each problem step by step. I also examined knowledge-integration processes and the impact on students' achievements in a traditional activity in which teachers solve, together with their students, problems that students have solved on their own. The two activities can provide students with opportunities to reflect on their own errors, which is assumed to promote learning. Two 5th-grade classes studying simple fractions with the same teacher participated. A pre-test/intervention/post-test design was employed. In the intervention, one class was assigned to the self-diagnosis activity and the other to the traditional activity. Results suggested that at least for a teacher who is not competent in managing argumentative class discussions, the self-diagnosis activity is more effective than the traditional activity in engaging students in knowledge-integration processes and enhancing their achievements. I account for these results and suggest possible directions for future research.

### Published

Safadi, R. (2018). Knowledge-integration processes and learning outcomes associated with a self-diagnosis activity - the case of 5th-graders studying simple fractions. *International Journal of Science and Mathematics Education*. 16(5), 929-948.



## Learning from Troubleshooting Activities When Contrasting Erroneous Examples with Worked Examples In the Physics Classroom

Research indicates that troubleshooting activities that require students to reflect on pre-prepared erroneous examples, i.e. erroneous solutions to problems that correspond to common naïve ideas, impact their learning positively. These include asking students to diagnose erroneous examples; in other words, detect the conceptual errors and then explain why these errors are wrong. One of the major challenges is to determine the best ways to support student learning with troubleshooting activities. One suggestion involves contrasting erroneous examples with worked examples through a step-by-step demonstration of how to solve a problem. Here, a new troubleshooting activity designed to prompt students to learn more effectively from erroneous examples is described and assessed. The worked examples only constitute one part of the rubric, and students are required to both diagnose erroneous examples and then score them. Six 8th grade classes from three schools (two classes each from a different school taught by the same teacher) completed a pre-test/intervention/post-test after finishing a unit in simple electric circuits. In the intervention, in each school, one class was randomly assigned to the new activity (45 students) and the other class to the traditional troubleshooting activity with worked examples without rubrics (46 students). The findings suggest that the new activity enabled more students to learn from the erroneous examples than the traditional activity, regardless of whether the students' naïve ideas resembled the ones committed in the erroneous examples, and confirm the effectiveness of the new activity in 8th graders studying simple electric circuits. In a companion study by the first author (under review), the findings confirmed the effectiveness of the new activity in 10th graders studying geometric optics. Taken together, the findings of both studies may suggest that regardless of grade level or topic, the potential of learning from troubleshooting activities can be exploited effectively by implementing scoring erroneous examples along with a rubric portraying worked examples.

### Published

Safadi, R., & Ababsy, R. (2020). Learning from troubleshooting activities when contrasting erroneous examples with worked examples in the physics classroom. *Physics Education*, 55(5), 055024.



## Learning from Self-Diagnosis Activities when Contrasting Students' Own Solutions With Worked Examples: The Case Of 10th Graders Studying Geometric Optics

Self-diagnosis activities require students to self-diagnose their solutions to problems they solved on their own by detecting and explaining their errors. Worked examples, a step-by-step demonstration of how to solve a problem, are often used to support students in self-diagnosis activities. However, studies indicate that students often fail to exploit worked examples in traditional self-diagnosis activities when simply required to self-diagnose their solutions. The study analyzes a new self-diagnosis activity developed by the first author to prompt students to effectively use worked examples when self-diagnosing the written worked examples only constitute one part of a scoring rubric and the students are required to both self-diagnose their solutions and then self-score them. This activity was hypothesized to encourage students to exploit the worked examples more thoroughly, and by extension detect and learn from their errors to a greater extent than students administered the traditional self-diagnosis activities. Six 10<sup>th</sup> grade advanced physics classes completed a pre-test/intervention/post-test after finishing a unit in geometric optics. Students in each class were randomly assigned to the new self-diagnosis activity (83 students) or the traditional self-diagnosing activity (79 students). Students assigned the new activity detected and learned more from their errors than students administered the traditional activity. It is argued that more in-depth error detection contributed overall to students' learning by triggering a series of implicit steps that prompted them to self-regulate their cognitions in a way that provided opportunities to self-repair their naïve concepts.

### Published

Safadi, R., & Saadi, S. (2021). Learning from self-diagnosis activities when contrasting students' own solutions with worked examples: the case of 10th graders studying geometric optics. *Research in Science Education*, 51(3), 523-546.



## עבד אלגני, יוסף

### Innovative Ways to Teach Mathematics - are They Employed in Schools?

This article sheds light on the various strategies to teach mathematics and whether they are employed or not. The study investigates the employed mathematics-teaching strategies in Arab schools in northern Israel, and the hindrances that prevent teachers from applying diverse effective strategies in their classrooms. The researcher follows the qualitative approach based on in-depth interviews and recommendations of previous studies and observation to obtain the maximum benefits and give accurate qualitative results based on interviews, from Arab schools in northern Israel who study in six different schools. Teachers assert that employing the different innovative strategies are vital and efficient in teaching mathematics, but there are many handicaps that prevent teachers from exploiting them including, amongst others, the imposed duties to complete the entire amount of loaded study material during the semester, as well as the lack of available tools to computerize classes and teaching process in general, the lack of building tangible tools, and the low proficiency level of some teachers. The results of the interviews showed that technology is rarely employed in teaching mathematics - if ever, as well as innovative and modern strategies. The study concludes that the heavy burden of teaching mathematics should be lightened to allow space for creativity in teaching strategies, as they need more time to be employed. In addition, for mathematics to be understood properly, the teaching process should be interesting to attract students. Besides this, the suggested strategies are advantageous to be applied in the teaching process

#### Published

Abd Algani, Y. (2019). Innovative ways to teach mathematics - are they employed in schools? *Journal of Computer and Education Research (JCER)*, 7(14). 496-514. DOI 10.18009/jcer.612199.



## Reasons and Suggested Solutions for Low-Level Academic Achievement in Mathematics

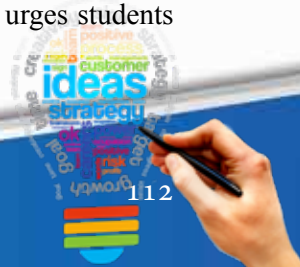
The study tackles a worldwide problem, manifested in the low-level academic achievement in mathematics, by placing mathematics in a real-life context beyond the border of book publications. It discusses the important role that mathematics plays in practice, as well as the effects of poor performance in mathematics on the academic career of students. The three pillars of the educational process are summarized in this article. In addition, the reasons for low-level academic achievement in mathematics are categorized in five divisions student-related factors, teacher-related factors, curriculum-related factors, school-related factors and family-related factors. The article also states the stages in which mathematics goes through during school study, which are acquiring a strong foundation, practicing mathematics, and the self-stage. Then it goes on more specifically to discuss the stages in which the teaching of any new concept or subject in mathematics must pass through. The researchers follow the qualitative approach based on in-depth interviews. The study ends up with suggested solutions for the problem of low-level achievement in mathematics for the student, teacher, parents and school.

### Published

Abd Algani, Y., & Eshan, J. (2019). Reasons and suggested solutions for low-level academic achievement in mathematics. *International e-Journal of Educational Studies*, 3(6), 181-190. DOI 10.31458/iej.es.604884.

## Teaching Values via Problem-Solving Approach in Mathematics

Mathematics is not an independent science, and teaching it is strongly related to daily life. Teaching mathematics, in general, embraces teaching mathematical values that are of three types general educational values, mathematical values, and educational values. However, more precisely, one of the approaches employed in teaching mathematics is the problem-solving approach, which instills values in the characters of students which help in shaping their personalities by granting them the chance to rely on themselves. In this way, it helps students to become independent, to have strong personalities, and to be capable of solving problems in their lives. In addition, problem-solving teaches students to be collaborative, innovative, and socially-active. However, the problem-solving approach consists of three levels, namely tasks, cooperative groups, and sharing. In brief, the approach urges students



to interact with other students in a group in order to find the proper solution for a certain task and then share the solution alongside the reasoning with the other students of the other groups. This approach encourages reasoning and creative thinking alongside with group work and self-reliance. Consequently, teaching mathematics through employing the problem-solving approach is of great importance for the individual and the community as well taking into consideration how important the values the approach instills in students. The study recommends employing this approach in teaching mathematics for students to be self-confident, critical thinkers, and problem-solvers in real and social life, which will benefit the country as a whole.

### **Published**

Abd Algani Y., & Eshan J. (2019). Teaching values via problem-solving approach in mathematics, *International Journal of Latest Research in Engineering & Technology (IJRET)*, 5(10), 1-11. ISSN 2454-5031.

### **The Effect of Mathematics Events on The Adjustment of Students' Error in Fractions**

The article discusses the common errors, the misconceptions and the problems related to the topic of comparing fractions and methods of teaching them. The following research is based on the qualitative approach which aims at examining the existing problems and ways of addressing them. The researcher discovered the significance of the conceptual instruction of the concept itself and the usage of the research methods, while avoiding indoctrinating the subject and using the ritual approach. The importance of the research lies in highlighting a vital and fundamental topic in teaching mathematics in the primary stage in order to provide the students with skills they can use in their later stages of learning.

### **Published**

Abd Algani Y. (2019). The effect of mathematics events on the adjustment of students' error in fractions. *International Journal of Development Research*, 9(11), 35-39.



## The Topological Connectivity of the Independence Complex of Circular-Arc Graphs

Let us denote the topological connectivity of a simplicial complex  $C$  plus 2 by  $\eta(C)$ . Let  $\psi$  be a function from class of graphs to the set of positive integers together with  $\infty$ . Suppose  $\psi$  satisfies the following properties

1.  $\psi(K_0) = 0$ .
2. For every graph  $G$  there exists an edge  $e = (x, y)$  of  $G$  such that

$$\psi(G - e) \geq \psi(G)$$

(Where  $G - e$  is obtained from  $G$  by the removal of the edge  $e$ ), and

$$\psi(G - N(\{x, y\})) \geq \psi(G) - 1$$

then

$$\eta(\mathcal{F}(G)) \geq \psi(G)$$

(where  $(G - N(\{x, y\}))$  is obtained from  $G$  by the removal of all neighbors of  $x$  and  $y$  (including, of course,  $x$  and  $y$  themselves).

Let us denote the maximal function satisfying the conditions above by  $\psi_0$ .

Berger [3] prove the following conjecture

$$\eta(\mathcal{F}(G)) \geq \psi_0(G)$$

for trees and complements of chordal graphs.

Kawamura [2] proved conjecture, for chordal graphs. Berger [3] proved Conjecture for trees and complements of chordal graphs. In this article I proved the following theorem

1. Let  $G$  be a circular-arc graph  $G$  if  $\psi_0(G) \leq 2$  then  $\eta(\mathcal{F}(G)) \leq 2$ .

1. Prior the attempt to verify the previously mentioned cases, we need a few preparations which will be discussed in the introduction.

### Published

Abd Algani, Y. (2019). The topological connectivity of the independence complex of circular-arc graphs. *Universal Journal of Mathematics and Applications*, 2(4), 159-169. DOI 10.32323/ujma.556457



## The Effectiveness of a Program for Developing the Skills of Mathematical Thinking for First Year Preparatory Pupils

This research aims to examine a suggested program based on student activity for developing mathematical thinking skills for first year preparatory pupils in Israel and for measuring the effectiveness of a proposed program. The researcher uses the experimental approach to examine the effect of the proposed program on seventh graders in Israel and the study relied on the mathematical thinking test and on the proposed teaching program. The sample of the study consisted of 136 male and female students. The experimental group consists of 66 male and female students, and the control group consists of 70 male and female students. The experimental treatment of the results led to the following conclusions

- There are significant differences between means of pre-and post-test scores of experimental groups on mathematical thinking.
- There are significant differences between means of post-test scores of experimental and control groups on mathematical thinking the program achieved high effectiveness in developing mathematical thinking skills.

The importance of the research lies in the fact that it benefits teachers in identifying the levels of mathematical thinking for their students, which provides an opportunity to develop them, and to know the importance of mathematical thinking and its exploitation in the educational process

### Published

Abd Algani, Y, & Eshan, J. (2020). The effectiveness of a program for developing the skills of mathematical thinking for first year preparatory pupils. *Journal of Gifted Education and Creativity*, 7(2), 41-51.



## Thinking Styles of New Mathematics Teachers and their Relation to Self-Esteem

The teacher's self-esteem affects his point of view, his thinking style, and his attitudes towards education. It also generally influences the teacher's behavior during the lesson session, his relationship with students, his teaching style, and also his expectations of the students as well as the decisions that he makes in his teaching plans. It can also have a significant impact on his students in developing their thinking style, and in helping students to overcome their educational difficulties and their fear of the subject they are studying. This research aims to determine the contribution of self-esteem in forecasting thinking styles among new mathematics teachers. The significance of The study is to determine the contribution of self-esteem in forecasting thinking styles in order to draw the attention of educators and researchers when preparing teacher training programs including their syllabus and the teaching material, because it will affect their performance and their students in the future. The researcher used the quantitative method and Thinking Styles Inventory to check the contribution of self-esteem in forecasting the thinking styles of the new mathematics teachers. The researcher will also use the Self-esteem scale to check the contribution of self-esteem in forecasting the thinking styles of the new mathematics teachers. The study sample consisted of 169 participants (79 males, 90 female) new mathematics teachers in Israel. The results show that the correlation coefficients between the legislative thinking style and self-esteem were significant (1.4%) and show that the correlation coefficients between the executive thinking style and self-esteem was significant at (2.8%).

### Published

Abd Algani, Y., & Alhaj A., (2020). Thinking styles of new mathematics teachers and their relation to self-esteem. *International e-Journal of Educational Studies*, 4(8), 65-76.



## The Connection Between the School Environment and Teachers' Burnout in Primary Schools in Arab Society in Israel

The teacher is an individual within an overall organizational system, characterized by intensity and dynamism. At the same time, the teacher influences and is also influenced by the environmental context. Thus, it is essential to examine the teacher's perceptions of the organization in which he operates and his feelings as an employee, assuming that these affect his style of work and efficiency. Besides, the school culture and environment contribute to the teacher's burnout and describe the process of burnout as the teacher's gradual loss of interest and enthusiasm at work. Consequently, the teacher develops a negative attitude towards himself and feelings of resentment and hostility towards his colleagues. If so, it can be said that burnout leaves its mark on the teacher's mental world and behavior, influences his conduct in the learning environment, and interferes with the achievement of his educational goals. Burned-out teachers can cause damage to the organizational environment to the point of impairing school functioning. Burnout can also create an obstacle to achieving educational purposes in general and academic achievement in particular. Likely, burnout teachers will not invest the effort necessary to yield their students' academic and scholarly achievements. Against this background, The study is carried out to enrich the research field, specifically in examining the connection between school environment and the teachers' burnout in primary schools in Arab society in Israel. The study was based on a quantitative method; about 341 teachers from elementary schools in the Arab community in Israel participated. The researchers used three questionnaires A questionnaire of demographics about the participants and the setting.

A questionnaire relating to the school environment consists of 30 items. The teacher's evaluation of his feelings in his work - burnout, which includes 14 items. The results of the study show a (1) significant negative relationship between the organizational environment of the school and the level of burnout among Arab teachers in elementary schools in Israel and (2) a meaningful positive relationship between the teacher's years of seniority and his burnout.

### Published

Abu Alhaija, Y. A. A., & Abd Algani, Y. M. (2021). The connection between the school environment and teachers' burnout in primary schools in Arab society in Israel. *Elementary Education Online*, 20(5), 2468-2479.



## The Impact of the Use of Mathematical Problem Solving on the Development of Creative Thinking Skills for Prep School Students in Arab Schools in Israel

Mathematics occupies a central place among the different sciences; it can be described as the backbone of these sciences. Mathematics, from many specialists' points of view, is an important tool for organizing experiences, and understanding the environment in which we live; in addition to that, solving the problems of the world needs innovative and intelligent solutions to achieve the desired progress for the global civilization. Problem-solving models usually combine training on the steps of problem-solving and creative thinking. The current research aims to examine the impact of the use of mathematical problem-solving on the development of creative thinking skills for prep school students in Arab schools in northern Israel. The researcher used the experimental approach, and designed a control group and an experimental group with pre- and post-tests. The research sample consisted of 80 prep school students in Arab schools in northern Israel, and the result was that there are statistically significant differences (at the  $\alpha \leq 0.05$  level) between the average scores of students in the experimental group and the control group in the post-application of the creative thinking test in favor of the experimental group. The researcher concludes with recommendations to invest in developing students' creative thinking. The importance of the current research stems from the importance of developing students' mental abilities, developing their self-education abilities, and acquiring creative thinking skills; because knowledge alone does not replace thinking, and cannot be utilized without the support of creative thinking.

### Published

Abd Algani, Y., Hibi, W., & Abo Al-Hija, Y. (2021). The impact of the use of mathematical problem solving on the development of creative thinking skills for prep school students in Arab schools in Israel. *Journal for the Mathematics Education and Teaching Practices*, 2(1), 9-27.



## The Impact of Using the Mathematical Modeling in Communication and Mathematical Achievement in Preparatory School Students

The research aims to know the impact of using Mathematical Modelling in achievement and developing mathematical communication skills. The research sample consists of 42 prep school students in Arab schools in Israel in the academic year 2019-2020. The researcher follows the experimental curriculum. The students were divided into two experimental and control groups; the two groups were equalized in the pre-mathematical achievement. The research concludes that there is efficiency for mathematical modelling in mathematical communication and achievement favouring the experimental group. The researcher introduces recommendations and suggestions that contribute to achieving mathematical communication and developing its mathematical ability.

### Published

Abd Algani, Y., Hibi, W., & Abo Al-Hija, Y. (2021). The Impact of Using the Mathematical Modeling in Communication and Mathematical Achievement in Preparatory School Students. *Psychology and Education Journal*, 58(2), 5482-5492.



## לבדו, הישאם

### חידות סודוקו ופתרונותיהם המתמטיים

أحجيات مع علم الرسوم البيانية التي تعكس أحجيات السودوكو في هذا العلم الرياضيّ البياني من مجال علوم الحاسوب.

