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# Chapter 28

## Reflective Teaching

by  
Barbara Thornton and Dalia Maher

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# Introduction

If you give a man a fish, you feed him for a day, if you teach a man how to fish you feed him for life.

(Chinese proverb)

## Reflective Teaching in Action

Mrs. Raga has been teaching English at the primary level for five years. She has learned how to maintain order in her classroom and to create lesson plans which contain several interesting activities that maintain her pupils' attention. She has come to the realization lately, through talking with her colleagues at a workshop, that she uses the native language in her classroom far more often than they do. She would like to start using English so that her pupils will get used to the sounds of the language but she feels uncomfortable with her language ability. She decides to prepare some notecards with basic English expressions for student activity and resolves to refer to these notecards in class daily until she no longer needs them. She is surprised that after a month, she has learned a great deal of management language and begins to think about other kinds of English expressions to incorporate into her lessons.

## What is Teacher Reflection?

The "reflective approach" to teaching is a recent trend which sees teacher development as arising from within. Teachers learn by reflecting on their classroom practice. In its strong form, the approach is initiated by teachers themselves who seek to observe their own teaching, collect data on their teaching techniques and use that data as the basis for self-analysis, self-evaluation, change and, ultimately, professional growth (Richards and Lockhart, 1996). In its weak form, it is what experienced teachers all do - think about what they are doing and seek ways of doing things better. It is a process of learning by reflecting on action (Schon, 1990, 1983).

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# Why Teacher Reflection?

As teacher educators, it is often easy to assume that our role is to equip our teachers with skills and techniques. However, it is important that these skills and techniques are adapted for use in specific contexts by individual teachers. A reflective approach means that teachers are decision-makers. They need to think about what they are doing, the challenges of their role and make their own individual links between theory and practice, personalizing the skills and techniques and matching them to their pupils' needs.

If we see our aim as teacher educators to prepare teachers for a lifetime career of teaching then it is very important that we enable teachers to be reflective practitioners. We want our teachers to continue to learn long after they finish their university studies. One thing we can be sure of in our educational system is that there will be change and a teacher who trained thirty years ago and who has learned nothing since would make a very poor teacher. Although teachers can learn from their colleagues and from being observed by inspectors, the ability to learn from experience is a very powerful learning tool. By training teachers to reflect on what they are doing, to learn from what happens to them in the classroom, we are helping to plant the seeds of teacher development which should last throughout their careers.

## Teacher Reflection: A Model

Wallace (1991) provides a useful model of teacher reflection and the relationship between reflection and training. In order to become professionally competent, the trainee teacher needs to practice, teach and reflect, on that practice - he calls this the reflective cycle. However, the trainee needs some sort of basis on which to reflect. Wallace describes two different kinds of knowledge that may inform teaching practice. Received knowledge is the knowledge the trainee receives from lectures, from reading books or from other external sources. Experiential knowledge is the knowledge derived from experience - the trainee teacher might have tried techniques in the past and made judgments about how well they worked. However, Wallace also refers to the trainee's existing conceptual schemata or mental constructs. By this, he means that trainees do not come to us as blank slates. They already have their own beliefs of what is meant by good teaching. Such beliefs are founded on their own experience of teaching prior to the start of their training. So, the reflective cycle occurs when teachers analyze their performance in light of their own experiences as students in classrooms, their academic knowledge sources and their own attempts at teaching. The diagram below summarizes Wallace's view.