الكتاب الرياضي يبدأ بشرح طرق الحل المختلفة ووسائل تطبيق هذه الحلول المتنوعة.

الأحجيات للصغار تبدأ بمصفوفات مربعة 2x2 أو بمصفوفات مستطيلة 2x3.

وللكبار بمصفوفات مربعة: 9x9 الصعبة

نشر

هشام ع. (2018), «ألغاز السودوكو للكبار والصغار», عمان.

### האירועים המוזרים של ביקור שמשום הראשון במנהטן

هذه رواية حدثية طويلة وممتعة، في منطقة الشرق الأوسط، بأحداث ووقائع مُغامراتية في موضوع

أمان المعلومات الرقمية Cyber Security ومن تمّ في موضوع مدني ملتهب وحساس ألا وهو الهويات

البيومترية Biometric ID. وم تمّ تتحول أحداث الرواية وتتطور وتتسارع إلى صراع جيو-سياسي

كبير في منطقة الشرق الأوسط، قد يُهدّد السلام المنطقي وما بعده.

نشر

هشام ع. (2020), «الوقائع العجيبة في زيارة شمشوم الأولى ليمانهاين»، عمان.



## עבוד, אליאס

### Algorithms for Solving Some Inverse Problems from Combinatorial Number Theory

In this paper we use the characteristic property of sumsets which states that there exists a proper subset tiling the set by translates to solve by an algorithmic method, for finite sets, some inverse problems in combinatorial number theory.

#### Published

Abboud, E. (2017). Algorithms for solving some inverse problems from combinatorial number theory. *British Journal of Mathematics & Computer Science*, 20(2), 1-8.

DOI [10.9734/BJMCS/2017/30619](https://doi.org/10.9734/BJMCS/2017/30619)

### Loci of Points Inspired by Viviani's Theorem

We consider loci of points such that their sum of distances or sum of squared distances to each of the sides of a given triangle is constant. These loci are inspired by Viviani's theorem and its extension. The former locus is a line segment or the whole triangle and the latter locus is an ellipse.

#### Published

Abboud, E. (2017). Loci of points inspired by Viviani's Theorem, *Mathematics Magazine*. 90(5), 338-346.



## On Word Equations Originated from Discrete Dynamical Systems Related to Antisymmetric Cubic Maps with Some Applications

In this article, we solve some word equations originated from discrete dynamical systems related to antisymmetric cubic map. These equations emerge when we work with primitive and greatest words. In particular, we characterize all the cases for which  $\langle \beta_1 \beta^{-1} \rangle = \langle \beta_2 \beta^{-2} \rangle \langle \beta_1 \beta^{-1} \rangle = \langle \beta_2 \beta^{-2} \rangle$  where  $\beta_1$  and  $\beta_2$  are the greatest words in  $\langle \beta_1 \rangle$  and  $\langle \beta_2 \rangle$  of  $M(n)$ .

### Published

Abboud, E. (2018). On word equations originated from discrete dynamical systems related to antisymmetric cubic maps with some applications. *Acta Mathematica Sinuca. English Series*, 34(11), 1663-1676. doi10.1007/s10114-018-6485-3

## Coloring a 1-by-n Chessboard

Counting problems in enumerative combinatorics are considered critical to solving problems in probability at the high school level and taught in undergraduate mathematics classes such as combinatorics, discrete mathematics and probability. Counting problems are taught at our colleges in a basic course on combinatorics or discrete mathematics.

In this paper, we pose and answer a variety of questions relating to the number of ways to color an n-by-1 chessboard under a variety of conditions. We answer the general question: Problem 1: *In how many ways can we color a 1-by-n chessboard using m colors if one of the colors occurs a multiple of t number of times?*

### Published

Abboud, E., Saleh, F., & Sharif-Rasslan, A. (2019) Coloring a 1-by-n chessboard. *The College Mathematics Journal*, 505, 322-330.  
DOI 10.1080/07468342.2019.1662707



## קאסם, עאליה

### Outstanding Students Volunteering During COVID-19: Comparative Research among Several Israeli Colleges

Voluntarily work is very significant. Due to the significance of such work, the researchers explored the attitudes of outstanding students at the Arab Academic College for Education in Israel and students at other colleges in Israel towards voluntarily work during the COVID-19 crisis. Students filled in two scales. The first scale included 34 items. It collected data on the motives of volunteering. The second scale involved 10 items. It collected data about the benefits of volunteering in the future. The researchers used quantitative research methods. Data were collected from 100 students. The researchers used descriptive and inferential statistical methods. The results indicate that there is a correlation between the feelings of outstanding students at the Arab college and other excellent students in other colleges; they feel that by volunteering they express their values and talents, and that they are granted independency in making decisions and salient reasons for volunteering creating a better society, meeting the expectations of the program coordinator, feeling good, volunteering in a field in which they will closely engage in the future and identifying the goals of the program and the project in which they are participating

#### Published

Shamma, F., & Kassem A. (2021) Outstanding students volunteering during COVID-19: comparative research among several Israeli colleges. *Cypriot Journal of Educational Science*, 16(4), 1737-1749.

doi <https://doi.org/10.18844/cjes.v16i4.6038>



## קורטאם, נאג'י

### **The Effectiveness of Demonstrations on Students' Achievements and their Learning the Oxidation-Reduction Topic**

In This study we explored whether the use of teachers' demonstrations significantly improves students' understanding of redox reactions compared with control group counterparts who were not exposed to the demonstrations. The sample consisted of 131 Israeli 8th graders in middle schools (junior high school). Students' attitudes and achievements as well as their understanding of redox and electrolysis were assessed by administering a questionnaire that investigated their attitudes (perceptions) towards a demonstration in chemistry. The findings showed that the experimental group's achievements and understanding of the subject were statistically significantly better than those of their control group counterparts.

#### **Published**

Basheer A., Kortam N., Hugerat M., & Hofstein A. (2017). The effectiveness of demonstrations on students' achievements and their learning the oxidation-reduction topic. *EURASIA Journal of Mathematics, Science and Technology Education*, 13(3), 555-570.

### **Misconceptions among Middle School Students Regarding the Conservation of Mass during Combustion**

The study focuses on the misconceptions of eighth-grade students in the Arab sector compared to the Jewish sector regarding the conservation of mass during combustion in a closed system and in an open system before the subject is taught, and to what extent the misconceptions change after it is taught. Students (N=195) from six heterogeneous classes were asked to fill in a ten-question questionnaire twice once before the subject was taught and again afterwards. The findings indicated that students' understanding improved more with respect to closed systems compared with open systems; before the subject had been taught the situation was very similar for both cases. The students' explanations were based on visual arguments and showed that there was confusion concerning the effect of chemical, physical, and state of matter changes on the conservation of mass during combustion. Regarding the comparison between the conceptions of eighth-grade students in the Arab and Jewish (N=105) sectors, students in the Arab sector had better



achievements in closed systems, whereas Jewish students gave more correct answers to questions in open systems. The study's findings can help middle-school students and their teachers understand that physical and chemical changes do not affect mass in a closed system, and that students should learn to distinguish between conservation of mass in open and in closed systems.

### **Published**

Basheer, A., Kortam, N., Zahran, N., Hofestein, A., & Hugerat, M. (2018). Misconceptions among middle school students regarding the conservation of mass during combustion. *EURASIA Journal of Mathematics, Science and Technology Education*, 14(7), 3109-3122.

### **How Project-Based Learning Promotes 7<sup>th</sup> Grade Students' Motivation and Attitudes Towards Studying Biology**

The study examines how Project-Based Learning (PBL) influences the attitudes and motivation of middle-school biology students in the Arab sector of Israel to learn biology. The research population consisted of 7th grade students (n=178) from six biology classes in northern Israel. The two-month study used a mixed methods research design: quantitative (questionnaires) as well as qualitative (a semi-structured interview with students). The two research hypotheses were as follows: (1) PBL increases student motivation; and (2) PBL improves student attitudes. The study's findings indicate that an intervention that combines the teaching of biology with PBL results in both increased motivation among students and more positive attitudes towards studying biology. Students reported greater pleasure, curiosity, interest, and cooperation when PBL was used. The findings suggest that introducing PBL can bring about improvements in both student motivation and their attitudes. The conclusions derived from these findings can help in formulating recommendations for applying PBL in biology and perhaps in other subjects as well, especially in the Arab sector of Israel.

### **Published**

Kortam, N., Basheer, A., Hofestein, A., & Hugerat, M. (2019). How project-based learning promotes 7th grade students' motivation and attitudes towards studying biology. *ARISE - Action Research and Innovation in Science Education*, 1(2), 9-17.



## The Educational Effectiveness of Didactical Games in Project-Based Science Learning among 5th Grade Students

The purpose of the study was to examine how the use of didactic games in teaching science affects the learning environment, achievement, and motivation among primary school students. The research population consisted of 188 5<sup>th</sup> grade students from two primary schools. This group was divided into an experimental group and a control group. The research tools consisted of two questionnaires one to determine the motivation to study science, and the other to determine the learning environment. Moreover, a pre-test in science was administered before the intervention and a post-test was administered afterwards. In addition, 20 pupils were interviewed. It was found that the use of didactic games in teaching significantly increases student motivation to learn science and that it has a positive effect on all the components of the "learning environment", as perceived by the students. In classes in which didactic games were used, the classroom atmosphere improved more than in classes where such games were not used.

### Published

Hugerat, M., Kortam, N., Maroun, N. T., & Basheer, A. (2020). The Educational Effectiveness of Didactical Games in Project-based Science Learning among 5th Grade Students. *EURASIA Journal of Mathematics, Science and Technology Education*, 16(10), em1888.

## The Historical Story behind the Discovery: How Does It Affect Students' Attitude towards the Scientific Endeavor?

The study examined changes in students' attitudes towards the scientific endeavor by exploring the impact of introducing historical stories and rationales into the science curriculum. The stories referred to discoveries by four scientists Galvani (the discovery of the electrical current), Fleming (the discovery of penicillin), Archimedes (the discovery of the floating principle), and Kekulé (the discovery of the structure of the benzene ring). The participants comprised 542 Arab students from northern Israel between the ages of 12 and 16. Out of the 542 students, 270 studied a curriculum that included historical stories approach (the experimental group), and 272 studied a curriculum without historical stories approach (the control group). A questionnaire was used to examine the students' attitudes towards the scientific endeavor. The results provide evidence for the view that relating the story behind the discovery significantly improves students' attitudes



towards science in comparison with those who study according to a traditional approach. The students noticed that certain circumstances must be present in order to enable a scientist to make his discovery. The main conclusion is that the scientific curriculum should include adequate scientific subject matter, integrating historical stories in order to encourage students to develop positive attitudes towards and perceptions of science.

### **Published**

Kortam, N., Basheer, A., Drawshe, H., Drawshe, S., & Hugerat, M. (2020). The historical story behind the discovery: how does it affect students' attitude towards the scientific endeavor? *Creative Education, 11*, 1243-1260.  
doi <https://doi.org/10.4236/ce.2020.118093>

## **The Story Behind The Discovery: Integrating Short Historical Stories In Science Teaching**

The use of the historical approach in teaching science has been studied for many years. Many researchers claimed that this approach has the power to improve students' understanding of the nature of science (NOS) by emphasizing not only the products of science but also the evolution of its ideas. In this paper we will deal with historical stories which were integrated into the science curriculum of primary, middle, and secondary school students from Arab schools in the Israeli Galilee (270 students). Integrating short historical stories in science teaching is a pedagogical approach in which teachers use the chronological story of scientific discoveries and the evolution of scientific ideas in order to render students' perceptions of the conceptual aspects of science, its processes and contexts more accurately. The stories in this paper refer to discoveries by four scientists Galvani (the discovery of the electrical current), Fleming (the discovery of penicillin), Archimedes (the discovery of the floating principle), and Kekulé (the discovery of the structure of the benzene ring). At the completion of enacting this curriculum, the students were asked to write their reflections. By reading the students' reflections we found out that they noticed that certain circumstances must be present in order to enable a scientist to make his discovery.

### **Published**

Kortam, N., Hugerat, M., & Mamlok-Naaman, R. (2020). The story behind the discovery: integrating short historical stories in science teaching. *Chemistry Teacher International (CTI)*, open-access, 20190016.  
doi <https://doi.org/10.1515/cti-2019-016>





## הבדלים בתפיסות (אמונות) הוראה ולמידה בקרב מורי מדעים, מורים-סטודנטים לתואר שני במכללה ופרחי הוראה - במערכת החינוך הערבית בישראל

מערכת החינוך במגזר הערבי בישראל אופיינה תמיד במסורתיות בהשקפותיה ובגישותיה. כך גם הגישות במגזר זה למקצוע המדעים, שראו בו מקצוע שיש להעביר בצורה פרונטלית ומכוונת מורה. לפי גישות מסורתיות אלה, לתלמיד יש מעט מקום - הן בשיעור, הן בפיתוח תפיסות מופשטות יותר על המקצוע. ממצאי מחקרנו מעידים כי סממנים אלה תקפים, בחלקם, גם עתה.

המחקר הנוכחי ניסה לעמוד על ההבדלים בגישות ההוראה-למידה בין מורים-סטודנטים לתואר שני, פרחי הוראה (תלמידי שנה ד' לתואר ראשון בהוראת מדעים) ומורים בפועל למקצועות מדעיים במגזר הערבי בישראל. ההתייחסות להבדלים בין תפיסותיהם נמדדה בשני משתנים תפיסתיים את מטרות הלמידה ותפיסותיהם האפיסטמולוגיות. בבחינת מטרות הלמידה, נמצא שהמורים בפועל הם בעלי תפיסה מודרנית יותר מפרחי ההוראה ומהמורים-סטודנטים לתואר שני. כמו כן, מורים-סטודנטים לתואר שני הם בעלי תפיסה מודרנית יותר של מטרות הלמידה מאשר פרחי ההוראה. בבחינת התפיסה האפיסטמולוגית נמצא שהמורים בפועל הם בעלי תפיסה אפיסטמולוגית מסורתית יותר מפרחי ההוראה והמורים-סטודנטים לתואר שני הם בעלי תפיסה אפיסטמולוגית מסורתית יותר מפרחי ההוראה. בבחינת מטרות ההוראה-למידה, נמצא שפרחי ההוראה מסורתיים יותר מן המורים-סטודנטים לתואר שני, וכי המורים בפועל מבינים היטב כי מטרות ההוראה-למידה הן לא רק הצלחה בלימודים, המתבטאת בציונים גבוהים, אלא גם הדרך. בבחינת התפיסה האפיסטמולוגית, נמצאה מגמה מסורתית יותר אצל המורים בפועל, ומודרנית יותר בקרב פרחי ההוראה, וזאת בניגוד למשוער. סיבה אחת לכך יכולה להיות שפרחי ההוראה הם צעירים ושותפים לתמורות שחלו בשנים האחרונות באשר למקור הידע ולהתייחסות אליו כאל גורם משתנה ולא כאל משהו מוחלט, בשונה מן הדור הישן. סיבה אפשרית אחרת היא כי בשל היותם צעירים, פרחי ההוראה מבינים שארגון הכיתה צריך להיות שיתופי יותר ועל המורה להיות לצד התלמיד. עם זאת, המורים-סטודנטים לתואר שני נוטים להבין כי מיקוד הלמידה צריך להיות בתלמיד, והראייה שלהם היא מודרנית יותר תוך כדי חתירה לעידוד התלמיד להצלחה, הקשבה ומתן הכלים והבמה בידו - כדי שישכיל ליישם את שלמד ולהצליח. ממצאי המחקר הנוכחי מחזקים את הסברה כי התרבות לעתים קרובות איננה זוכה לתשומת לב מספקת כאשר מדובר בהבנת האמונות של מורים למדעים, בהשפעתן על התנהגות המורים בכיתה ובהשפעות הנלוות ללמידת התלמידים. המורים במגזר הערבי משמרים את אמונותיהם השמרניות והמכוונות מורה, ובכך משפיעים על הישגי התלמידים, על גישותיהם לסוגיות מדעיות ועל הקריירות האפשריות שלהם.

### פורסם

קורטאם, נ', בשיר, א', זועבי, ר' וחוגיראת, מ' (2019). הבדלים בתפיסות (אמונות) הוראה ולמידה בקרב מורי מדעים, מורים-סטודנטים לתואר שני במכללה ופרחי הוראה - במערכת החינוך הערבית בישראל. עיונים בחינוך, 19, 687-712.



## רסלאן-שריף, אמאל

### Coloring a 1-by-n Chessboard

Counting problems in enumerative combinatorics are considered critical to solving problems in probability at the high school level and taught in undergraduate mathematics classes such as combinatorics, discrete mathematics and probability. Counting problems are taught at our colleges in a basic course on combinatorics or discrete mathematics.

In this paper, we pose and answer a variety of questions relating to the number of ways to color an  $n$ -by-1 chessboard under a variety of conditions. We answer the general question: Problem 1: *In how many ways can we color a 1-by- $n$  chessboard using  $m$  colors if one of the colors occurs a multiple of  $t$  number of times?*

#### Published

Abboud, E., Saleh, F., & Sharif-Rasslan, A. (2019) Coloring a 1-by- $n$  chessboard. *The College Mathematics Journal*, 505, 322-330. DOI 10.1080/07468342.2019.1662707

### The Discovery Approach Strategy in Solving Hard Mathematics Problems: a Case Study

Four goals of this report (a) To examine whether Mathematics Pre-Service Teachers (MPSTs) have the ability to solve correctly hard mathematical problems taken from the International Mathematics Olympiad (IMO), (b) To examine the main strategies used by MPSTs to solve these problems, (c) To examine whether MPSTs' attitudes and beliefs about mathematics teaching and learning, could be influenced by a course in "Math Problem Solving Seminar", and (d) what strategies might promote these beliefs. This has direct implications for the teaching and learning of mathematics. To answer these questions, sample that included a class of 36 students participate in The study which included two groups 14 excellent and 22 ordinary MPSTs. All participants took the same above course and worked in pairs (17) or individually (2). The participants choose a problem from a questionnaire which included 19 IMO problems. All the participants presented their solutions in front of the other students. Our case study- Samia's (female) solution to "The napkins problem (IMO 2011, C7)". The results showed that all students in our example have the ability to solve hard mathematical problems taken from the IMO. The results

showed as well, that the *Discovery Approach Strategy* together with the *Visual Approach Strategy* was found to contribute positively to the solution of her problem (need to get a conjecture without the proof). In the process of solving these problems, the MPSTs reorganized their information and reconstructed their arguments. Samia supported this by using *The Discovery Approach Strategy*. This result is in partial accordance with the study of Tripathi (2009).