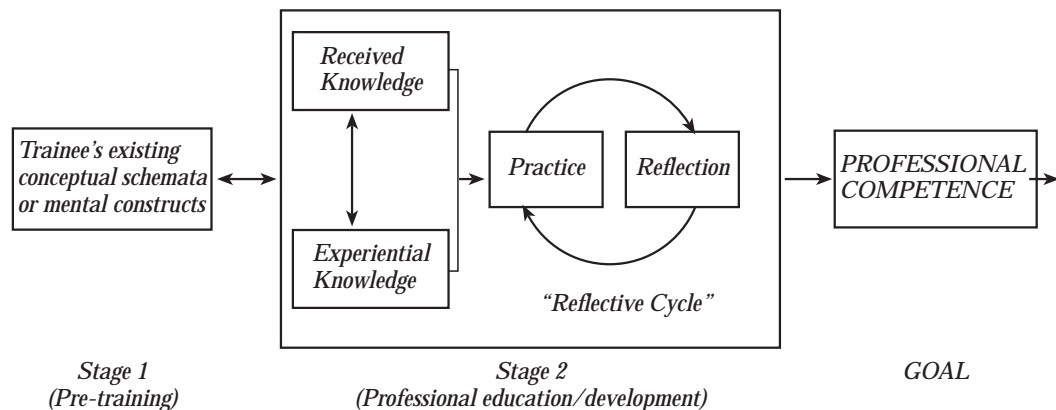


Figure 4.1 Reflective practice model professional education/development

(Wallace 1991 p. 49)

The reflective cycle assumes that teachers who reflect on what is happening in their classrooms, who make thoughtful decisions about their procedures and approaches, who view their classrooms as laboratories to study the relationship between teaching and learning, will quickly discover whether there is a gap between what they are teaching and what the pupils are learning. They will become professional educators rather than robotic classroom managers.

## Reflection in Practice

That is all very well but what exactly should I do to enable my student teachers to become reflective educators? Here are a number of techniques you can use with your teachers to promote reflection.

### Ghosts Behind the Chalkboard

It is easy to forget that our student teachers do, in fact, have a great deal of experience with classrooms and teaching. By the time they enrol with us at university, they have observed and participated in literally hundreds of hours of lessons - as pupils in school. It is unrealistic to think that this experience has had no effect on them in terms of their values and beliefs about what constitutes good teaching. Often these values and beliefs remain hidden and are never verbalised yet they are very powerful in determining one's own teaching style. The title of this section, "Ghosts behind the Chalkboard," comes from an article written by Weintraub (1989). The ghosts are the previous teachers that you have experienced and observed who have had an effect on your teaching in the classroom. It is helpful for our students to become aware

of their pre-existing belief systems so that they realize the reasons behind their classroom decision-making. There are a number of exercises you can do to elicit such beliefs. Below is one example.

### Ghosts Behind the Chalkboard

Think back to the best teacher you had in school. What was it about that teacher or that teacher's way of teaching that was particularly good? List the qualities your teacher had and the things your teacher did. Be as specific as possible.

Now think back to the worst teacher you had in school. What was it about the teacher or the teacher's way of teaching that was bad? List the qualities this teacher had and the things this teacher did. Then compare your list with that of a colleague. What does it tell you about good teaching?

	My list	Colleague's list
Good teacher		
Bad teacher		

## Beliefs about Teaching

It is possible to tease out teachers' deep-seated beliefs about teaching in a number of other ways. One simple technique is through a questionnaire or true/false exercises, such as the example below. Use this as a way of getting teachers to talk about their personal theories of teaching. Where do their beliefs come from? Are they supported by research? Are they related to the teacher's personality structure? Are their beliefs promoted by a particular educational institution? You can choose to focus on just one area of inquiry, such as error correction, the use of Arabic, approaches to classroom discipline, etc. or more general issues.

### Beliefs about Teaching

**Directions:** Agree, disagree or modify

1. A teacher should never use Arabic in the classroom.
2. The most important thing about a teacher is his or her personality.

3. A teacher must have perfect English in order to be able to teach.
4. Teachers should always correct learners' pronunciation.
5. Some children will never learn English however hard the teacher tries.
6. A good textbook is essential to good teaching.
7. Teachers should never allow pupils to call out answers in class.
8. Grammar-based classes are preferred to communicative classes.
9. Learners need to be active participants in the English classroom.
10. It is not necessary for all children in Egypt to learn English.

## Journal Writing

"...the usual teaching journal is a first person account of a series of teaching experiences. The idea is to write about teaching experiences as regularly as possible over a period of time, then to analyze these entries...." (Gebhard, 1999, p.79).