The results of the semi-constructed interview showed, that the attitudes and beliefs were positively influenced by the lecturer" *An amazing and professional lecturer can contribute positively to MPSTs' solving of difficult IMO problems via his/her direction, enthusiasm, general encouragement, setting up of challenges and encouragement of creativity, motivation, self-confidence and mathematical thinking"*.

We believe that training by professional mathematical teachers, using *The Discovery Approach Strategy*, to solve difficult mathematical problems contributes positively to MPSTs' cognitive development, and as a direct implication, *will contribute positively to the cognitive development of their students*.

### **Published**

Shaker Rasslan, S. Hussam Arisha Haj Ihia,H., Samia Haj-Yahia, S., & Amal Rasslan-Sharif, A. (2020). The Discovery Approach Strategy in Solving Hard Mathematics Problems: a Case Study. *Contemporary Mathematics and Science Education*, 1(1), Article No ep20004.

DOI <https://doi.org/10.30935/conmaths/8449>.



## Effectiveness of Using Collaborative Distant Online Assignments to Improve Social Connections and Motivation of Preservice Teachers During COVID-19 and Beyond

Because of the ongoing COVID-19 crisis in public health around the world, online teaching and learning processes have become the norm. For educators, it is very significant and meaningful to explore how teaching, learning and assessment processes can be applied in distance learning.

The study aims to review and analyze the issue of Online distant collaborative assignments and the extent of its impact on pre-service teachers' motivation and to strengthen the relationships and social interaction between them during the performance of the task. A total of 158 students participated in this study, from different educational academic colleges and from different departments such as Mathematics and sciences.

The study examined the level of academic motivation and the effectiveness of social relations and communication between participants through personal reports from students and their answers to open-ended questions sent to them, in addition to a questionnaire prepared by the researchers. The validity and reliability of the questionnaire were assessed by academic experts in the field. The role and presence of the lecturer in running an online collaborative assignment is perceived as very important by the students in relation to pedagogical, social, organizational and technological aspects.

The findings highlight the importance of running an online collaborative assignment, and the importance of requirements a clarity and division of roles among learners both in the task execution phase and in the plenary presentation stage, to lead learners towards a successful completion of said task. These results highlight the effectiveness of performing collaborative distant tasks, improving social relationships and learning motivation among participants, which are of paramount importance during the period of social distance in the shadow of the COVID-19 pandemic.

### Published

Salman, E., Sharif-Rasslan, A., Awad, N., & Fattum, A. (2020). The Effectiveness of Using Collaborative Distant Online Assignments to Improve Social Connections and Motivation of Preservice Teachers During COVID19 and Beyond. In K. Bory, D. Nevide (Eds.), *Modern Critical Trends in Education*. (pp.77-100). Düsseldorf: Lambert Academic Publishing. (ISBN 978-620-3-19548-4)



## Virtual School Students' Reactions to Understanding Tasks: The Case of Local Extrema Point

The main aim The study is to examine the understanding of the concept of a *local extreme point* of differentiable function. Three research questions rose (a) To what extent do students who study 5 mathematics units in virtual school understand the concept extremum point? (b) To what extent does the concept name (i.e., "extremum point") influence the mathematical understanding of the concept upon students who study 5 mathematics units in the virtual school? (c) To what extent do students who study 5 mathematics units in the virtual school understand the concept maximum point? To answer the research questions, we used qualitative research methods based on semi-structured interviews. The results of the study showed that All the four interviewees know to find correctly the *stationary points*, but they don't distinguish between a stationary point and an Extremum point. All the interviewees mention that the two points are Extremum points instead of stationary points. We have to emphasize that mathematically, a stationary point not necessarily an extremum point. In addition, one of the interviewees confuses an extremum point and a maximum point because of the daily meaning of "Extremum" in Arabic languages. He also reveals *Pseudo-Conceptual Behavior*; he used sentences like "the tangent equal to 0" instead of the "slope of the tangent equal zero". It turns out also, that while three out of four interviewees determined the type of the extremum points by using the acceptable *value table* method correctly, the fourth determines the type of the extremum points by *one point* and by using the "*odd function*" characteristic, correctly. According to the requirement to find the extremum point the results showed that two of the four interviewees reveal pseudo-conceptual mode of thinking according to the maximum point concept. They use "slope at the extremum points equal 0". One of them even used concepts increasing, decreasing, positive, negative meaninglessly, without clarifying who is positive (negative) or who is increasing (decreasing). One of the important but interesting results is the reaction of the interviewees to the definitions of the maximum point concept. The results showed that 3 students out of 4 gave correct mathematical definition, but; the 4<sup>th</sup> student gave meaningless definition. We crossed his meaningless answer with his answers to the other questions during the interviews; it turned out that his answers to most of the questions revealed pseudo-conceptual mode of thinking.



### Published

Rasslan, S., Shibli, N., & Rasslan-Sharif, A. (2020). Virtual School Students' Reactions to Understanding Tasks: The Case of Local Extrema Point. *Contemporary Mathematics and Science Education*, 1(2), Article No ep20007 DOI <https://doi.org/10.30935/conmaths/8496>

### **Fostering Optimization in Problem-Solving**

The study investigates an activity for first and second graders; this activity was carried out in two schools in different zones through a project which was created by the author. This activity concentrated on stimulating the pupils to use their intuition to deal with "number optimization activity" which is a classroom activity that treats optimization via number sense. A part of a discourse between a teacher and a 2nd grader who was chosen randomly a transcript was analyzed. The results indicated that the learners' mathematical behavior (thinking), while treating a "number optimization activity", was guided by their numeracy intuition. Moreover, 2nd grader knowledge about numbers, especially his/her number sense, can support his/her ability to conclude basic propositions in optimization, e.g., "finding the minimum price(s) is necessary to find the maximum number of products".

### Published

Sharif-Rasslan, A. (2021). Fostering Optimization in problem-solving. *Primary Mathematics*, 12-14.



## ייצוגי כמות וגמישותם - הכוח המניע תהליכי חישוב והבנה מתמטית

### Quantitative Representations and Flexibility - The Driving Force of Calculation Processes Strengthens Mathematical Understanding

המחקר בחן בהרחבה את ייצוגי הכמות ואת השפעתם על הרהיטות החישובית. ייצוגי הכמות נבחנו מכמה נקודות מבט של המעבד המבני ושל המעבד הסדרתי כזיהוי מהיר, כתהליכי השלמה לשלם וכמבט גמיש על השלם וחלקיו. נקודות מבט אלה נבחנו באמצעות השפעתן על החישוביות ועל גילוי תובנות מתמטיות של משמעות התרגיל, הקשרים הלוגיים בין תרגילי החיבור לחיסור והבנת שאלות מילוליות. במחקר השתתפו 118 תלמידים, 97 מהם בני 7-8 שנים הלומדים בכיתות ב' בבית-ספר יסודי ו-21 תלמידים המתקשים בחשבון ומוגדרים בחינוך המיוחד תלמידים עם לקויות למידה. מקצתם מקבלים תמיכה לימודית בחשבון בקבוצות קטנות ולומדים בכיתה הרגילה במסגרת "שילוב", והאחרים לומדים בכיתות מיוחדות ללקויי למידה הנמצאות בבית הספר הממלכתי במסגרת "כיתות מקדמות". התלמידים עם לקויות למידה בני 9-13 שנים. התלמידים הלומדים בכיתות ב' הרגילות מוּיָנו לשלוש קבוצות על פי הישגיהם בחשבון באמצעות המשתנים האלה א. הצלחה גבוהה - תלמידים השולטים היטב בתכנים (ציון 90-100); ב. שליטה בינונית - תלמידים המכירים את התכנים אך שוגגים רבות ביישומם (ציון 65-89); ג. שליטה נמוכה - תלמידים מתקשים שאינם עומדים בדרישות המינימום של כיתה א' (ציון 0-65). (החלוקה והמונחים המגדירים קבוצות אלה מתבססים על סולם נבו (1995). לצורך המחקר נבנה מבדק מיפוי בנושא הלימודי "תחום העשרים" שהותאם להיבטים שפורטו לעיל ושימש כלי המחקר. ממצאי המחקר הראו הבדלים מובהקים בין הקבוצות כדלקמן נמצאו הבדלים צפויים בהיטות החישובית בעיקר בתחום עשרים. המחקר הראה כי ההבדלים קיבלו ביטוי גם ברוב תפקודי הליבה סובייטיז (זיהוי מהיר של כמויות עד 4) ואומדן מהיר עד 10, הפקת ציור דו-ספרתי, גמישות הייצוג המבני, הכולל השלמת עיגולים לשלם חסר - עד 10 ועד 20 בשרטוט ותובנת ההיפוך בין חיסור לחיבור מתוך מבט גמיש על שרטוט. נמצא כי סובייטיז ואומדן וכן הפקת ציור עד 20, הם מנבאים לרהיטות חישובית בתחום 20. כמו כן נמצא קשר מובהק ומנבא הצלחה בין תובנת קשר ההיפוך לפתרון תרגילים ויישום שאלות מילוליות. על פי ממצאי המחקר, נבנה מודל התערבות המציג את הקשר בין שלושת תחומי העניין בהוראת החשבון ייצוגי כמות וגמישותם, תהליכי חישוב והבנה מתמטית. המודל מכון את מורי המתמטיקה בהעמקת דרכי הוראתם להיבטים קדם-חישוביים של הייצוג וגמישותו, למען תלמידים רגילים ותלמידים מתקשים כאחד. מסקנות המחקר גורסות שממצאים אלה עשויים לשפוך אור על הבנת קשיים מתמטיים בקרב תלמידים ולתרום מבחינה דידקטית להעמקת דרכי ההוראה בכיתה הרגילה, ובוודאי כהוראה מתקנת לתלמידים מתקשים.

#### פורסם

שי, ר' ושריף-רסלאן, א' (2019). ייצוגי כמות וגמישותם הכוח המניע תהליכי חישוב והבנה מתמטית. *מחקר ועיון בחינוך מתמטי*, 7, 60-74.





## שפות וספרות והוראתן





## ח'יר-עבאס, רנדה

### The Use of Modern Standard and Spoken Arabic in Math Lessons - The Case of A Diglossic Language

Researchers have shown an increased interest in the way teachers use their *knowledge about language* (KAL) to enhance student understanding and learning. This qualitative case study investigated first- and second-grade teachers' use of KAL in Arabic. We investigated the linguistic transitions from standard Arabic to spoken Arabic made by the teachers during mathematics lessons. The results suggested that Arab-speaking mathematics teachers were aware of the gap between home language (Spoken Arabic) and school language (Modern Standard Arabic) and used linguistic transition as a teaching strategy to develop academic thinking and behavior among their students. The results suggested that Arab teachers built a non-formal bilingual education program where the two languages were used to teach mathematics. Despite the requirement to use Modern Standard Arabic, participants bridged the gap between the languages.

#### Published

Abbas, R., Vaknin-Nusbaum, V., Neuman, A., Mongillo, G., Feola, D., & Kaplan, R. (2018). The use of modern standard and spoken Arabic in math lessons - The case of a diglossic language. *Culture and Education*, 30(4), 730-765. doi <https://doi.org/10.1080/11356405.2018.1519920>.



## התרומה של מודעות מורפולוגית להבנת הנקרא בערבית

קריאה והבנה של טקסט תלויה בין השאר ביעילות הזיהוי של מילה יחידה. בשלבים הראשונים של רכישת הקריאה ילדים לומדים את הקשר הגרפמי-פונמי כדי לפענח מילים כתובות, ועם השיפור ביכולת הדיוק ובמהירות הפענוח של מילה יחידה הם מפתחים בהדרגה אוטומטיות בכל הנוגע ליכולת זו. עם השיפור במיומנויות הפענוח גוברת המודעות ליחידות מרובות אותיות שאינן מילים, כגון הברות ומורפמות. מודעות זו מתאפשרת לאחר שהאוטומטיות בזיהוי מילה מפנה משאבי קשב למבנה המילה לצורך הפקת משמעות ולמידה של ידע חדש מהטקסט.

במחקר הנוכחי נבדקה האפשרות שעם השיפור במיומנויות קריאה ופיתוח אוטומטיות בתהליכי פענוח מילה כתובה אכן תתחדד המודעות המורפולוגית לצורני המילים הכתובות. זאת בהנחה שפענוח מהיר של מילים כתובות מאפשר למשאבי הקשב להיות מופנים לצורני המילה הכתובה שלעיתים הם בבחינת גשר לאיתור משמעותן הסמנטית של מילים ומסייעים בהעמקת איכות הייצוג. באופן ממוקד נבחנה תרומתה הייחודית של המורפולוגיה ושל סוגים שונים של מודעות מורפולוגית (מעבר לפענוח פונולוגי) להבנת הנקרא בקרב תלמידי כיתות ב'. מודעות מורפולוגית על כל היבטיה (הטיות, גזירות, סמיכות גזורה) נמצאה כתורמת להבנת הנקרא ולהבחנה בין קוראים מתקשים לקוראים מיומנים.

### פורסם

וקנין-נוסבאום, ו', סבאח ס' ועבאס, ר' (2017). התרומה של מודעות מורפולוגית להבנת הנקרא בערבית. בתוך ב' מחיל וע'י אולשטיין (עורכות), *התפתחות לשונית בקרב דוברי ערבית בחברה רב-לשונית* (עמ' 45-66). תל-אביב: מכון מופ"ת.

## אטינגר, אילת

### "A Bird has Sung to me of Love" - Two Readings of One Poem by Meshullam da-Piera

Meshullam da Piera was an important Hebrew poet who lived and wrote in Gerona, Spain in the post-Andalusian climate of the thirteenth century. One of the major issues that has attracted the attention of scholars who deal with Da Piera is his frequent tendency to favor an enigmatic, vague style in his poems, whose incoherent flow and odd word choice are explained in different ways. This article presents an English translation as well as two separate readings of one of his ambiguous poems in a joint attempt to decipher and applaud the poet's mastery and ingenuity. The poem, "Li rinenah tsiptor") "A bird has sung to me of love") is a long, complicated poem of sixty-five lines. It is loaded with characters including the poet himself, a wondrous dove, the poet's fickle friends and rivals, an envisaged damsel and a lord named 'Amram, and it is organized around a description of the poet's obscure dream, which is followed by a rebuke of his allegedly loose mores. Our readings depart from one another mainly in terms of who expresses the rebuke the female figure who appears in the dream or the poet's friends. The fact that the poem itself does not provide a clear answer to this fundamental ambiguity is what prompted us to present our two interpretations that develop in different directions. The first reading, by Oettinger, claims that the poem incorporates the atmosphere and the ideas of the poet's circle of mystics in Gerona and suggests an inner, silent reflection governed by a divine vision. The second reading, by Kfir, interprets the poem as a complex psychological process of a lonely old poet who is anxious about his place within society and traces the process by which his psyche constantly struggles, sways, and strives for reconciliation. We believe that our different readings are not simply two subjective perspectives but rather are generated by the unique features of Da Piera's poetry, which themselves invite more than one interpretation.

#### Published

Kfir, U., & Oettinger, A. (2019). "A bird has sung to me of love" - two readings of one poem by Meshullam da-Piera. *Prooftexts* 37(2) 183-214.



## The Cattish Fire in Chelm (IFA 14232)

Stories embody the truth. They help us know and understand the nature of mankind; they explain ways of life; prepare us for various situations and teach morals, values and ways of behavior. Hence, they become didactic tools in the hands of the storyteller, who not only teaches his listeners of the world surrounding them, but also decides which stories to tell, and thus which reality to depict. In this paper, I analyze the story "The cattish fire in Chelm" as it was told to me by grandfather, Mordechai Hillel Kroshnitz (1915-1998) and documented in The Israel Folklore Archives (IFA 14232). The topics of Noodlehead towns like Chelm and the gloat and ridicule of fools are discussed, the story is compared to its historic-literary parallels in Rabbinic and Medieval Hebrew and international literatures, its two combined goals, of humor and conveying wisdom, are exemplified.

### Published

Oettinger, A. (2019). The cattish fire in Chelm, (IFA 14232). In H. Bar Itzhak & I. Pintel-Ginsberg (Eds.), *The Power of a Tale, Stories from the Israel Folktale Archives*. Pp. (204-212). Wayne State University Press: Detroit.

## Didactic Strategies for Effective Learning in "The King's Son and the Ascetic" by Ibn Hasdai

We live in an age where education has become a scientifically grounded profession. Considerable research has been conducted to decipher what constitutes effective teaching, which components are crucial, and in what ways students are impacted by teaching strategies. However, discourse on pedagogy - the systematic approach to learning and understanding the nature of learning - goes back to Antiquity and continued to expand in the Middle Ages as well. In this paper, I discuss the didactic strategies used in the Hebrew book of "The King's Son and the Ascetic", written in the 13<sup>th</sup> century by Abraham ben Samuel Halevi Ibn Hasdai, a Jewish poet and translator from Barcelona, in the light of the contemporary literature on teaching and especially "Essential Teaching Skills" by Chris Kyriacou, and "Qualities of Effective Teachers" by James H. Stronge, that theorize the practice of teaching, while defining the range of skills and activities that are essential to good teaching.

### Published

Oettinger, A. (2019/20). Didactic strategies for effective learning in "The King's Son and the Ascetic" by Ibn Hasdai. *Franfurter Judaistische Beiträge*, 43, 15-46.



## New Objectives for Ancient Poems Using Piyyût in the "Songs and Roots" (Širim wě-šorâšim) Elementary School Program to Instill Love of the Homeland

Teaching love of the homeland is a component of patriotism instilled in education primarily through informal, experiential, enjoyable and meaningful learning that elicits the emotions. Here, I show how Piyyût - religious Jewish poetry - can be used to inspire students to loving their country, and evoke strong emotions. I suggest that this can be done by harnessing three characteristics of Piyyût the religious response; affinity and familiarity; and the power of art the use of figurative speech to describe characters and events through the scenic imagery, as well as music and song, to create experiential learning sparked beauty and joy. These are illustrated by examples from the "Songs and Roots" (Širim Wěšorâšim) program that has been successfully applied in state and state-religious elementary schools since 2005.

### Published

Oettinger, A. (2020). New objectives for ancient poems using Piyyût in the "Songs and Roots" (Širim wě-šorâšim) elementary school program to instill love of the homeland". *Darom, Revista de Estudios Judíos 2*, 99-126.

## **"כי באר אל כל מחלה מרפא" - מדע הרפואה בספרות היפה העברית בימי הביניים**

במאמר זה נבחנות יצירות של ספרות יפה שכתבו יוצרים יהודים ספרדים בעברית במהלך המאות ה-12-13, אשר כוללות ידע רפואי. הדיון מתמקד בבחינת הסוגות בהן נכתבו היצירות ובסקירת תוכן, ככלים המאפשרים לעסוק בשאלה החוץ-ספרותית מה ניתן ללמוד מתוך כך על החברה היהודית אשר כתבה וקראה את אותן היצירות. מעיון במאמר עולה כי נושאים מתחום הרפואה עמדו במרכזם של שירים לימודיים ונארגו לתוך עלילות משעשעות בספרות הפרוזה החרוזה. השירים כללו הנחיות לאורח חיים בריא, ידע רפואי מגוון והסברים רפואיים עשירים לתופעות ולדרכי התנהגות, כל זאת בהתאם לתורת הרפואה בימי הביניים, לעתים בהתבסס על כתבים רפואיים, כאשר היוצרים משמשים כפופוליזטורים של הידע הרפואי, ומסייעים בהבאתו ובהנגשתו לקהלם. ניתן להסיק כי היצירות נכתבו עבור קהל יהודי משכיל, שוחר תרבות וספרות זרה אך המבכר תכנים על פני אופן הצגתם, ונעזר ביצירות הספרות כחומר לימודי. כן ניתן לשער, כי קהל היעד כלל רופאים ופרחי רפואה. ספקולציות אלו מוצאות את אישושן בבדיקת אלמנטים חוץ-ספרותיים, חברתיים, תרבותיים והיסטוריים, בהתאם לגישת הביקורת ההיסטוריוציסטית.

## פורסם

אטינגר, א' (2017). "כי באר אל כל מחלה מרפא" - מדע הרפואה בספרות היפה העברית בימי הביניים. *דברים כתב עת אקדמי רב-תחומי*, ט' 27-39.

## **נופי ארץ-ישראל בפיוט והחינוך לאהבת הארץ**

אהבת הארץ וידיעתה הן אחד מערכי היסוד של תכנית הלימודים בחינוך העברי, מאז קום המדינה ועד ימינו. במאמר זה נבחנת האפשרות להנחילן באמצעות הוראת הפיוט ושירת הקודש, מורשת הדורות, הנלמדת במערכת החינוך הממלכתי. במאמר מוסבר ומודגם כיצד ההבעה ההיסטורית, הדתית-לאומית, של כמיהת העם לציון, מוצגת בפיוטים באמצעות המעגל האסכטולוגי שמהלכו תינוי צרות ההווה בעת השעבוד והגלות, געגועים לעבר המפואר בימי המלכות ותקווה לגאולה עתידית. עוד נבחנים יסודות הנוף בפיוטים, מטענם הרגשי, והאופנים שבהם ניתן לשלב מכלול זה בהוראה כיום.

## פורסם

אטינגר, א' (2017). נופי ארץ-ישראל בפיוט והחינוך לאהבת הארץ. בתוך: י' טובי, ש' גליק ור' לוי-מלמד (עורכים), *יובלי אהבה - קובץ זיכרון ליובל הימן, הי"ד (עמ' 188-179)*. ירושלים: הוצאת המשפחה.

## **"יבש יבש" "ירוק ירוק" - מעשייה בלבוש של אגדת קדושים**

מאמר זה עוסק בניתוח הסיפור "שבעה עצי תמר" (אסעי"י 14382) מפי המספרת סולטנה בדש, ילידת תוניסיה (1934). מהעיון המפורט בסיפור עולה כי בתוך מסגרת של אגדת קדושים, שעניינה מסר דתי-נורמטיבי של בטחון באל והסתפקות בקיים, השכילה המספרת לטמון מסרים ספציפיים המתייחסים לערכה הרב של האישה הטובה, על תרומתה לבעלה, על הצורך להעריכה, על החטא שבבגידה ועל ההפסד שנוחלים שני הצדדים, עם חורבן הבית בהתרת קשר הנישואין. יתר-על-כן, בקריאת הסיפור כמעשייה, העוול הנעשה לאישה מעיד על חוסר הגינות במערכת החברתית הקיימת. המספרת מעידה כי שמעה סיפור זה בילדותה, מפי אמה, ובחרה לספר אותו לבנה. נסיבות ההיגוד הללו מקנות לסיפור משמעות עמוקה הוכחת תקפותם של ערכים חברתיים-דתיים, בצד קריאת תגר על הקיים, מסרים שהם משמעותיים במיוחד כאשר הם מועברים מאם לבנה המתבגר.

## פורסם

אטינגר, א' (2020). "יבש יבש" "ירוק ירוק" - מעשייה בלבוש של אגדת קדושים. בתוך צ' זבה-אלרון, ח' מילוא וע' פינטל-גינסברג (עורכות), *מסורת חיה - ל"ב עיונים ועיון (עמ' 279-291)*. חיפה: פרדס הוצאה לאור.



## **"לא הבלים הוא הבל מבוע הרוח/ הבא בשפתי אוהבים" - "נקר הספק" למשה יצחקי**

"נקר הספק" הוא ספר שיריו השמיני של פרופ' משה יצחקי. ברשימת הביקורת הקצרה אני סוקרת את הספר על שמונת מדוריו, מאפיינת את המהלך הטמון בו, בוחנת את הכלולות הנוצרת במהלך הספר בנושאים, בדימויים ובלשון, ומצביעה על זיקות למיתולוגיה, לשירה ולמקורות היהודיים התנ"ך וספרות חז"ל.

### **פורסם**

אטינגר, א' (2020). "לא הבלים הוא הבל מבוע הרוח / הבא בשפתי אוהבים" - ספר 'נקר הספק' למשה יצחקי. *עיתון 77*, 414, 14-15.

## **מתרגם, עורך ויוצר: על מלאכתו של אבן חסדאי בספר "בן המלך והנזיר"**

אבן חסדאי, מתרגם בן המאה ה-13 מן הערבית לעברית, מציין בפתח ספרו "בן המלך והנזיר" שהוא תרגם אותו מספר בערבית, אשר תורגם מן היוונית. הספר העברי נושא דמיון כלשהו לנוסח ערבי קצר המכונה בשם "כתב יד האלה", אולם בשני הספרים הללו רואה המחקר עיבודים של נוסח ערבי נוצרי אבוד שהוא עיבוד של נוסח יווני של ספר ברלעאם ויואסף. במאמר זה אני בוחנת את האפשרות שאבן חסדאי אכן נשען בעיבודו על "כתב יד האלה", אולם עשה בטקסט כרצונו: סיפור המסגרת תורגם בהתאם לגישה הרומאית, לפיה תרגום משמעו פירוש וביאור. לתוך "כתב יד האלה" שזר אבן חסדאי חומרים מתורגמים נוספים שאותם ערך וסגן, תוך תפיסת התרגום כאומנות של כתיבה משותפת. בנוסף, אבן חסדאי התאים את הספר לקהל קוראיו היהודי ושילב בו שירים רבים פרי-עטו, ובכך הפך את התרגום למעשה פוליטי. כתוצאה משינויים אלו הנוסח העברי הוא יצירה עצמאית העומדת בפני עצמה. ייתכן שמחברה בחר לכנותה בשם "תרגום" כבר בפתח דבריו, מתוך רצון לשווק אותה לקוראיו, שבאותה עת העדיפו ספרות זרה על פני ספרות מקור.

### **פורסם**

אטינגר, א' (2020). מתרגם, עורך ויוצר: על מלאכתו של אבן חסדאי בספר "בן המלך והנזיר". *בין עבר לערב - המגעים בין הספרות הערבית לבין הספרות היהודית בימי הביניים ובזמן החדש*. י"ב: 65-85.



## אסדי, איברהים

### How do the different Cognitive and linguistic Factors Contribute to reading in Arabic? A Cross-Sectional Study from First to Sixth Grade

The contribution of linguistic and cognitive variables to reading processes might vary depending on the particularities of the languages studied. This view is thought to be particularly true for Arabic which is a diglossic language and has particular orthographic and morpho-syntactic systems. This cross-sectional study examined the contribution of phonological, orthographic, morphological, semantic, syntactic, visual perception, rapid automatic naming and phonological working memory abilities to decoding and fluency (the two components of reading). The results, obtained from 1305 native Arabic-speaking children in first to sixth grade, were analyzed using path models. The analysis revealed that memory and orthographic knowledge contributed to both components of reading, while phonological awareness contributed mainly to decoding and rapid automatic naming contributed to fluency. The contribution of morphology to the two components, which appeared already in the first grade, was weak and inconsistent. Finally, the results showed that visual perception, semantics, and syntax predicted neither decoding nor fluency. The data presented here suggest that reading development in Arabic differs from other languages, a finding that might explain certain difficulties in reading acquisition in Arabic. The results are discussed in the light of previous findings in the literature and the specific features of Arabic.

#### Published

Asadi, I. A., Khateb, A., Ibrahim, R., & Taha, H. (2017). How do the different cognitive and linguistic factors contribute to reading in Arabic? A cross-sectional study from first to sixth grade. *Reading and Writing an Interdisciplinary Journal*, 30(9), 1835-1867



## How Simple is Reading in Arabic? A Cross-Sectional Investigation of Reading Comprehension From First to Sixth Grade

The study aimed to examine, from a cross-sectional perspective, the extent to which the simple view of reading (SVR) model can be adapted to the Arabic language. This was carried out by verifying, in both beginning and more skilled readers, whether the unique orthographical and morphological characteristics of Arabic contribute to reading comprehension beyond decoding and listening comprehension abilities. Reading comprehension was evaluated in a large sample of first to sixth-grade Arabic-speaking children. The participants' decoding and listening comprehension abilities were investigated together with their orthographic and morphological knowledge. Path analysis indicated that reading comprehension was moderately explained by the SVR (56-38%). Orthographic and morphological knowledge explained an additional 10-22% of the variance beyond that explained by the basic SVR components. These findings demonstrate that certain linguistic aspects of Arabic impact reading processes differently when compared with other languages. The psycholinguistic implications of these findings are discussed in the light of previous findings in the literature.

### Published

Asadi, I. A., Khateb, A., & Shany, M. (2017). How simple is reading in Arabic? A cross-sectional investigation of reading comprehension from first to sixth grade. *Journal of Research in Reading*, 40(S1), S1-S22

## Predicting Reading in Vowelized And Unvowelized Arabic Script An Investigation of Reading in First and Second Grades

The study examined the orthographic transparency of Arabic by investigating the contribution of phonological awareness (PA), vocabulary and Rapid Automatized Naming (RAN) to reading vowelized and unvowelized words. The results from first and second grade children showed that PA contribution was similar in the vowelized and unvowelized orthographies. The RAN contribution was weak and similar in both versions. The vocabulary contribution increased with grade and was slightly higher in the unvowelized than vowelized orthography. Since orthography transparency in Arabic is determined solely by vowelization, these results are discussed in relation to its position on the transparency-depth continuum.



### Published

Asadi, I. A., & Khateb, A. (2017). Predicting reading in vowelized and unvowelized Arabic script - An investigation of reading in first and second grades. *Journal of Reading Psychology*, 38(5), 486-505.

### **Reading Arabic with Short Vowels Vowelized But Not Necessarily Transparent Orthography**

The study examined the influence of diacritics for short vowels on the accuracy and fluency of reading aloud in Arabic orthography among a sample of 1,516 children in first through sixth grades. For this purpose, the children's reading was evaluated using two lists of directly comparable words one without diacritics for short vowels (unvowelized) and the other with diacritics for short vowels (fully vowelized). Our results indicate that reading accuracy and fluency were higher on the unvowelized orthography in all the grades. However, reading accuracy did not differ significantly between the first and second grades. Thus, diacritics for short vowels seem to add to the complexity and density of Arabic orthography. These findings are discussed in the context of the unique characteristics and complexity of the Arabic orthographic system. In addition, the role of diacritics for short vowels in determining orthographic depth and transparency in Arabic is discussed.

### Published

Asadi, I. A. (2017). Reading Arabic with short vowels vowelized but not necessarily transparent orthography. *Journal of Writing Systems Research*, 9(2), 137-147.

### **What Contributes to Spelling in Arabic? A Cross-Sectional Study from First to Sixth Grade**

The study aimed at examining the contribution of various cognitive and linguistic variables to spelling processes among native Arabic-speaking children from first to sixth grades. For this purpose, measures of phoneme awareness (PA), orthographic, morphological, lexical and syntactic knowledge were collected, together with working memory and speed of processing indexes. The analysis was conducted on a large and representative sample using path models. The results revealed that, together with the consistent contribution of PA and orthography, morphology played an important role in predicting spelling. Furthermore, our findings suggested that Arabic orthography, even



the vowelized version which is considered as transparent (since it provides the reader with the full phonological information), behaved as other deep orthographies in spelling. These findings are discussed in the context of the unique characteristics of the Arabic language and its orthographic system.

### Published

Asadi, I. A., Ibrahim, R., & Khateb, A. (2017). What contributes to spelling in Arabic? A cross-sectional study from first to sixth grade. *Journal of Writing Systems Research*, 9(1), 60-81.

## **Examining the double-Deficit Hypothesis in Vowelized-Transparent Arabic in a national Representative Sample of Grades 3 and 4**

We examined the double-deficit hypothesis in Arabic by investigating the reading and cognitive profiles of readers with selective deficits in naming speed, phonological awareness, or both. In a nationally representative sample of 486 children in 3<sup>rd</sup> and 4<sup>th</sup> grade, we identified 171 children with reading difficulties 20 (12%) were classified as having a phonological deficit, 31 (18%) as having a naming speed deficit and 41 (24%) as having a double deficit. Differences between the subgroups extended to reading, cognitive and linguistic processes beyond phonological and naming abilities. Children with a double deficit performed worse than those with a naming speed deficit but similar to those with a phonological deficit. Numerous unconfirmed theories led to an in-depth analysis of the nature of rapid automatized naming and its relation to orthographic processing. Surprisingly, our findings revealed that orthographic processing may be considered a novel and separate core deficit, suggesting a triple deficit in Arabic rather than a double deficit. The findings are discussed in light of the uniqueness and complexity of Arabic orthography and orthographic transparency in the Arabic language.

### Published

Asadi, I. A., & Shany, M. (2018). Examining the double-deficit hypothesis in vowelized-transparent Arabic in a national representative sample of Grades 3 and 4. *Dyslexia*, 24(3), 234-249.



## Reading Comprehension Subgroup in Arabic Simple but Not Multiplicative Model

The "Simple View of Reading" (SVR) model posits that reading comprehension is a product of decoding and listening comprehension and that reading comprehension difficulties can be categorized according to the weakness and strength of those two components. In the present study, the SVR applicability to subgroup reading comprehension in Arabic and the multiplicative claim were tested. A large sample of 1,012 children who were good readers and 370 children with poor reading comprehension from first-sixth grades took part in the study. The findings provide support for the SVR 80% of children with poor reading comprehension were classified into hyperlexic, dyslexic or garden variety subgroups based on their performance in decoding and listening comprehension. In addition, 26% of the children with adequate reading comprehension showed weakness in decoding and/or listening comprehension, a finding that does not support the multiplicative model. Theoretical implications are discussed with specific recommendations for intervention programmes.

### Published

Asadi, I. A. (2018). Reading comprehension subgroups in Arabic - A simple but not a multiplicative model. *Reading & Writing Quarterly*, 34(4), 281-290.

## The Contribution of basic Linguistic Skills to Handwriting among fifth-Grade Arabic-Speaking Children

Previous research has attempted to characterize the contribution of motor, cognitive, and linguistic variables to handwriting. In this study, we aimed at assessing the contribution of basic linguistic skills (namely phonological processing, orthographic knowledge and morphology awareness) to the three dimensions of handwriting (i.e., legibility, speed and spelling) in the same participants. For this purpose, 200 normally developing fifth grade children, in whom motor variables are hypothesized to play little role in handwriting, participated in this study. Handwriting (text copy and dictation) and other linguistic measures (testing phonology, orthography and morphology) were subjected to regression analyses. These showed that the same linguistic measures contributed differently to the various dimensions of handwriting and explained 26%, 13% and 57% of the variance in legibility, speed and spelling respectively. These findings indicated that legibility and speed were



relatively poorly explained and emphasize the need to include other linguistic and non-linguistic variables in the study of handwriting in this age group. Future research on Arabic should developmentally investigate handwriting from earlier stages of skill acquisition and assess the contribution of linguistic, cognitive and motor factors, not only to text copy and dictation but also to other tasks such as free writing and written expression.

### Published

Metanis, A., Asadi, I. A., & Khateb, A. (2018). The contribution of basic linguistic skills to handwriting among fifth-grade Arabic-speaking children. *Journal of Writing Systems Research*, 10(2), 95-110.

## **The SVR between Transparent and deep Versions of the Arabic Orthography**

Several studies have tested the validity of the simple view of reading model by examining various degrees of orthographic depth. The study aims to validate this model in both transparent and deep versions of Arabic. In addition, the contribution of the basic components of decoding and listening comprehension to reading comprehension in the transparent and deep versions was tested. In total, 460 typical Arabic-speaking children in the first and second grade participated in this study. A moderate degree of explained variance was found in both versions, and the contribution of decoding and listening comprehension was influenced by transparency and by the grade level of the reader. The results are discussed in relation to previous findings in the field and the unique characteristics of the Arabic language.