Journal writing occurs after a teaching event. Essentially, it has two purposes:

1. To record the events of the lesson for later reflection.
2. To help the teacher observe the lesson in a more thoughtful way and to develop insights, ideas and discoveries about ways to improve teaching (Richards and Lockhart, 1996, p. 7).

We can distinguish between personal journals and dialogue journals. Personal journals emphasize understanding ourselves as teachers through introspection. We write down our thoughts and feelings about our teaching and new insights learned from reading about teaching. A personal journal is not designed to be read by others.

A dialogue journal, in contrast, is read either by our tutor or another teacher who helps us to understand teaching through responding to our questions and comments. We "dialogue" with another person in writing.

Ask your student teachers to keep a dialogue journal. The journal can focus on lessons they have taught and their analysis and reflections on the lesson afterwards. You can also ask student teachers to reflect on their methodology lectures or any other aspects of their learning. At first, you may need to give the student teachers questions to guide their reflection. Richards and Lockhart (1996, p.16-17) suggest choosing from the following questions.

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### Questions about your teaching.

1. What did you set out to teach?
2. Were you able to accomplish your goals?
3. What teaching materials did you use? How effective were they?
4. What techniques did you use?
5. What grouping arrangements did you use?
6. Was your lesson teacher dominated?
7. What kind of teacher-student interaction occurred?
8. Did anything amusing or unusual occur?
9. Did you have any problems with the lesson?
10. Did you do anything differently than usual?
11. What kinds of decision-making did you employ?
12. Did you depart from your lesson plan? If so, why? Did the change make things better or worse?
13. What was the main accomplishment of the lesson?
14. Which parts of the lesson were most successful?
15. Which parts of the lesson were least successful?
16. Would you teach the lesson differently if you taught it again?
17. Was your philosophy of teaching reflected in the lesson?
18. Did you discover anything new about your teaching?
19. What changes do you think you should make in your teaching?

### Questions about the students.

1. Did you teach all your students today?
2. Did the students contribute actively to the lesson?
3. How did you respond to different students' needs?
4. Were students challenged by the lesson?
5. What do you think students really learned from the lesson?
6. What did they like most about the lesson?
7. What did they not respond well to?

### Questions to ask yourself as a language teacher.

1. What is the source of my ideas about language teaching?
2. Where am I in my professional development?
3. How am I developing as a language teacher?
4. What are my strengths as a language teacher?
5. What are my limitations at present?

6. Are there any contradictions in my teaching?
7. How can I improve my language teaching?
8. How am I helping my students?
9. What satisfaction does language teaching give me?

Why did you ask about the forms of the rule?

I began my lesson on if - sentences by asking "How many types of conditionals are there?" and I began with the first and second and third and how it is formed. I try to check the answer to know if the student understands the structure and how to use it. So I checked random students to know if they understand and try to know the conditional if. I tried to make the class interesting and the class free from fear. We turned to the workbook which they completed and then we checked orally with the students writing the answers on the board.

How?

I agree, you've a very good sense of humor

MY FAULTS - As I see them.

That I may have concentrated too much on the back desks and also the students at the back couldn't read the blackboard.

Do you feel it was better to write answers on b.b especially for long sentences?

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## What Sort of Responses Encourage Reflection on the Part of my Teachers?

When you collect the journals, beware of making evaluative comments. Other types of comments are more helpful to promoting reflection on the part of our students.

### Affective and Personal Comments.

Commenting on personal aspects of journal entries can help to build confidence and establish rapport with the teacher. Comments like this might include things such as *I really enjoyed your description of Ahmed in the class you taught.*

### Procedural Comments.

Give the teacher information about procedures, rules and expectations connected with their teaching practice. *In this school, we collect homework three times a week.*

### Direct Responses to Questions.

Student teachers can be encouraged to ask questions in their journals e.g. *How can I stop the pupils from speaking in Arabic during pair work?* Your role as a tutor would then be to respond directly to that question.