### Published

Asadi, I. A., & Ibrahim, R. (2018). The SVR between transparent and deep versions of the Arabic orthography. *Journal of Reading Psychology*, 39(6), 537-552.



## How the Characteristics of Phonemes and Syllabic Structures Can Impact the Phonological Awareness of Kindergarten and First-Grade Arabic-Speaking Children

Phonological awareness may be influenced by the differences in the characteristics of the items studied. This hypothesis is considered particularly applicable to Arabic, which is a diglossic language. The study examined the impact of the phonemic position and the affiliation of the items between spoken and standard languages on phonemic isolation tasks. The data were obtained from 310 native Arabic-speaking kindergarteners and first-graders and revealed that using simple and complex monosyllabic pseudo-words, isolating initial phonemes was more difficult than isolating final phonemes. In addition, the items in the spoken language were easier than the items in the standard language for the children at both grade levels. Thus, certain phonological features of the standard language may not be sufficiently developed even after entrance to school, which may explain certain difficulties in reading development in Arabic. The results are discussed in relation to previous findings.

### Published

Asadi, I. A. (2019). How the characteristics of phonemes and syllabic structures can impact the phonological awareness of kindergarten and first-grade Arabic-speaking children. *Reading Psychology*, 40(8), 768-781.

## The Impact of the Position of Phonemes and lexical Status on phonological Awareness in the diglossic Arabic Language

The study aimed at examining the impact of phonemes and lexical status on phonological manipulation among pre-school children. Specifically, we tested the impact of phonemic positions (initial vs. final) and lexical status (shared, spoken, standard and pseudo-words) on phonemic isolation performance. Participants were 1,012 children from the second year (K2) and third year (K3) in kindergarten. The results of the ANOVAs revealed significant effect of the phonemes' position on the phonemic isolation performance whereas the performance was easier with the initial rather than the final phonemes. Also, the repeated measure analysis showed that the lexical status also impacts the phonemic isolation performance. The performance in pseudo-words was lower than all the others. However, the other clusters of real words did not differ. The results are discussed in the light of previous findings in the literature



and of differences in the syllabic structures of the words that may influence phonological awareness

### **Published**

Asadi, I. A., & Abu-Rabia, S. (2019). The impact of the position of phonemes and lexical status on phonological awareness in the diglossic Arabic language. *Journal of Psycholinguistic Research*, 48(5), 1051-1062.

## **Phonological Task Comparability in Arabic and Relation to Reading - A longitudinal Assessment in Kindergarten and First Grade**

The universal role of phonological processing skills for reading acquisition has been established in many different languages including Arabic. However, in Arabic little knowledge exists about the development of wide-range of phonological tasks and about the correlations between them. We longitudinally studied the developmental trends and correlations between different phonological tasks in kindergarten and first grade and tested their relation to reading accuracy and fluency. Thirty-two children individually completed the same ten phonological processing tasks in kindergarten and first grade. In first grade, reading measures and letter naming were also assessed. Developmental effects of phonological skills showed significant improvement of performance between the two phases in the majority of tasks. Task comparability has raised interesting issues related to the developmental hierarchy of phonological awareness tasks. Moreover, phonological awareness tasks were more inter-correlated in first grade compared to kindergarten, and their correlations to reading were also more established when phonological measures were collected in first grade. The developmental hierarchy of phonological tasks seems to depend on the linguistic and cognitive complexity (unit position, maintenance of the coherent unit and word length) of the items, beyond the size of the phonological unit which was manipulated. The observations reported here have practical implications for planning graded phonological instruction and intervention strategies.

### **Published**

Mansour-Adwan, J., Asadi, I. A., & Khateb, A. (2020). Phonological task comparability in Arabic and relation to reading - A longitudinal assessment in kindergarten and first grade. *Reading and Writing an Interdisciplinary Journal*, 33(8) 2121-2151.



## Predicting Reading Comprehension in Arabic-Speaking Middle Schoolers using linguistic Measures

The study aimed at examining the contribution of various linguistic components to reading comprehension (RC) in the seventh and ninth grades, and to compare this contribution between two groups typical developing children, and those with reading disabilities (RD). This was done by testing the relative contribution of phonological awareness, morphological knowledge, vocabulary and syntactic knowledge to reading comprehension, in both groups. The regression analysis indicated that the linguistic components explain between 60-56% of the variance in RC in the seventh and ninth grades among the typical group, and between 74-79% in the same grades among those with RD. While phonological awareness and morphological knowledge contribute to RC only among the RD group, the contributions of vocabulary and syntactic knowledge were found to be significant in both groups. The results are discussed in the light of previous findings in the literature with theoretical and pedagogical implications.

### Published

Asadi, I. A. (2020). Predicting reading comprehension in Arabic-speaking middle schoolers using linguistic measures. *Reading Psychology, 41*(2), 87-109.

## The Contribution of Linguistic and Cognitive Measures to Listening Comprehension among Arabic-Speaking Kindergarteners

Listening comprehension (LC) is considered an important but complex skill that predicts later reading comprehension in various languages. Little is known about the nature of LC in the Arabic diglossic language. In this study, we aimed at understanding the relationship of LC with different linguistic and cognitive components. For this purpose, 262 Arabic-speaking kindergarteners participated in this study. Our regression results showed that both linguistic and cognitive measures explained 53% of the variance in LC. Regarding the linguistic measures, while vocabulary, syntactic knowledge and morphological knowledge contributed significantly to LC, the phonological awareness contribution was not significant. As for the cognitive measures, both working memory and speed of processing were found to contribute significantly to LC whereas the contribution of speed of processing was marginal. Our findings are discussed in the light of previous findings in the literature with theoretical and pedagogical implications.



### Published

Asadi, I. A. (2020). The contribution of linguistic and cognitive measures to listening comprehension among Arabic-speaking kindergartners. *Literacy Research and Instruction*, 59(1), 1-16.

## **The Impact of Diglossia on Phonological Processing**

The study examined the impact of the lexical distance (spoken, modern standard Arabic-MSA, shared, and pseudo-words) on phonological awareness (PA) and naming speed (RAN). The data from this longitudinal study were obtained from 261 native Arabic-speaking kindergartners, which were then followed to first grade. The data revealed a significant effect of the lexical distance both on PA and RAN. The PA of the spoken language was easier than the MSA and the other clusters. Similarly, the naming speed of the spoken items was better than the MSA but slower than the shared ones. Regardless of lexical distance, the main effect was on the length of the items but not on the phonemic position. Thus, in the Arabic diglossic reality, certain phonological features of the MSA may not be sufficiently developed and available in the first grade for the reading development. The results are discussed in relation to previous findings.

### Published

Asadi, I. A., & Abu-Rabia, S. (2021). The impact of diglossia on phonological processing. *Journal of Reading Psychology*, 42(7), 685-699.



## בסל, אברהים

### Biblical Quotations in al-Biqā'ī's Qur'ān Commentary

This article deals with the Biblical quotations in al-Biqā'ī's Qur'ān commentary *Nazm al-durar fī tanāsub al-āyāt wa-ʾl-suwar* [Arrangement of the Pearls regarding the Correspondence of the Verses and the Sūras]. For the quotations, al-Biqā'ī relied on an Arabic manuscript of the Pentateuch which he mistook for a Jewish manuscript with signs of the Jewish reading in the marginalia. Walid Saleh, in his study of al-Biqā'ī's book, argued that the Arabic text of the Pentateuch used by al-Biqā'ī was a Karaite translation of the Hebrew Bible, possibly by Yefet ben 'Elī. But in light of our examination, it seems that al-Biqā'ī was wrong in his identification. Our examination of the manuscripts led us to conclude that the Biblical text that al-Biqā'ī used was a Christian Arabic translation of the Pentateuch rendered from the Peshitta, which is very similar to the Arab<sup>Syr2</sup> translation tradition; in fact, it is nearly identical to the tradition reflected in the manuscripts of Sinai 4 and Munich 234.

#### Published

Bassal, I. (2020). Biblical quotations in al-Biqā'ī's Qur'ān commentary. *Jerusalem Studies in Arabic and Islam*, 48, 159-196.

### שני כתבי יד מזרחיים לתורה בערבית נוצרית - האמנם שתי מסורות שונות?

המאמר דן בשאלה האם כתב יד סיני 4 (מאה 10) נציג מסורת Arab<sup>Syr2</sup> הושפע מכתב יד סיני 2 הקדום יותר (מחצית שנייה של המאה ה-8) נציג מסורת Arab<sup>Syr1</sup>? והאם קיימת השפעה של מסורת תרגום Arab<sup>Syr1</sup> על מסורת תרגום Arab<sup>Syr2</sup>?

העיון המשווה בין שני כתבי היד הראה שהמעתיק של כתב יד סיני 4 הכיר את כתב יד סיני 2. זאת נלמד גם מן ההערות הנוספות בתוך כתב היד. אולם לא נוכל לומר זאת לגבי המתרגם שהוא אונונימי. עם זאת, כתב יד סיני 4 מגלה קווים עצמאיים ייחודיים, דבר שאנו רואים בכמה מישורים בעניין התקינות הלשונית וההקפדה על כללי הדקדוק הערבי - סיני 4 מקפיד יותר על השימוש הדקדוקי הנכון ביחסות של הערבית בצורות האקוזטיב, הנומנטיב או בהתאם הדקדוקי או בנטיית הפועל והבניינים.

במלאכת התרגום נמצא הבדלים בולטים בין שני כתבי היד והדבר בא לידי ביטוי במספר תחומים (א) בדיוק בהבנת הצורות הסוריות - סיני 4 נאמן לטקסט המקור ומדייק יותר בהבנת הצורות הסוריות - סיני 4 נאמן יותר לטקסט המקור ומדייק יותר בהבנת



הצורות הסוריות; (ב) באוצר המילים - סיני 4 מגלה עצמאות והבדל בתרגום שמות אבני המילואים, בשמות מקומות, במינוח דתי, בתרגום שמות האלוהות. באשר לתרגומים אלטרנטיביים עוקבים - בולטת בסיני 4 הנטייה לתרגומים אלטרנטיביים עוקבים. במשלב הלשוני - סיני 2 משתמש במטבעות לשון ארכאית מן השירה הערבית הקדומה ומן הקוראן והחדתי יותר מסיני 4. גם השימוש במילים הארמיות - בסיני 4 יש פחות שימוש במילים ארמיות בהשוואה לסיני 2.

לאור כל ההשוואות הללו ניתן לראות בכתב יד סיני 4 תרגום עצמאי, לשונו הערבית נהירה והיא מייצגת את הערבית הסטנדרטית של תקופת המתרגם. כנראה, שההבדלים הללו, שזכרו לעיל, היוו סיבות אשר הביאו לתפוצתו של כתב יד סיני 4 בתוך הכנסייה הסורית המזרחית ואף עזרו לו לדחוק הצידה את כתב יד סיני 2 הקדום ממנו. למעשה, לפנינו שני כתבי יד שונים ושתי שיטות או שתי מסורות תרגום שונות שיש ביניהן הרבה מן המשותף וגם מן המבדיל.

### פורסם

בסל, א' (2019). שני כתבי יד מזרחיים לתורה בערבית נוצרית - האמנם שתי מסורות שונות? בית מקרא, סד (א), 55-81.

## **מخطוطة سيناء 2 أقدم ترجمة عربية للتوراة جوانب من لغتها وصنعة ترجمتها (כתב יד סיני 2 התרגום הקדום לתורה עיונים בלשון ובמלאכת התרגום)**

كما بيّننا في ن مخطوطة سيناء 2 نُقلت عن السريانية، وهي تحتوي على أسفار موسى الخمسة وسفر دانيال. تاريخ إنجاز نسخها مدوّن في الكولوفون في ورقة 246 ب 940/939 ميلادي. المترجم والناسخ مجهولان، لكن مقارنة المخطوطة مع آيات توراتية وردت في المصادر العربية القديمة مثل ابن قتيبة (ت 889 للميلاد)، والن الذي سجّل الطبري (923-839 للميلاد) والمنسوب إلى محمد ابن إسحاق (ت. 767 للميلاد)، تبين لنا أن المخطوطة تعود إلى فترة أكثر قدماً، فهي تعود، حسب رأينا، إلى النصف الثاني من القرن الثامن للميلاد، ومكان ترجمتها، على ما يبدو، أحد المراكز المسيحية في تلك الفترة في سوريا أو في العراق. وهذا في أقدم ن ص عربي مترجم للتوراة وصل إلينا. من ناحية المسائل الصرفية حافظت مخطوطة سيناء 2 على المبنى الكلاسيكي بشكل عام، مع وجود تحولات في مسائل صرفية مثل تبديل في الميزان الصرفي لصيغ الفعل، الوحدة الصرفية «-ين» متحجرة وتفيد صيغة الجمع المنصوب أو المجرور أصبحت تفيد أيضاً صيغة الجمع في حالة الرفع كذلك؛ الوحدة الصرفية «-يyyīn لصيغة الجمع تختصرت وكتبت ((-īn> iyīn: يكثر استعمال صيغ الجمع بوزن جمع القلة، كما يتم استخدام كلمات ومصطلحات دينية مميزة، في الترجمة منقولة عن جذور نظيرة في اللغة المترجم عنها؛ كذلك نجد استعمال كلمات وتعابير من اللغة العربية القديمة ومن القرآن والحديث.

## نُشر

بصل، إ. (2017). مخطوطة سيناء 2 أقدم ترجمة عربية للتوراة جوانب من لغتها وصنعة ترجمتها. *المجلة - مجمع اللغة العربية*، 8، 132-55.

## مخطوطة سيناء 2 ترجمة عربية قديمة للتوراة

يشتمل هذا البحث على قسمين الأول دراسة والثاني النصّ وتحقيقه. يشمل قسم الدراسة على عرض تاريخي ولغوي. في العرض التاريخي نستعرض أولاً الخلفية الحضارية للعرب المسيحيين في المشرق العربيّ في القرن السابع ميلادي والمشهد اللغويّ للمشرق العربيّ عشية ظهور الإسلام وانتشار اللغة العربية اللذان شكّلا خلفيةً لنشوء ترجمات عربية للكتاب المقدّس. ويناقش السؤال متى باتت الحاجة ماسة لنقل الكُتب الدينية اليهودية والمسيحية، التي كانت مكتوبة بالعبرية أو الآرامية أو اليونانية أو اللاتينية أو القبطية، إلى اللغة العربية؟ ونأتي بعده بعرض وجهات نظر الباحثين بصورة عامّة حول الفترة التي تُرجم بها العهد القديم والعهد الجديد للغة العربية، وخاصة السؤال هل عرّف العرب التوراة والإنجيل أو أجزاء منهما قبل ظهور الإسلام؟ أيضاً نأتي بعرض لترجمات العهد القديم القديمة وخاصة العربية باختلاف مصادرها وفتراتها.

كذلك يشمل هذا القسم على وصف للمخطوطة ودراسة موسّعة للخط والرسم الإملائي والتراكيب النحوية والصرفية إضافة إلى دلالة الألفاظ. ويشمل أيضاً فصلاً في صنعة الترجمة والمسائل الأسلوبية التقابلية بين اللغات العربية، السريانية والعبرية.

أمّا القسم الثاني، وهو تحقيق النصّ، فيشتمل على المتن والحواشي (basic text and apparatus). يشمل المتن نصّ المخطوطة بصورته الحقيقية كما ورد فيها، ولهذا أبقيت لغة نصّ المخطوطة على عواهنه، أمّا الحاشية فشملت قسمين حاشية علوية (upper apparatus) وتشمل ملاحظات حول النصّ، وأيّ تصحيح أو ملاحظة وردت فيها كتبت بعد المعكف ([ lemma]). فالكلمة من نصّ المخطوطة وردت داخل المعكف والشرح كتب خارجه. والحاشية السفلية (lower apparatus) شملت مقابلة نصّ سيناء 2، الذي يرد داخل المعكف، مع أربع مخطوطات مخطوطة سيناء 4 يرمز لها في الحاشية (س 4)، مخطوطة سيناء 10 يرمز لها في الحاشية (س 10)، مخطوطة سيناء 3 يرمز لها في الحاشية (س 3) وتفسير سعادي جاؤون الفيوميّ ويرمز له بالاسم سعادي وهي النسخة التي أصدرها يوسف ديرنبورغ 1893.

في العديد من الكلمات لم يحرص ناسخ المخطوطة على إجماع بعض الحروف، فتركنا الكلمة على حالها ونوّهنا إلى صورتها الصحيحة في الحاشية. ترقيم الملاحظات في الحاشية يشير إلى رقم الآية في المتن. (مثلاً، 1 5 يعني الإصحاح الأوّل والعدد الخامس/ أو آية رقم 5).

من أجل عدم تضخيم الحاشية العلوية اقتصرنا الملاحظات فيها على مسائل توضيحية أو خاصة ومميّزة للنصّ ومهمة لفهمه. أمّا مسألة الأخطاء اللغوية أو الخروج عن اللغة المعيارية فلم نُدرجها في الحاشية، لكن ذكرناها في قسم الدراسة اللغوية، ولهذا وجدنا، أحياناً، من المناسب التنويه إلى رقم الصفحة أو البند الذي



יُعالج هذه المسألة اللغوية، وهذا من أجل تيسير الأمر على القارئ. كذلك الأمر بالنسبة للحاشية السفلية فقد قابلنا مع بقية المخطوطات فقط في حالات اختلاف خاصٍ ومميّز بين هذه الترجمات. فالهدف من هذه الدراسة هو تقديم نصّ مخطوطة سيناء 2 بصيغة الأصل كما وردت في المخطوطة، بصورة سهلة وواضحة للباحثين والمهتمين بالنصوص العربية القديمة والتراث العربي المسيحي، والترجمات العربية للكتاب المقدس والمسائل اللغوية التقابلية بين العبرية السريانية والعربية.