### Exploratory Suggestions.

This involves giving teachers ideas for how they can explore issues they have raised e.g. *Why not try a technique for achieving silence in the classroom? You could teach the children to respond to a hand signal, ring a bell, or try a clapping routine.*

### Synthesis Comments and Questions.

The student teacher might talk about things they have read about or learned about in their methodology lectures. Your role as a tutor might then be to give them an example of how this works in practice in the classroom. In this way, you will be helping the student teacher to see the link between theory and practice. *Last week we read about the need for active learning. How do you see that occurring in your classroom?*

## Observation and Teaching

There are many different approaches to stimulating teacher reflection through observation. None of them involve evaluation. The reason for this is that teachers are reluctant to take part in observations involving evaluation. Instead, observations can be used as information gathering missions or fact-finding sessions. Observers act as another set of eyes and ears and help teachers look at the teaching process with thoughtfulness and objectivity. Richards (1998)

describes observations as a three-part process.

- The teaching event itself - this is usually a lesson the teacher has taught but it can also be a lesson the teacher has observed either in real life or on video. It can even be a lesson the teacher has read about.
- Recollection of the event - this stage involves producing an account of the event with no attempt at evaluation - perhaps through journal writing.
- Review and response to the event - here the student teacher reviews and reflects on the event in order to process it at a deeper level.

## Post Lesson Reflection

It is usual to ask teachers to reflect on a lesson after they have taught it. Such reflection often takes the form of the supervisor asking a question such as *So how do you think it went?* However, more focused questions are sometimes necessary in order to get the trainee teacher to go beyond the superficial aspects of the lesson. The following are some questions you may wish to ask:

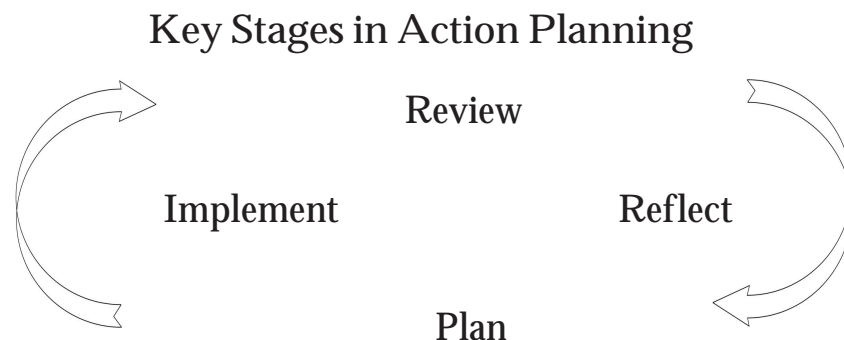
Questions for reflection after a lesson.

1. How do you feel about the lesson?
2. What do you think the pupils know now that they did not know before the lesson?
3. What do you think the pupils can do now that they could not do before the lesson?
4. If you were teaching this lesson again, what would you do differently?
5. What have you learned about teaching or about yourself as a teacher as a result of this lesson?

(Richards and Lockhart, 1996)

## Action Planning

Action planning is used at the pre-service level in a number of European countries, both as a way of assessing student progress and encouraging teachers to reflect. There are numerous variations of the action planning process. However, the key stages are usually seen as:



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## Review

In the review stage, the student teacher typically completes an audit of his or her strengths and weaknesses.

## Reflect

Next, the student teacher reflects on these strengths and weaknesses and sets targets for future development.

## Plan

The student teacher, with the help of a tutor, plans how he or she is going to achieve the targets. It is important that the targets be:

- Specific - *I want to be a better teacher is not specific. But, I want to use more English in the classroom is.*
- Measurable - It should be possible to see and measure when the target has been achieved. *I want to be a more popular teacher is not as easily measurable as My goal is to have each child in the classroom using English at some point in the lesson.*
- Agreed - During pre-service the student teacher and the tutor need to agree upon the target goal. This will ensure that the target is appropriate and realistic in the time frame of the educational process.
- Realistic - It is no use setting a target that is impossible to achieve, e.g. *I want to speak English like a native* may not be a realistic goal.
- Timed - Student teachers and tutors should also agree on an appropriate date for reaching the target goal.

## Implement

The next stage requires the teacher to implement the action plan and monitor its implementation. This is followed by another period of review.