### نُشر

بصل، إ. (2019). مخطوطة سيناء 2 ترجمة عربية قديمة للتوراة. الطبعة الأولى، 540 ص، مجمع اللغة العربية، الناصرة



## דהאמשה, עאמר

### Names under Supervision: Israeli Linguistic Regulation of Arab Streets -Tur'an as a Case Study

The present article contributes to the local study on street signs and of majority and minority language representation more generally. It analyses the street signs set up by the Tur'an municipality during the term of Jewish Mayor. In that, it sheds light on the impact of top-down political processes on the design of Arab space, its interpretation by a municipality headed by an agent of the establishment, and the naming's implications for the Arab minority's spatial socialization. Through the names selected and the visual and orthographic characteristics of the linguistic landscape, the article highlights the politics of shaping cultural and historical identity in physical space. The visual characteristics examined below are related to the visibility of the two languages - Arabic and Hebrew - or more specifically, to the representation of one as opposed to the deliberate marginalization of the other. My reading of street signs is informed by critical toponymy and semiotics, which emphasize the ideological meanings inherent in the depth structures of names and visual communication products. This article assumes a two-directional relationship between humans and landscape. Accordingly, I consider the initiative by a Jewish mayor to name the streets of Arab Tur'an an attempt to affect the spatial awareness of its Arab inhabitants in line with the values of the establishment.

#### Published

Dahamshe, A (2017). "Names under supervision: Israeli linguistic regulation of Arab streets-Tur'an as a case study", *Journal of Levantine Studies*, 7(2), 103-130.

### הזרה מבפנים: עברית וערבית בשלטי השמות שקבע הריבון הישראלי בתרשיחא הערבית

מאמר זה בודק את תחום ייצוגי השפות של הרוב והמיעוט, "המרכז" ו"הפריפריה" - על-ידי הפגשה ביניהם בשלטי שמות הרחובות. המחקר מנתח את מאפייני שלטי שמות הרחובות שנקבעו בתרשיחא הערבית בידי עיריית מעלות תרשיחא, שיהודים עומדים בראשה מיום שנוסדה. המאמר שופך אור על השפעת התהליכים הפוליטיים היוזמים באמצעות קביעת שמות "מלמעלה", על עיצוב מרחב היישוב הערבי ועל הפרשנות שמעניקה לו המועצה שבראשה עומד סוכן (agent) של הממסד.

מאמר זה מראה כיצד תהליך המרחוב הלשוני בתרשיחא יוצר מרחב שלישי המאכלס בתוכו את הדיכוי הלשוני הממסדי ואת המורשת הלשונית בערבית ומפעיל ביניהם יחסי



זרות, אך לא יחסי אויבות. הגורם הממסדי שקבע, קרי עיריית מעלות תרשיחא, שמות רחובות בתרשיחא הערבית אינם מעלימים לחלוטין את עקבות הצורות הערביות של השמות והם אינם בהכרח מוציאים זה את זה.

### פורסם

דהאמשה, ע' (2018). "הזרה מבפנים עברית וערבית בשלטי השמות שקבע הריבון הישראלי בתרשיחא הערבית". *העברית שפה חיה, ח' 101-125*.

## **מעבר לבעלות הלשונית: קריאה תרבותית משווה בשמות העבריים ובשמות הערביים של נופי הטבע**

מאמר זה חושף כי למרות הדומיננטיות של הנרטיב הלאומי הישראלי בשמות נופי הטבע שנקבעו במקום השמות הערביים של הארץ, יש לקרוא את השמות האלה בהקשר רחב יותר. לצד גיוס השיום לניכוס בעלות על האדמה, ניתן לאתר בשמות הישראלים "קטגוריות ביניים", פרקטיקות לשוניות חתרניות ומציאויות חברתיות ותרבויות מרובדות ורב-ממדיות שאינן מצייתות בהכרח לעיקרון הריבונות והלאומיות. בשמות המקומות קיימות קטגוריות מטה-פוליטיות הקשורות לערכים תרבותיים ולהיבטים של תקשורת. קריאתי בטרמינולוגיה של נופי הטבע מציעה פרשנות המנכיחה את הסמליות שלהם כמרחב אחורי. מדובר במרחב הכולל מגוון של תצורות טבע ונוף המזמנות שלל המשגות ודימויים, השופכים אור על היחס של התרבויות הילידית והישראלית אל הטבע ועל אופן המשגתו.

### פורסם

דהאמשה, ע' (2018). "מעבר לבעלות הלשונית: קריאה תרבותית משווה בשמות העבריים ובשמות הערביים של נופי הטבע". בתוך ע' דהאמשה וי' שוורץ (עורכים), *שמות מקומות וזהות מרחבית בישראל-פולסטיין יחסי רוב-מיעוט, השכחה וזיכרון* (עמ' 105-140). תל אביב: רסלינג.

## **הפרדה מרחבית באנקדוטות מפי ערביי הגליל**

האנקדוטות שערביי הגליל מספרים על היישובים הערביים ועל תושביהם מבטאות את המפה המנטאלית ואת הגאוגרפיה האנושית, המחשבות והרגשות, השוכנים בדמיונם של מספרי האנקדוטות. האנקדוטות הערביות הן פרקטיקה פואטית המעצבת את המשמעות של המרחב הגלילי למקומות כתוצר של יחסי כוח פנים-חברתיים ולא רק כתוצאה של מימד חומרי וקטגוריה "מגורית". הן יוצרות חלוקות והפרדות המארגנות את המרחבים של היישובים הערביים ואת יושביהם בתבניות של ניגוד-על "יישובנו", יישובו של הקול המספר, לעומת "היישוב", מושא הביקורת והלעג.

### פורסם

דהאמשה, ע' (2020). הפרדה מרחבית באנקדוטות מפי ערביי הגליל. בתוך צ' זבה-אלרן, ח' מילוא וע' פינטל-גינסברג (עורכות), *מסורת חיה - ל"ב עיונים ועיון* (עמ' 299-312). חיפה: פרדס הוצאה לאור.





ספרות ילדים, סיפור מקראי, עקידת יצחק, אברהם אבינו, העקדה בקוראן.

#### פורסם

וייס, י' (2018). דמותו של אברהם אבינו ומסרים חברתיים בעיבודים של סיפור עקדת יצחק לילדים. *שיח ישורון*, 8, גי-י"ט.

### **מגדל בבל במקרא, באגדה ועיבודו לילדים**

לספרות הילדים מגוון מקורות, ובהם הסיפור העממי, סיפורי המקרא, אגדות ומדרשים. במאמר זה אדון בסיפור 'מגדל בבל' ואשווה בין סיפורי מגדל בבל לילדים שכתבו יהודים סבזרו, עטרה אופק, אפרים סידון, זאב גלילי, לוי קיפניס ודבורה עומר. קיים הבדל מהותי בין האסופות המלוות את כל סיפורי התנ"ך ונצמדים לסיפור כלשונו ומשתמשים בציטוטים מתוכו לעומת הכתיבה החופשית, מלאת התיאורים והדמיון של סופרים שבמודע בחרו לספר סיפור חדש בשיבוץ אגדות חז"ל.

#### פורסם

וייס, י' (2020). מגדל בבל במקרא, באגדה ועיבודו לילדים. *שיח ישורון*, 9, גי-י"ט.

### **ייצוגי השעשוע, המשחק והקריאה בספריו האוטוביוגרפיים של אורי אורלב "חיילי עופרת" ו"משחק החול"**

*מאמר זה מוקדש בגעגועים להורי האהובים ארנולד ומרים וייס זכרם לברכה.* ברומנים האוטוביוגרפיים של אורלב חיילי עופרת ומשחק החול מתוארת ילדותם של אורי אורלב ואחיו קאז'יק במקומות מסתור שונים בשש שנות מלחמת העולם השנייה. הרומן הראשון חיילי עופרת נכתב למבוגרים זמן קצר לאחר סיום המלחמה (1956), ונעשה פופולרי בקרב בני הנוער. את הספר משחק החול (1996) כתב אורלב לילדים בעקבות שאלותיו של בנו על המלחמה ועל קורותיו במלחמה. בספר זה אורלב חוזר וכותב על מקצת האירועים שהעלה בחיילי עופרת ומבארם ומרחיבם כך שיתאימו לקורא הצעיר. במאמר זה אעמוד על תפקידיהם של *השעשוע, המשחק והקריאה* בספרות בעולמו של הילד, ואבחן כיצד הם משתקפים בשני ספריו האוטוביוגרפיים של אורלב. עיון בתאוריה של הפסיכולוג ברונו בטלהיים המוצגת בספרו הורה מתקבל על הדעת (עם עובד, 1997) תסייע להבין את מקומם המרכזי של *השעשוע, המשחק והקריאה* בחיי הילד. לטענת, אפשר למצוא חוט מקשר בין כל הרכיבים הללו, שבאו לידי ביטוי בילדותו של אורלב, ותרמו להתפתחותו כסופר בעל דמיון, יכולת ביטוי, רגישות ומוסריות בבגרותו.

#### פורסם

וייס, י' (2021). ייצוגי השעשוע, המשחק והקריאה בספריו האוטוביוגרפיים של אורי



## חנא-ארשיד, האלה

### כאשר דיגלוסיה פוגשת בלקויות התפתחותיות - השפעת המרחק הפונולוגי בין ערבית מדוברת לערבית תקנית על לקות שפה ועל לקות קריאה

גורמים רבים משפיעים על התפתחות השפה והקריאה של ילדים. אלה כוללים גורמים קוגניטיביים-לשוניים, גורמים פדגוגיים, וגורמים סביבתיים, כגון אוריינות הבית והמצב הסוציו-אקונומי. מרחק לשוני בין שפת הדיבור של הילד לבין שפת האוריינות מהווה גורם נוסף העשוי להשפיע באופן ניכר על רכישת אוריינות, במיוחד בדיגלוסיה הערבית. ילדים דוברי ערבית רוכשים קריאה בערבית מודרנית תקנית (Modern Standard Arabic) שאינה בשימוש בדיבור יום-יומי. הערבית התקנית שונה משפת הדיבור של הילדים, כלומר מהערבית המדוברת, בכל תחומי השפה פונולוגיה, מורפולוגיה, תחביר ולקסיקון. כלומר, ילדים הלומדים לקרוא בערבית ניצבים בפני המשימה הכפולה של רכישת שתי מערכות בו-זמנית מערכת לשונית והמערכת האורתוגראפית שמייצגת אותה. הפרק מתמקד בהשפעת המרחק הפונמי שקיים בין ערבית מדוברת וערבית תקנית על רכישת מיומנויות העיבוד הפונולוגי בקרב ילדים עם לקות שפה וילדים עם לקות קריאה, כפי שהדבר משתקף בחזרה על מילות תפל, למידת מילות תפל ופענוח מילות תפל. התוצאות מראות השפעה ניכרת של המרחק הפונולוגי שבין הערבית המדוברת והתקנית על מיומנויות הייצוג והעיבוד הפונולוגי אצל ילדים עם התפתחות תקינה. בנוסף, הן מראות כי למרחק הפונולוגי בין ערבית מדוברת וערבית תקנית ישנה השפעה ניכרת ועיקשת על העיבוד הפונולוגי אצל ילדים עם לקות שפה וילדים עם לקות קריאה. השפעה זו משתקפת בציונים נמוכים באופן מובהק במטלות של חזרה על מילות תפל, מטלות של למידת מילות תפל, ומטלות של פענוח מילות תפל כאשר מילות התפל מקודדות פכונמות תקניות שאינן קיימות בשפה המדוברת של הילדים. ממצאים אלה מרמזים על כך שילדים דוברי ערבית עם לקות שפה או לקות קריאה לוקים בחסך כפול כאשר הם נדרשים לבצע מטלת עיבוד פונולוגי בערבית תקנית חסך כללי בייצוג ועיבוד פונולוגי שכל הילדים עם לקות שפה וקריאה בכל השפות מתמודדים אתו וחסך ספציפי של מרחק פונולוגי הקשור למצב הסוציו-בלשני הדיגלוסי של השפה הערבית וההשפעה של מצב זה על מידת החשיפה וההתנסות של ילדים עם הפונולוגיה של השפה התקנית כמו גם גיל הרכישה של מבנים פונולוגיים תקינים.

#### פורסם

סאיג-חדאד, א', גאוי-דקואר, ע' וחנא-ארשיד, ה' (2021). כאשר דיגלוסיה פוגשת בלקויות התפתחותיות - השפעת המרחק הפונולוגי בין ערבית מדוברת לערבית תקנית על לקות שפה ועל לקות קריאה. נאסר אבו-אלהגיאה, פ' וישראלאושילי, מ' (עורכים). *חינוך בחברה הערבית בישראל* (עמ' 71-103). תל-אביב: מופ"ת.

## סרחאן, רבאב

### Women's Literature in Lebanon and the Image of Women in Novels

The novel *Ana ahya* by the Lebanese writer Layla Ba'lbaki (1958) and her subsequent novel *al-Aliha al-mamsukha* (1960) may be considered the true beginning of Arab women's novels, which address gender-related issues. In the following years, other Lebanese women also contributed to this literature and enriched it. Women's concerns and women's desire for empowerment and liberation are themes that are shared by most novels composed by these women writers. The novels deal with personal freedom in matters of love and sex and the liberation of women from social restrictions. However, after the war of June 1967, women writers began to associate women's personal freedom with the political, social, and economic freedom of society. In the novels composed in that period the female characters are of two types, the traditional, old-fashioned woman versus the rebellious woman who rejects the dominant social norms. In both cases the woman is a victim.

#### Published

Sirhan, R. (2019). Women's literature in Lebanon and the image of women in novels. *Journal of Oriental and African Studies*, 28, 147-162.

### תפֹר הפֹן القصصی فی لبنان وتأثیر الحرب الأهلیة اللبنانية علی الروایة

תعرض هذه المقالة نشأة الفَن القصصی فی لبنان وأهم روادہ، بدءًا بکتاب مدرسة المهجر وعلی رأسهم جبران خلیل جبران ومیخائیل نعیمة فی العقد الأول من القرن العشرين، مُرورًا بکرم ملحم کرم وخلیل تقي الدين فی الثلاثينات وحتى نهاية الحرب العالمیة الثانية، وصدور روایة «الرغیف» لتوفیق یوسف عواد عام 1939. هذه الروایة التي اعتُبرت باکورة الروایات اللبنانية فی تطرّفها إلى البنية الاجتماعیة بصورة کثیة وشاملة. طغى الاتّجاهان الواقعی والرومانسی علی کتابات هذه الفترة الممتدة من 1937 إلى مطلع الخمسينات، ثم حدثت قفزة فی شکل هذا الفَن ومضمونه امتدّت حتى أواخر الستّينات، نضجت فیها عناصر الثورة الفکریة والفنیة والفلسفیة التي مکّنت الروایة العربیة بصفة عامّة، واللبنانیة بصفة خاصّة، من تحطيم الأشکال السابقة المُتبعة فی السرد العربی، وذلك حین سرى فی الأدب التّيار الوجودی الذي کان أول من روج له فی الروایة الحدیثة الكاتب سهیل إدريس فی روايته «الحيّ اللاتینی» عام 1953. هذا التّيار الوجودی الذي غزا الأدب منذ مطلع الخمسينات وحتى بداية السبعينات، أحدث قفزة نوعیة حقیقیة فی بنية

الرواية العربية عامّة، واللبنانية خاصّة، من حيث الشكل والمضمون، وخاصّة في السّينات وما تلاها إثر حرب حزيران عام 1967 والتصدّع الكياني الذي ألمّ بالهوية العربية، فأصبح التركيز على الفرد يأخذ حيزاً أكبر في الروايات، وانصبّ اهتمام الكاتب على شخصية واحدة، ورصد تأثير التحوّلات السياسيّة الدائرة والقيم الاجتماعيّة المتغيّرة على تطوّرها النفسي. أمّا في منتصف السبعينات وحتى اليوم، فتشهد الرواية اللبنانيّة مرحلة أخرى من تطوّرها، وذلك إثر اندلاع الحرب الأهليّة اللبنانيّة (1975-1990) التي ما يزال اللبنانيون يعانون من تداعياتها حتى أيامنا هذه. وقد عبّر الروائيّون اللبنانيّون، الذين كتبوا عن هذه الحرب، عن رفضهم لها، وكان إلياس خوري هو الكاتب الأبرز في هذا المجال، إذ عكست رواياته، بكلّ عناصرها، صورة قاتمة عن الانهيار العامّ الذي تُمثله هذه الحرب التي شكّلت مفترقاً لبروز كتّاب آخرين مثل رشيد الضعيف وحسن داوود وربيع جابر. كذلك، كانت الحرب محقّراً لكتابات نسائيّة لبنانيّة كثيرة تميّزت بتعمّقها داخل الذات الإنسانيّة، ورصد ردود فعلها الداخليّة والخارجيّة جرّاء الحرب.

### نُشر

سرحان، ر (2018). تطوّر الفنّ القصصيّ في لبنان وتأثير الحرب الأهليّة اللبنانيّة على الرواية. *الكرمل*، (39)، قسم اللغة العربيّة وآدابها في جامعة حيفا، 74-96.

## السيرة الذاتيّة في الأدب العربيّ الحديث "بين مدينتين" لفتحي فوراني نموذجاً. في م حمد (مُحرّر ومُعَدّ)

يسعى هذا البحث إلى الوقوف على مميّزات السيرة الذاتية، هذا النوع الأدبيّ الذي أصبح مطروحاً وبشكل بارز في أدبنا العربيّ الحديث، رغم قلّة الدراسات النظرية واختلاف التسميات والتعريفات. وبما أنّ السيرة الذاتية تتداخل مع أنواع كتابيّة أخرى، كالسيرة الغيبيّة والرواية والمذكرات والتاريخ وغيرها، فقد ارتأينا أن نتطرق إلى نقاط الاختلاف والالتقاء الأساسيّة ما بين السيرة الذاتية والرواية، كون الأخيرة هي أقرب الأنواع الأدبيّة من السيرة الذاتية. وقد اتّخذنا كتاب «بين مدينتين» للكاتب فتحي فوراني نموذجاً لسيرة ذاتيّة حديثة، وقفنا فيها على المحاور الأساسيّة التي دارت حولها وهي المكان، الزمان، البعد الاجتماعيّ والبعد الثقافيّ، كذلك على جماليّة اللّغة وقدرة الكاتب ونجاحه في تضمينها الاقتباسات الأدبيّة التي تُشكّل ثروة لمحيّ اللّغة العربيّة والأدب العربيّ.