## Action Research

Action Research involves research initiated by the teacher him or herself in the classroom. The purpose is to further an understanding of the teaching and learning process and to bring about some change in classroom practice (Gregory, 1988). The procedure is similar to that involved in action planning. The teacher usually identifies an area for investigation, plans the research and then implements it. Action Research differs from action planning in a number of ways.

1. It is more research oriented. The emphasis is on systematic data collection which is later analyzed. Action research projects can be described as experiments or investigative projects.

2. Action research can be collaborative or team based (Wallace, 1998).
3. It does not necessarily look at areas of improvement in teacher practice. It can answer more open-ended questions such as "*What are my students' attitudes to learning English?*" It can build on a teacher's strengths, rather than looking at weaknesses.

## Topics Suitable for Action Research by Pre-Service Teachers

Teachers initiate action research to satisfy their own needs and answer their own questions about teaching. Because of this, it is usually not appropriate to assign an action research project to another teacher. However, we can help teachers to initiate projects by sharing with them ideas from our own practice or ideas from the research of other teachers. Some of these include:

1. "Calling on" procedures: girls versus boys, numbers of students called on, left side versus right side of the room, front versus back of the room, etc.
2. Questioning techniques: amount of time following a question before calling on a student, factual questions versus comprehension and open-ended questions, etc.
3. Amount of English used in the classroom and for what purposes.
4. Number of activities within a lesson period.
5. Movement in the classroom: areas in which the teacher routinely moves, proximity to all students, etc.
6. Management techniques: maintaining order, getting and keeping the children's attention, distributing and collecting materials efficiently, etc.
7. Clarity: clear explanations of procedures and directions, modeling procedures, using charts, graphs, the blackboard and other graphics to help children understand.
8. Momentum: smooth flow of events from one activity to another with no "down time" for the students.

## Conclusion

Some writers feel that the reflective approach to teacher education has been overdone at the pre-service level (Tickle, 1993). They say that in order to reflect on your teaching, you need to have experience and knowledge on which to base that reflection. It is not completely true, however, that novice teachers

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have insufficient experience. We have argued here that teachers come to the teaching process with many years of classroom experience - years during which they have observed many teachers and formed belief systems about teaching and learning. Furthermore, in order for reflection to be ingrained in our teachers' professional lives, we need to structure the experience for them. We can show them that we ourselves have not stopped learning and as supervisors, we, too constantly think about and reflect on our supervision. In this way, we are providing a powerful model of the reflective practitioner rather than merely talking about how things should be done.

## Key Terminology

### Action Research

This "reflection in practice" is research oriented and teacher initiated. It is a "method of professional self-development which involves the systematic collection and analysis of data related to practice" (Wallace, 1998 p.255).

### Action Planning

Pre-service teachers review strengths and weaknesses, reflect on them, plan target goals and implement the goals.

### Schemata

Mental constructs or mental representations of knowledge and beliefs.

### Reflective Cycle

Practice teaching followed by reflection upon that experience through the light of pre-existing conceptual schemata, received knowledge and experiential knowledge.

### Received Knowledge

Knowledge about teaching learned from lectures and books.

### Experiential Knowledge

Knowledge about teaching derived from personal experience in classrooms.

### Personal Journals

Introspective, personal writing about teaching.

### Dialogue Journals

Writing about teaching events that are shared with a tutor or another teacher.

### Observation

Collecting data in an effort to promote reflection and analysis.

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## Understanding Check

Look back at the proverb at the beginning of this chapter.

What is the meaning of the proverb and how does it relate to teacher reflection?

- What are the advantages of getting teachers to reflect on their own teaching?
  - Can you think of any disadvantages to this?
  - Which Reflection in Practice techniques might help your student teachers think about and Reflect on their teaching experience?
- 

## Resources

Cruickshank, D., Bainer, D. and K. Metcalf. (1998). *The Act of Teaching*. New York: McGraw-Hill Higher Education.

Gebhard, J. (1999). *Reflecting through a Teaching Journal*. In Gebard, J & Oprandy, R. *Language Teaching Awareness: A Guide to Exploring Beliefs and Practices*. New York: Cambridge University Press.