### نُشر

سرحان، ر (2021). السيرة الذاتية في الأدب العربيّ الحديث «بين مدينتين» لفتحي فوراني نموذجاً. في م حمد (مُحرّر ومُعَدّ)، *الثابت والمتحوّل في الأدب الفلسطينيّ الحديث- دراسات نقدية مُحكّمة* (ص 205-221). قسم اللّغة العربيّة ومجمع القاسمي للّغة العربيّة.



## עאסלה בדארנה, עביר

### **Morphological Ability among Monolingual and Bilingual Speakers in Early Childhood: The Case of Two Semitic Languages**

The study examines the possible effects of bilingualism, mother tongue and type of morphology on morphological awareness of Arabic- and Hebrew-speaking preschoolers (mean age - 54). Four groups of children participated in the study (1) 50 Arabic-speaking monolingual speakers; (2) 50 Hebrew-speaking monolingual speakers; (3) 50 Arabic/Hebrew bilingual speakers; and (4) 50 Hebrew/Arabic bilingual speakers. Participants from the bilingual groups were sequential non-balanced bilingual speakers who started learning a second language at ages 3-4 in a bilingual Arabic/Hebrew kindergarten. All children performed two tasks on inflectional morphology and three tasks on derivational morphology in one or both languages. To examine inflectional morphology, domain plural nouns were chosen because of their linear nature in both Hebrew and Arabic and because inflectional plural-noun morphology is acquired very early. In derivational morphology, the focus was on the verbs because of their high token frequency, early acquisition compared to nominal morphology, and its importance for Semitic languages. The results demonstrate significant effects of mother tongue, bilingualism and type of morphology on the children's performance. The better results were obtained in Hebrew-speaking monolinguals and in Arabic-speaking bilinguals. Monolingual Hebrew speakers performed better in Hebrew than Arabic-speakers did in Arabic. At the same time, Arabic-speaking bilingual children demonstrated significantly better results in Hebrew (second language) than Hebrew speakers did in Arabic (second language). Analysis of the findings also shows that differences in performance among the bilingual and monolingual groups seem to relate not only to psycholinguistic factors such as linguistic complexity but also to sociolinguistic factors (e.g. diglossia in Arabic).

#### **Published**

Asli-Badarneh, A., & Leikin, M. (2019). Morphological ability among monolingual and bilingual speakers in early childhood: The case of two Semitic languages. *International Journal of Bilingualism*, 23(5), 1087-1105.



## עסאקלה, עיסאם

### Science Fiction in Arabic Literature History - Growth, Development and Position

Science fiction literature is a somewhat new and less recognized field in the Arabic literary polysystem. The science fiction (SF) genre entered Arabic literature through translations of Western SF works. Nonetheless, we can see elements and sources of SF in classical and folk Arabic literature. In addition, the industrial-technological revolution in the twentieth century served as a catalyst for the growth of this genre. From the moment it emerged, SF literature faced two types of criticism. The first viewed it as non-canonical, cheap, a sub-category of detective literature, popular and having no value. The second group of critics, diametrically opposed to the first, saw SF fiction as canonical literature that should be engaged with, critiqued and researched. In recent years, we can see that diametrically literature has begun to establish itself and assume a position in the Arabic literary polysystem. We are witnessing a trend that is changing the approach to diametrical literature and beginning to recognize it as a canonical literary genre accepted by the academic establishment, meriting attention, research and criticism.

#### Published

Asaqli, E. (2017). Science fiction in Arabic literature history - growth, development and position. *International Journal of Advanced Research*, 5(2), 1441-1451.

### Prison Space in Arabic Science Fiction Novels

The study examines the meaning of prison space as it is reflected in two Arabic science fiction novels.

Prison is a closed space in which inmates are deprived of their freedom, individuality and identity. Traditionally, the vast majority of prisons have been associated with torture and humiliation. In the novel *al-'Azmān al-muẓlima* (*Dark Times*), Dr. Qāsim is incarcerated in Guantanamo because of his opposition to the actions of a terrorist group. In prison he suffers physical and mental abuse and is experimented on, as if he were a guinea pig. Because he places Qāsim in solitary confinement, the novel's author must use the literary device of soliloquy in order to convey what is happening in the character's

mind. The novel also highlights positive aspects of life in prison—a place for exchanging views and ideas and for forging new friendships. It also makes the inmates take a more profound look at life and transforms them intellectually, conceptually and ethically.

In the novel *Qāhir al-Zaman (Time's Overcomer)*, the journalist Kāmil is sent to prison because he opposes testing on living human beings. The novel depicts prison as a dark grave, narrow, stagnant and detached from the world, a place where inmates and their behavior are changed. Kāmil is filled with frustration and despair. He behaves like a nervous animal in a cage and his frayed nerves lead to a complete breakdown. His inner agitation makes him lose all contact with his humanity. Kāmil's reminiscences are used to provide the reader with the missing information concerning his experiences in prison.

### Published

Asaqli, E., & Masalha, M. (2018). Prison space in Arabic science fiction novels. *International Journal of Advanced Research*, 6(5), 166-177.

## **Folk Songs and How 'Amal Dunqul Uses Them in His Poetry**

The study deals with the use of folk songs in two poems by the Egyptian poet 'Amal Dunqul (1940-1983), '*Jāza 'lā Shāfi' al-Baḥr* (A Seaside Vacation) and the *Al-hidād Yalīqu bi Qaṭr Al-nadā* (A Mourning Becomes Qaṭr Al-nadā). The study reveals the cultural heritage and references from which 'Amal Dunqul draws in his poetry. It further examines the reasons and motives that prompted the poet to employ these sources. The study shows that 'Amal Dunqul, who came from the village, reveals his unfamiliarity with city life and the various psychological, social and political shocks it inflicts on him. He sees that the poet's life in the city is full of anxieties and is very black; he sees that he is suffering living there.

Dunqul compares his status to that of others. He feels attuned to the spirit of the nation, and he believes that he belongs to it. He uses Egyptian folk songs and reflects on their content to criticize the prevailing political, social and economic conditions. Since he dreams of a more beautiful future, he believes that poetry should be a voice of opposition and resistance to the state of reality. Poetry, for him, expresses the rejection of the humiliation heaped upon us.

Dunqul leverages his cultural heritage to increase peoples' national identity. He quotes Egyptian folk songs and roundelays, including them in his poetry after changing their context to decry the country's political and moral corruption, and the loss of Egypt's firm and moral political leadership. His poems express



his sadness and grief because of the political and moral corruption on the one hand, and the infirmity of presidents on the other.

### Published

Asaqli, E., & Masalha, M. (2020). Folk songs and how 'Amal Dunqul uses them in his poetry. *Advances in Literary Study*, 8(2), 78-105. Doi 10.4236/als.2020.82008.

## Monologue in Science Fiction Novels in Arabic Literature

The study examines the feature of monologue (internal dialogue) in science fiction novels in Arabic literature. We analyze its various uses, examine the motives for using it and identify its artistic dimensions and connotations. The research sample consisted of the three novels of *Qāhir al-Zaman* (Time's Vanquisher) by the Egyptian writer Nihād Sharīf, *al-Sayyid min Haql al-Sabānikh* (The Mister from the Spinach Field) by the Egyptian writer Šabrī Mūsā and *al-'Azmān al-Muẓlima* (Dark Times) by the Syrian writer Ṭālib 'Imrān.

As used in these novels, the monologue has many facets. The author employs it to reveal his intentions and objectives, his views regarding the disintegration of human relations in the age of science, community issues, historical events, cryogenic applications in medicine and building the future. The monologue enables the writers to have their characters express opinions incongruent with the automated-mechanical system and society in which they locate them.

The monologue is used when the authors seek to have their characters express internal emotional upheaval and confusion as well as when the characters need to convey reflection and contemplation in response to internal and external situations. It ends with the characters ceasing to hesitate or uncovering a truth previously hidden from them.

The monologue is also used as part of the **Warning** Technique. The latter is a literary tool that, through certain words or expressions, alerts the reader that he is about to enter the character's psyche, that he is moving into the interior landscape of the character.

### Published

Asaqli, E. (2020). Monologue in Science Fiction Novels in Arabic Literature. *Journal of Oriental and African Studies*, 29, 61-89.



## الحوار في رواية رائحة الزّمن العاري لهيام قبلان شخصية هزار نموذجًا

هدفت هذه الدّراسة إلى معالجة موضوع الحوار بأنواعه كما ورد على لسان شخصية هزار في رواية رائحة الزّمن العاري لهيام قبلان. كشف الحوار الخارجي والمونولوج والمناجاة لدى هزار عن مظاهر القهر والتسلّط التي تعانيها من ظلم الرّجل الشّرقيّ الذي يسعى لتهميشها واضطهادها وتجريدها من خصوصياتها ومشاعرها وحقوقها الأساسية. بالمقابل عبّرت هزار، من خلال الحوار، عن حقّها في حياة حرّة كريمة، محاولة بذلك كسر القيود واختراق الرّقابة والوصاية الذّكورية عليها، وصوّر الحوار تعطلّ الخطاب الاجتماعيّ، الأخلاقيّ، الاقتصاديّ، الدّينيّ والثّقافيّ في المجتمع الشّرقيّ من جهة، والدّمار الذي حلّ بالوطن جزاء سياسة الحكومة من جهة ثانية.

تميّزت الحالات التي يظهر فيها المونولوج والمناجاة عند هزار بـالإنذارية، ونعني بها التّمهيد للدّخول إلى نفسيّة الشّخصيات بكلمات أو تعابير معيّنة لتعّين القارئ وتنّهيه إلى الانتقال من الخارج إلى داخل الشّخصيّة، وقد وردت في المونولوج والمناجاة أساليب وظواهر لغويّة كالعطف والتكرار بهدف إبراز الحالة النفسيّة لهزار.

### نُشر

عساقلة، ع. (2019). الحوار في رواية رائحة الزّمن العاري لهيام قبلان شخصية هزار نموذجًا. في محمّد حمد، وياسين كتّاني (إعداد)، بين المسيرة والمغايرة دراسات في أدب المرأة الفلسطينية (214-246). باقة الغربيّة أكاديميّة القاسمي.



## לאקל, ורד

### טראקייב איןזאפא פי ארבייט אלפליטנייט אלשמאלייט

לעבארא איןזאפא פי אללגאט ארבייט אלמחכייט שכלאן רייסאן; דאן קלמא ראבטא (איןזאפא טראקייבא סינטיטיק Synthetic genitive), ומע קלמא ראבטא (איןזאפא טחלייליט Analytic genitive). יטנאול זא מאל טראקייב איןזאפא פי ארבייט אלפליטנייט אלשמאלייט, אלזאדף רייסיס מנא ארועא טראקייב נאחויטא טתפרע מן טראקייבי איןזאפא אלמזכוריין. וקד אטזאח, מן כלאל זא אלבאח, אן ארבייט אלפליטנייט אלשמאלייט תמיל אין אדמ אסטעמאל קלמא ראבטא (Genitive exponent), ואין אינאז טראקייב נאחויטא זאדידא, ממה יטואף ומילמה אין איןזאז.

### נשר

עקל, ו. (2020). טראקייב איןזאפא פי ארבייט אלפליטנייט אלשמאלייט. פי אהארון זייב קלאינברג (מחזר), ארבייט אלפליטנייט וטראיטה אללגויי אלשמעי. (ס. 265-287). הנאסרא מלגא ארבייט.



## עשת, יובב

### **Reading between the Lines: Questionable Medical and Journalistic Ethics in Israeli newspaper Coverage of Medications.**

Israeli medical ethics require that physicians avoid participating in commercials for medical and other products. Journalistic ethics require exclusion of commercial content from journalistic texts and stipulates that media coverage of controversial issues be balanced and objective. Moreover, direct-to-consumer-advertising (DTCA) of prescription drugs and embedded marketing is banned in Israeli media.

This article examines whether both norms were met in coverage of medication in three Israeli newspapers to provide the public with balanced and objective information. The level of balance in coverage was assessed by the ratio between promotional and limiting contents, using framing theory and evaluating the relative prominence of information sources, applying advanced countervailing powers theory. Results show promotional content almost three times greater than limiting contents. Prescription drug citations comprised 88% of journalistic articles.

About half of these articles cited sources perceived as objective researchers or physicians. However, given their funding dependence on drug companies, such coverage is arguably embedded marketing, which has societal implications.

#### **Published**

Klin, A., & Eshet, Y. (2017). Reading between the lines: questionable medical and journalistic ethics in Israeli newspaper coverage of medications. *Israel Affairs*, 23(1), 87-107.



## קאסם, עאליה

### Narrative Levels in Son'allah Ibrahim's Sharaf

The study examines the narrative levels in Son'allah Ibrahim's Sharaf, where the novelist employs an experimental art of fiction. The novel's structure tends to create aestheticism capable of representing the distortions of the different levels of reality. It is based on the harmony between the different narrative units and the documentary recording within the collage that selects scenes from reality together with its contradictions and disappointments. Moreover, the harmony is achieved within a presentation of fiction where characters are deprived of their features and where reality is distorted. The novel is simply distributed into varied narrative levels that frequently become tangled or separate. Every so often, these narrative levels are fused within the structure of the novel from which rough crests and apexes appearing the wake of the novel's stumbling and slipping into some failures. These probably occur because of the accumulation of information, reports and direct portrayal of the novelist's ideology, creating a loose narrative structure intensified by other thematic difficulty in spite of the fact that the novelist is endowed with soberly modern consciousness and endorses different narrative tools to create an experimental structure.

#### Published

Kassem, A., Assadi, J. (2017). Narrative levels in Son'allah Ibrahim's Sharaf. *IOSR Journal of Humanities and Social Science (IOSR-JHSS)*, 22(3), 21-30.

### The Image of The Jew in Ahmad Harb S Trilogy

It took Arabic literature, especially narrative prose, a lot of time to look into the character of the Jew or to seriously describe the mutual relationship between Arabs and Jews whether this relationship indicated collision or neutrality. However, Palestinian literature in general and the novel in particular has had to deal with the Jewish model, because the nature of the circumstances and the conflict on the ground have forced Palestinian writers to involve Jewish personalities in the portrayed events. Ahmad Harb's novel, which consists of three parts, *Ismael* (1987), *The other Side of the Promised Land*, (1992) and *Remains* (1996) constitute a milestone in this context. Hence, this research traces the depiction of the Jew throughout Harb's trilogy to illustrate its distinction in

describing the "other" based on interactions and close examinations. Besides, it is noted that Harb does his utmost to exclude stereotypical notions and misconceptions, adding human touches to some characters. Furthermore, Harb shows a deep interest in characters similar in form and content to other characters that appeared in the novels of other writers.

### Published

Kassem, A. (2017). The image of the Jew in Ahmad Harb S trilogy. *International Journal of Asian History, Culture and Tradition*, 4(1), 16-28.

### **Place in Muhammad Ali Taha's Short Story Collection: The Leaning Date Palm: The Role of Place in the Literature of the Arab Minority in Israel**

The present study deals with the function of place in the short-story collection *The Leaning Date Palm* by the Palestinian writer Muhammad 'All Taha, published in 1995. The study begins with a definition of the concept of place in the context of narrative fiction, and the important artistic, sensory and semantic functions it has as an artistic component in the story. This is followed by a discussion of the writer's background and his literary output, after which we provide a survey of the main topics and ideas, as well as the prominent other features, of the story collection *The Leaning Date Palm*. Our study leads to the conclusion that place plays an important role in this story collection, especially due to the author's focus on national issues in the context of the Israeli-Palestinian conflict. Place, after all, constitutes a fundamental element in that conflict. The author, our study has found, deals with the concept of place from a number of different perspectives Longing for the past, the traditional place, the importance of returning to one's homeland, and protecting one's land.

### Published

Kassem, A. (2020). Place in Muhammad Ali Taha's short story collection: The leaning date palm: The role of place in the literature of the Arab minority in Israel. *International Journal of African Society, Cultures and Traditions*, 8(2), 1-24.



## שגיא, שרה

### סופרים ערבים כותבים בעברית: תרבות, מסורת, לשון

המאמר עוסק בתופעת הכתיבה בעברית של סופרים ערבים בישראל, בני מיעוט הכותבים בשפת הרוב - לשון התרבות השלטת. המאמר מבקש לברר מהו אופייה של יצירה זו. האם היא כפופה לנורמות הספרות השלטת, או חותרת תחתיה, אם בלשון ואם בתכנים? במאמר מושם דגש על הביקורת שמפנים יוצרים אלה כלפי תרבות המוצא שלהם וכלפי אפשרות השתלבותה של החברה הערבית בחברה היהודית דוברת העברית המאופיינת במודרניזציה ובפתיחות יחסית.

#### פורסם

שגיא, ש' (2017). סופרים ערבים כותבים בעברית תרבות, מסורת, לשון. שיח ישרון, 7-2, עמ' כ"ג-מ'.

### "אני סוגה תחתית אני" - ייצוגו הספרותי של ז'אנר הסטנדאפ ברומן סוס אחד נכנס לבר מאת דוד גרוסמן

הרומן סוס אחד נכנס לבר מאת דוד גרוסמן מושתת על מופע סטנדאפ של הסטנדאפיסט דובלה, המציג עצמו לא רק כמוקיון, אלא גם כאוויל וכנוכל. מאמר זה מבקש לברר מהי הסוגה שאליה ניתן לשייך את הרומן כולו ומה מהותה ומאפייניה של סוגת הסטנדאפ, על היבטיה הלשוניים והפרפורמטיביים.

#### פורסם

שגיא, ש' (2018). "אני סוגה תחתית אני" - ייצוגו הספרותי של ז'אנר הסטנדאפ ברומן סוס אחד נכנס לבר מאת דוד גרוסמן. העברית שפה חיה קובץ מחקרים על הלשון בהקשריה החברתיים-תרבותיים, ח, 311-328.