Gregory, R. (1988). *Action Research in the Secondary Schools*. London: Routledge, Chapman and Hall.

Richards, J. (1998) *Beyond Training*. Cambridge: Cambridge University Press.

Richards, J. and C. Lockhart. (1996). *Reflective Teaching in Second Language Classrooms*. Cambridge: Cambridge University Press.

Schon, D. (1990). *Educating the Reflective Practitioner*. London: Jossey-Bass.

Schon, D. (1983). *The Reflective Practitioner: How Professionals Think in Action*. London: Temple Smith.

Tickle, L. (1993). Capital T Teaching. In Elliott, J. (ed.) *Reconstructing Teacher Education*. pps 110 - 124. London: Falmer Press

Wallace, M. (1998). *Action Research for Language Teachers*. Cambridge: Cambridge University Press.

Wallace, M. (1991). *Training Foreign Language Teachers: A Reflective Approach*. Cambridge: Cambridge University Press.

Weintraub, E. (1989). *Look Back and Learn: the Ghosts behind the Chalkboard*. TEA News, 7.1.

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## Summary Handout for Chapter 28:

### Reflective Teaching

What is the reflective cycle?

- Teaching Practice
- Reflection
- Reflection is based upon pre-existing conceptual schemata, received knowledge and experiential knowledge

Reasons to adopt a reflective approach:

- Develops a reflective professional teacher
- Leads to life long learning and professional development

Methods of encouraging reflective teaching:

- Ghosts behind the blackboard
- Beliefs about teaching
- Dialogue journal writing
- Non-evaluative observations
- Post lesson reflections
- Action planning
- Action research



Editorial Board  
&  
List of Contributors

## Brief Biographies of Editorial Board

### Reda Fadel:

Mr. Reda Fadel is a professional teacher educator who has worked in the field of teaching English for many years at the Ministry of Education. In addition to teaching English, he has supervised teachers of English in Egyptian Government schools and worked in curriculum design and development. He has worked as an ELT Counselor, Inspector general, and senior inspector at the Ministry of Education.

### Raga Hanna:

Dr. Raga Hanna is a Professor Emeritus who has been teaching methodology at the Faculty of Education in Fayoum since 1977. She is also involved in in-service training of non-specialist teachers. Her special interest is in the areas of teaching children and teaching practice.

### Mary Lou McCloskey:

Dr. Mary Lou McCloskey, from Georgia State University in Atlanta, is the 2002-2003 president of the international TESOL (Teachers of English to Speakers of Other Languages) organization. She is the author of many texts for teachers and learners and has worked with children, teachers, schools, districts, universities, and ministries of education on four continents.

### Barbara Thornton:

Before becoming an educational consultant, Barbara Thornton, worked at the University of Leicester in the United Kingdom. She has trained teachers in over a dozen countries on three continents. She is the author of a number of texts and articles in the field of teacher training.

### Zeinab El-Naggar:

Dr. Zeinab El-Naggar is a professor of ELT methodology at Ain Shams Faculty of Education. She has worked as an English language teacher, teacher trainer and materials developer in both Egypt and Saudi Arabia. She is a member of the standing committee for curriculum development at the Ministry of Education. She is currently director of the Center for Developing English Language Teaching (CDELTA) at Ain Shams Faculty of Education.

### Kamal Fouly:

Dr. Kamal Fouly is a teacher educator at the Faculty of Education, Al-Minya University, director of El-Manara Educational Center, an AUC off-campus program, and director of the Al-Minya University Website Unit. He previously taught at the American University in Cairo and Imam Muhammad Ibn Saud Islamic University in Saudi Arabia. He has published a number of papers in local and international journals.

### Linda New Levine:

Dr. Linda New Levine, formerly adjunct Assistant Professor of Linguistics and Education at Teacher's College, Columbia University and ESL teacher for K-12 students in New York public schools, is an ESL/EFL consultant specializing in content and language learning for school age children.

---

Faculty of Education  
Contributors to SPEER as Writers

Ain Shams University

Zeinab Ali El-Naggar, Professor, Curriculum and Instruction

Alexandria University

Nadia Ahmed El Sayed Toubia, Associate Professor, Curriculum & Instruction

Assiut University

Fatma Ali Abdel Haque, Lecturer, Curriculum & Instruction

Monir Fuad Nazir Atta Ala, Professor, Curriculum & Instruction

Cairo University

Eman Nady Zaky, Librarian, Fayoum

Raga Hanaa, Professor Emeritus, Curriculum & Instruction, Fayoum

Mansoura University

Asmaa Abdel Moneim Mostafa Mahmoud, Lecturer, Curriculum & Instruction

Sirvart Kevork Dikran Sahakian, Professor, Curriculum & Instruction

Minia University

Dalia Aly Maher Abbass Mohamed, Demonstrator, Curriculum & Instruction

Riham Aziz El Dien Mohammad Mahdy, Demonstrator, Curriculum & Instruction

South Valley University

Ali El Sagheer Abdel Aal Hassan, Lecturer, Curriculum & Instruction, Sohag

Antar Solhy Abdellah, Demonstrator, Curriculum & Instruction, Sohag

Atta Mohammad Gebriel, Demonstrator, Curriculum & Instruction, Sohag

Suez Canal University

Amal Abdel Fattah Abedlla Ismail, Demonstrator, Curriculum & Instruction, El- Arish

Ministry of Education  
Contributors to SPEER as Writers

Beni Sweif Governorate

Aziz Saad Saad Allah Sedhoum, Supervisor, Nasser Directorate

Cairo Governorate

Insaf Sayed Mohammad Ahemd Salem, Curriculum Expert,  
General Department of Primary Education, Ministry of Education