### היררכיה של אחרות בסיפור "חדר על הגג" מאת סביון ליברכט

המאמר משרטט צומת של צירים הנעים בין צמדים של אופוזיציות המתקיימים בסיפור "חדר על הגג" הציר הגברי-נשי, הציר המערבי-מזרחי, המשיק במקרה זה לציר היהודי-ערבי ולציר הבין-מעמדי. נוגע לכולם וחל על כולם הוא ציר היסובייקט-אובייקט.

#### פורסם

שגיא, ש' (2018). היררכיה של אחרות בסיפור "חדר על הגג" מאת סביון ליברכט. דארנא, 46, 104-116.



## האדונית והפועל - היררכיה של אחרות בסיפור "חדר על הגג" מאת סביון ליברכט ותיווכה לסטודנטים במכללה ערבית

סוגיות ודילמות הקשורות בהוראת סיפור בעל מורכבות חברתית - "חדר על הגג" מאת סביון ליברכט - לסטודנטים המתכשרים להוראת לשון וספרות עברית במגזר הערבי. היצירה, המתארת מערכת יחסים בין מעסיקה יהודייה ופועלים ערבים המועסקים בביתה, עוסקת בדמויות ערביות, במנהגיהן ובשפתן, כפי שעוצבו על-ידי סופרת יהודייה ישראלית ועל כן הדיון ביצירה מחייב עיסוק בשתי התרבויות ובמפגש ביניהן.

### פורסם

שגיא, ש' (2020). האדונית והפועל - היררכיה של אחרות בסיפור "חדר על הגג" מאת סביון ליברכט ותיווכה לסטודנטים במכללה ערבית. EHH(22)  
doi [https://benyehuda.org/lexicon/00578\\_files/00578200.pdf](https://benyehuda.org/lexicon/00578_files/00578200.pdf)

## ייצוגי הכפר הערבי בספריו המוקדמים של סייד קשוע

סוגיית הכפר הערבי כמהות פיזית וכאידיאה נוכחת ביצירותיהם של סופרים ערבים הכותבים ומפרסמים את ספריהם בעברית. שלוש תמות מרכזיות מסייעות בידינו של קשוע להעמיד לנגד עיני קוראיו את תמונת הכפר על ציר המרחב ועל ציר הזמן תיאורו הפיזי של הכפר, זיכרונות מהעידן שלפני הנכבה ותיאור תחלואי הכפר בהווה בראייה ביקורתית המופנית כלפי פנים וכלפי חוץ.

### פורסם

שגיא, ש' (2021). ייצוגי הכפר הערבי בספריו המוקדמים של סייד קשוע. בתוך ר' בן-שחר ונ' בן-ארי (עורכות), העברית שפה חיה קובץ מחקרים על הלשון בהקשריה החברתיים-תרבותיים, ט, עמ' 329-348.

## סטנדאפ וספרות הילכו שניים יחדיו? שילוב יסודות הומוריסטיים מאומנות הסטנדאפ ברומן "סוס אחד נכנס לבר" מאת דויד גרוסמן

הרומן של דוד גרוסמן "סוס אחד נכנס לבר" (2014) מתאר-לראשונה בספרות העברית - הופעת סטנד-אפ מלאה מראשיתה ועד סופה. זוהי הופעתו של הסטנד אפיסט דובליה ג'י, מין ליצן עלוב ועצוב, שאינו בוחל בשום אמצעי כדי להצחיק את קהלו ההולך ומתמעט במועדון נידח בנתניה. במהלך ההופעה, בין בדיחה לבדיחה, נחשפים חייו של הסטנדאפיסט בעבר ובהווה ולנגד עיני הקהל הולכת ונפרמת ההופעה הקומית ומקבלת צביון של סיפור טראגי. ברומן מתקיימים הלכה למעשה מאפייניו העיקריים של ז'אנר הסטנד-אפ, קרי מרכזיותו של האמן במופע וכן יצירת האשליה שהוא ממציא את דבריו תוך כדי שהייה על הבמה, שכן הוא כביכול 'חשי' את קהלו ומאלתר את סיפוריו ואת



בדיחותיו בהתאם לכך ואף עושה שימוש נרחב ונועז בגופו. הבדיחות של דובליה חלקן וולגריות וסרות טעם וחלקן האחר עולה בקנה אחד עם התכנים המזוהים עם עולמו של הסופר והדמות הציבורית דויד גרוסמן בדיחות פוליטיות, בדיחות שואה ובדיחות מוות. במחקר זה אבקש לברר את טיבו של ההומור שבו משתמש גרוסמן בטקסט כדי לאפיין את עולמו של דובלה הסטנדאפיסט וכדי לבדוק כיצד מתממשים ומשתלבים בטקסט ספרותי יסודותיו ומאפייניו של ז'אנר אמנותי אחר לחלוטין - מופע הסטנדאפ קומדי.

### פּוּרְסָם

שגיא, ש' (2021). סטנדאפ וספרות הילכו שניים יחדיו? שילוב יסודות הומוריסטיים מאומנות הסטנדאפ ברומן 'סוס אחד נכנס לבר' מאת דויד גרוסמן. *הומור מקוון*, 16, 49-31.



## שחברי קאסם, עביר

### Phonological Awareness in Arabic: The Role of Phonological Distance, Phonological-Unit Size, and SES.

The study tested phonological awareness in a cross-sectional sample of 200 Arabic speaking 2<sup>nd</sup>, 4<sup>th</sup>, 6<sup>th</sup>, 8<sup>th</sup>, and 10<sup>th</sup> graders from low and mid-high Socio-Economic Status (SES). Participants were native speakers of a local dialect of Palestinian Arabic spoken in the north of Israel. Twelve phonological awareness tasks were administered six of them used as stimuli shared words that have an identical form in Standard Arabic and in the spoken dialect (hereafter, SpA words; e.g., / saʒad / ‘kneft’) and six used StA words with a unique form different from the one used in the dialect (hereafter, StA words; e.g., / ʔaxað / ‘took’). Three tasks (blending, segmentation, deletion) were developed for each set of words to test syllable awareness and three additional ones to test phoneme awareness. Repeated measure ANOVAs showed a cross-sectional growth in syllable and phoneme awareness across grades, as well as significant differences between children from low versus mid-high SES. The results also showed a consistent effect of phonological distance on phonological awareness across all tasks and in both groups with awareness of SpA words higher than StA words. At the same time, the impact of phonological distance was more prominent in children from low SES as against mid-high SES, in phoneme awareness as against syllable awareness, and in segmentation and deletion tasks as against blending tasks. The results underscore the roles of item-based properties of phonological distance and phonological-unit size, as well as the role of participant-based characteristics of SES in phonological awareness in Arabic diglossia.

#### Published

Saiegh-Haddad, E., Shahbari-Kassem, A., & Schiff, R. (2020). Phonological awareness in Arabic: the role of phonological distance, phonological-unit size, and SES. *Reading and Writing*, 33(6), 1-26.



### Visual Arabic Word Recognition During Subliminal and Supraliminal Presentations: A Lexical Decision Study in Normal and Disabled Readers

The study aimed at assessing visual word recognition in normal skilled (NRs) and disabled adult Arabic readers (DRs) using masked subliminal and supraliminal word presentations in a lexical decision task (LDT). The main assumption of this investigation was that, as a consequence of their reading disability, DRs would exhibit slower reaction times (RTs) and lower performance than NR in the supraliminal condition. By contrast, since words identified subliminally are thought to occur thanks to advanced orthographic (not phonological skills), it was assumed that this presentation mode would diminish the differences between DRs and NRs. RTs and  $d'$  detection measures were analyzed in 59 NRs and 21 DRs who had to decide whether visually presented letter strings corresponded to real Arabic words or to pseudowords. The statistical analyses conducted on RTs and  $d'$  showed that, although both groups showed a lexicality effect (faster RTs for words than for pseudowords), the DRs compared to NRs showed longer RTs and lower detection measures in the supraliminal mode. Importantly, in the subliminal mode, no group effect was found in terms of RTs and the size of the difference between groups in terms of detection decreased. Also, in this latter presentation condition, we observed that the lexicality effect was significant in the DRs but not in the NRs. These findings are discussed in relation to other studies indicating that DRs might have benefited from good orthographic skills, on which they rely to compensate for their phonological deficits.

#### Published

Rizik, S. S., Khateb, A., & Pegna, A. J. (2021). Visual Arabic word recognition during subliminal and supraliminal presentations: a lexical decision study in normal and disabled readers. *Open Journal of Modern Linguistics*, 11(3), 361-379.



## שיד-חשמה, לינה

### Interconnectivity Between Feminist Literature and Prison Literature or Feminist Prison Literature - Al-Sharnaqa Novel As A Sample

The study confirms the existence of intersection between Feminist Literature and Prison Literature. Both genres intersect in their approaches and aesthetic tools. The quest for freedom, revelation, unbosoming, revolution against persecution and destruction of all the forms of authority constitute central points of intersection, which reach their burning point when the writer herself is the prisoner who lives the experience of imprisonment and she reveals her experience through writing a narrative text.

The study suggests calling this type of literature written by such women writers as "Feminist Prison Literature" and seeks to clarify this interconnectivity and prove that the prison literature that a woman writes does not differ in its themes and features of its revolutionary content, its artistic devices and techniques from men's prison literature. To achieve these objectives, the study chose the novel of *al-Sharnaqa/ the Cocoon* by the Syrian woman writer, Ḥasība 'Abd al-Raḥmān, as a sample.

#### Published

al-Sheikh-Ḥishmeh, L. (2018). Interconnectivity between feminist literature and prison literature or feminist prison literature - al-sharnaqa novel as a sample. *International Journal of Language and Literature*, 6(2), 59-81.

### Prison Literature in the Arab World: Features and Samples

The study reflects the crisis of freedom that prevails in the Arab countries, where the prison has become an institute, whose function is to "tame" the voices that threaten the entity of the regime. This situation led to the appearance of a large quantity of Prison Literature.

Prison Literature is characterized by fixed features. It is a result of an actual true experience and is generally published after the painful and ugly experience. Mostly, it is written and published outside the writer's homeland far from the existing political regime or in the writer's homeland after the disappearance of the suppressive regime.

Prison Literature is generally concerned with the educated political intellectual writer who is opposed to the political regime and describes the prison and the



brutality of the torturer and his tools, and the prisoner's extreme suffering. Since Prison Literature describes a bitter reality, the writer finds himself obliged to rebel against it through his search for new artistic tools and different forms that break the traditional classical systems.

### Published

al-Sheikh-Hishmeh, L. (2018). Prison literature in the Arab world: features and samples. *Journal of Oriental and African Studies*, 27, 165-199.

## **Aesthetics of Place and Its Dialectics in Prison Literature**

The study deals with the aesthetics of the Prison-Place in 'Prison Literature'. It discovers that Prison Literature is basically a literature about Place. The Prison is the master of the event towards which all the structural elements of text are directed. It is impossible to talk about the Prison without connecting it with the Prisoner because the human presence in it is the element that emphasizes its indication and grants it its meaning.

The study observes the aesthetics of the Prison and its attributes as they are reflected in the literary text, and points out the role of these attributes in defining the indications of Place and the prisoner's realization of those indications. The study also confirms that the relationship between the Prisoner and the Prison is a contradictory dialectic relationship between the 'prison and freedom'. From this dialectic relationship, other Time and Place dialectics result, interconnect, and dispute among themselves at the same time. These dialectics emphasize the idea that whenever the Place is closed on the body of the prisoner, the prisoner looks for freedom and emancipation by his soul and imagination as tools that help him to overcome the cruelty of Place and keep his steadfastness. Therefore, the study investigates a number of samples of Prison Literature in order to observe the speciality of this place and the prisoner's dialectic relationship with it.

### Published

al-Sheikh-Hishmeh, L. (2020). Aesthetics of place and its dialectics in prison literature. *Journal of Oriental and African Studies*, 29, 7-35.



## فردوس في حبرها القلق قراءة في ديوان "حبر على قلق" للشاعرة فردوس حبيب الله

تسعى هذه الدراسة إلى التعريف بالشاعرة فردوس حبيب الله، كاشفة عن الخطوط العريضة لمشروعها الشعري من خلال التركيز على ديوانها الأخير «حبر على قلق». ولأن هذا القلق لم يأت من فراغ، بل هو انعكاس لواقع يحكمه القلق والاعتراب والتشظى، فقد وقفت الدراسة على موقف الشاعرة من هذا القلق، وعن دوافعه وأسبابه، وقد حاولت الإجابة عن السؤال هل هو قلق فردي ذاتي أم أنه جماعي إنساني عام؟ هل هو قلق أنثى في مجتمع ذكوري سلطوي أم أنه قلق الرجل والمرأة على حد سواء؟ من هنا، تكشف الدراسة عن هذه الرؤيا الشعرية التي تعبر عنها الشاعرة فتتناول بالبحث والتحليل مضامين القصائد وموضوعاتها وقضاياها، كالبعد الصوفي والهموم الفردية- هموم المرأة ثم الهموم الجماعية- السياسية والاجتماعية، ثم الشكّل والمستويات الفنية والآليات التي اعتمدها كالتضاد والتناص، مروراً بالعبث والنصيبة والميتا شعر وغيرها.

### نُشر

الشيخ- حشمة، ل. (2019). «فردوس في حبرها القلق»- قراءة في ديوان «حبر على قلق» للشاعرة فردوس حبيب الله». بين المسائرة والمغايرة- دراسات في أدب المرأة الفلسطينية. قسم اللغة العربية مجمع القاسمي- أكاديمية القاسمي، ص 45-69.

## "شهرزاد من هذا العصر" - قراءة تأويلية في رواية حكايات الليدي ندى" للكاتبه كلارا سروجي - شجراوي"

تنتهي رواية «حكايات الليدي ندى» للكاتبه كلارا سروجي - شجراوي إلى السرد النسويّ الثائر الذي يسعى إلى تقويض الأعراف التي أرسنها المؤسسة الذكورية المسيطرة. تجلّت ثورتها على صعيد المضمون والتقنيات الفنية في تناولها لقضايا تكشف عن جراتها في انتهاك الأعراف الاجتماعية والأدبية. إنها رواية مركبة رمزية تجعل عملية القراءة عملية ذهنية من الدرجة الأولى. لذا تهدف هذه الدراسة إلى قراءة الرواية قراءة تأويلية تسبر أغوارها الباطنية والشكلية، وتحلل أبعادها الرمزية ودلالاتها النسوية والسياسية، ثم الوقوف عند أبرز تقنياتها الأسلوبية، معتمدة على التوجه السيميائي الذي يرى بكلّ معطى من معطيات النصّ علامة تحمل معنى بالضرورة، بما في ذلك الأساليب الفنية.

### نُشر

الشيخ- حشمة، ل. (2020). «شهرزاد من هذا العصر» - قراءة تأويلية في رواية حكايات الليدي ندى» للكاتبه كلارا سروجي - شجراوي». المجمع-أبحاث في اللغة العربية والأدب والفكر. باقة الغربية أكاديمية القاسمي، ع 15، ص 277-320.



## أدب السجون.. مرة أخرى - دراسة في الأدب الخليجي

يرصد هذا البحث تجارب الأدباء والمبدعين الخليجيين مع القمع وملاحقة رقابات الثالوث المحرم لهم ولإبداعاتهم، ثم يبحث في نصوص أدبية تتجلى فيها هذه الظواهر؛ يبحث في النصوص من مضمونها إلى فنيها وأساليبها. من هنا تأتي الدراسة تحليلية تطبيقية ذات مستويين المستوى النظري، حيث يقسم هذا القسم إلى ثلاثة فصول. يتطرق الفصل الأول إلى إشكالية الحرية والإبداع بدءاً بتعريف مفهوم الحرية ثم مفهوم الإبداع لغوياً، فلسفياً، اجتماعياً وسياسياً، ثم العلاقة الجدلية بينهما وتأثير ذلك على الواقع الأدبي بشكل خاص. ثم رصد جدلية الحرية والإبداع وأدب السجون في الأدب العربي القديم، ثم في الأدب العالمي. أما الفصل الثاني فقد خصص لبحث أدب السجون، ورصد الواقع السياسي لبيان نوعية العلاقة بين السلطة والمثقف في العالم العربي وملاحقات السلطة للمثقفين وسجنهم كخلفية أساسية لفهم دوافع ظهور مثل هذا النوع الأدبي وأهدافه، ثم تعريف السجن لغوياً، اصطلاحاً، نظرياً وتاريخياً، وصولاً إلى تعريف أدب السجون مفهومه، نشأته، تطوره، مضامينه وميزاته الفنية، ثم رصد نماذج أدبية كتبت من كافة الأقطار العربية. أما الفصل الثالث فقد تمحور حول التطور السياسي والاجتماعي والاقتصادي في دول الخليج، ثم الملامح الثقافية والتطور الأدبي. كما تم رصد تجربة الكاتب والمثقف الخليجي في مواجهة التابو السياسي، الديني والاجتماعي، وممارسات القمع التي مارسها عليه الرقابات الرسمية وغير الرسمية، فكشف البحث التقاب عن تجارب عدد من الأدباء الخليجيين الذين لوحقوا أو اعتقلوا أو سجنوا أو منعوا من نشر كتبهم. وكانت هذه خلفية ومرجعية هامة ساعدت على شمولية الطرح والإحاطة بجوانبه وأبعاده المختلفة.

أما في المستوى التطبيقي فقد تركّز هذا القسم في قراءة نصوص أدبية تنتمي لأدب السجون، حيث تم استقراء مضامينها وما تجلّى فيها من صور القمع والسجن وسؤال الحرية وصور التعذيب الجسدي والنفسي، ولامح الشخصيات شخصية السجان وشخصية السجن. أما في الباب الثاني فقد ألقى الضوء على التقنيات النصية والجماليات الفنية والأسلوبية التي تميّز أدب السجون، كالبطولة والأبطولة، المكان-السجن صورته وجمالياته، الزمان- زمن السجن، تيار الوعي- تفتيت الحبكة التقليدية، النهايات، العتبات النصية والعناوين، الرمز، زاوية السرد وتعدد الأصوات، وغيرها.

### نشر

الشيخ-حشمة، ل. (2020). أدب السجون.. مرة أخرى - دراسة في الأدب الخليجي. عمان دار الشامل للنشر والتوزيع.