Damietta Governorate

Raafat Mustafa El Tenawy, Senior Teacher, Damietta Military School

Daqahliya Governorate

Walid Anis Shaaban Yasin, Teacher, Mansoura Directorate

Menoufiya Governorate

El Sayed Mohammad Huseiny Sherifa, Supervisor, Berket El Saba Directorate

Kamel Hassanein Mohamed Hyndiah, Supervisor, El Shohada Directorate

Minia Governorate

Abdel Gayed Fayed Abdel Gayed, Supervisor

Abdel Hamid Abdel Hafeez Mohamed, Supervisor, Mellawy Directorate

Mary Samir Hanna Salib, Supervisor, Abo Korkas Directorate

Mohamed Sayed Saleh Massoud, Supervisor, Mellawy Directorate

Qena Governorate

Seif El Din Khodary Mubarak, Supervisor

Sharqiya Governorate

Ibrahim Abdo Zohry Abdo, Supervisor, Diarb Nigm Directorate

IELP-II Staff and Consultant

Contributors to SPEER as Writers

Robert Burch, Director of Research and Evaluation, IELP-II

Linda New Levine, Consultant, Vero Beach, Florida, USA

Mary Lou McCloskey, Georgia State University, Atlanta, Georgia, USA

Barbara Thornton, International Consultant, Ankara, Turkey

Contributors to SPEER as Field Testers

Faculty of Education

Ain Shams University

Dalia Ibrahim Yehya Mohamed Ibrahim, Demonstrator, Curriculum & Instruction

Magdi Mahdi Ali Sikha, Associate Professor, Curriculum & Instruction

Noha Khalil Hussien Mohamed, Student Teacher

Assiut University

Omneya Ahmed Sayed Mansour, student teacher

Salwa Mohamed El Sayed Ahmed, Lecturer, Curriculum & Instruction

Zagazig University

Mona Saber Mousa Mohamed Abou Mousa, Student Teacher, Benha

Mona Salem Mahmoud Zazaa, Lecturer, Curriculum and Instruction, Benha

Nesreen Ahmed Ali El-Sweedy, Demonstrator, Curriculum, Benha

Mustafa Abdel Aziz Abdel Hady Abdel Aziz, Student Teacher, Benha

Shaymaa Ghareeb Mohamed Ahmed, Student Teacher, Benha

Cairo University

Mona Ahmed Abdel Tawab Emam, Lecturer, Curriculum & Instruction, Fayoum

Ahmed Salah Mohamed Mohamed, Student Teacher, Fayoum

Ayman Abdel Tawab Abdel Wahab Ibrahim, Student Teacher, Fayoum

Helwan University

Amal Abou Hadid, Lecturer, Curriculum & Instruction

---

Eman Ramadan Mohamed, Student Teacher  
Engy Mohamed Ahmed Hassan Soliman, Student Teacher  
Kawther Mohamed Abdellah Abou Haggar, Associate Professor, Curriculum & Instruction

Mansoura University

Adel Abdel Halim Abdel Hady El Sheikh, Associate Professor, Curriculum & Instruction

South Valley University

Mahmoud Abdel Salam Ali Abdallah, Student Teacher

Mohamed Idris Farag Nassrallah, Student Teacher

Mohamed Safwat, Lecturer, Curriculum & Instruction, New Valley

Ministry of Education

Contributors to SPEER as Field Testers

Alexandria Governorate

Dalia Mohamed Mohamed Abou Tahoun, Teacher, El Montazah Directorate

Eman Othman Mohamed El Tantawy, Teacher, East Alexandria Directorate

Essam El Dine Moustafa Mourad, Senior Teacher, East Alexandria Directorate

Assiut Governorate

Manal Hassan Hemdan Mohamed, Teacher, Abnoub Directorate

Cairo Governorate

Manal Gamal Abdel Mohseen Ali Zaied, Teacher, Road El Farag Directorate

Nadia Naguib Zaky Gergis, Supervisor, Road El Farag Directorate

Rabab Abd Elmoniem Mohamed Ali Soilam, Teacher, Road El Farag Directorate

Daqahliya Governorate

Farag Abdel Shafi Mohamad Hashish, Supervisor, Sherbeen Directorate

Hamdy Yousef Ali Yousef, Teacher, West Mansoura Directorate

Mahmoud Mahmoud Ismail El Sayed Oda, Teacher, Mansoura Directorate

Fayoum Governorate

Hussein Ali Abdallah Shaban, Teacher, Senouras Directorate

Said Abdel Latif Ahmed Abdel Latif, Teacher, Senouras Directorate

Sayed Abdel Hamid Abdel Baky, Supervisor, Senouras Directorate

Kafr El Sheikh Governorate

Hosni Said Abdalla Deyab, Teacher, Kafr El Sheikh Directorate

Islam El Sayed Ibrahim Amr, Teacher, Kafr El Sheikh Directorate

Metwalli El Sayed Hussein El Ashri, Supervisor, Kafr El Sheikh Directorate

Minia Governorate

Mary Samir Hanna Salib, Supervisor, Abo Korkas Directorate

Qalyubia Governorate

Ayman Abdel Hakeem Mohamed Khafagy, Teacher, Shebin El Kanater

Eliwa Hassan Salem Zayed, Teacher, Shebin El Kanater

Qena Governorate

Hosam Eldin Abdel Hameed Ali, Supervisor, Qena Directorate  
Mohamed Mokhtar Mohamed Hussein, Teacher, Qena Directorate  
Sarwat Mohamed Mahmoud Ali, Teacher, Qena Directorate

Sohag Governorate

El Hussein Sayed Mohamed Sayed, Teacher, Tamma Directorate  
Essam Mohamed Ahmed Abdellah, Teacher, Juhayna Directorate  
Mahmoud Hussein Mohamed Omar, Supervisor, Juhayna Directorate  
Salem Salman Ahmed Salem, Supervisor, Tamma Directorate  
Sherine Wanis Wahba Hana, Teacher, Tamma Directorate

South Sinai Governorate

Aboul Azm Reda Aboul Azm Megahed Fouda, Teacher, South Sinai Directorate  
Azab Seif El Nasr Ahmed Youssif, Teacher, Saint Catherine & Abou Rodeis Directorate  
Yahya Ahmed Moselhy Abdel Fattah, Supervisor, Saint Catherine & Abou Rodeis Directorate