Stressing the importance of instructional objectives, this discussion explores the relationship of handwriting to child characteristics and societal expectations. The nature of writing is described, and questions are specified for teachers to consider before determining educational objectives pertaining to handwriting. Guidelines for initial instruction in handwriting are offered. Subsequently, general objectives in handwriting are listed for cognitive skills and attitudinal domains; in addition, guidelines including examples are provided for writing specific learning objectives. The remaining third of the discussion points out opportunities for handwriting learning activities in several curriculum areas, including mathematics, science, social studies, language arts, and health. (RH)
The teacher of handwriting must select vital objectives for learners to achieve. The concept of relevance is important to emphasize in selecting ends for pupil attainment. Thus, much thought and careful consideration needs to be given by the teacher in selecting these handwriting goals. Too frequently, pupils have developed trivial and insignificant learnings. There is much to be learned during the elementary school years. In society, the "explosion of knowledge" has been a definite reality for some time. The knowledge explosion societal trend has important implications for the classroom teacher. The teacher must select educational purposes carefully. Pertaining to writing skills, Petty\(^1\) wrote:

> Writing involves many skills and abilities. The most fundamental of these are the thinking skills or abilities, which are basic to the expression of feelings and thoughts, whether the medium is speech, movement, art, or writing. In relation to writing, these skills include collecting and organizing data; classifying, comparing, and summarizing ideas and feelings; choosing the most appropriate words and phrases for conveying expressions; organizing these expressions into sentences that are clearly understandable; and sequencing the sentences into a meaningful whole. All of these thinking abilities are used to compose a piece of writing, with the effectiveness of any composition largely dependent on the quality of the thinking ability or skill of the composer. No written expression, not even a single sentence or a label or a short memorandum, will be effective expression unless it is well thought out.

In addition, of course, skill in forming letters and words, in spelling correctly, in punctuating sentences properly, and in those matters of form and custom in the appearance of various types of writing are also very much a part of

effective written expression. And each of these general skills or abilities consists of specific lesser ones: in handwriting, the strokes needed to make the letters, spacing, rhythm of movement; in spelling, making sound and symbol associations, affixing, capitalizing; in punctuation, the strokes needed to form the punctuation marks. All of these skills require teaching and thorough practice so that they become automatic to writers and permit them to use full thinking power for composition.

The Child and Handwriting

Certainly, the teacher must give careful consideration to child growth and development characteristics when selecting objectives. If pupils cannot achieve stated objectives, modification of stated ends is in order. Handwriting objectives selected by the teacher for learners to achieve should be attainable. At the same time, the chosen objectives represent new learnings for pupils to acquire.

The length of time devoted to handwriting instruction needs careful evaluation. Early primary grade pupils need relatively short periods of time devoted to learning activities involving handwriting. Generally, their attention span is not as long as compared to older pupils. First grade pupils become tired rather soon from handwriting experiences because the finer muscles, involving the use of the arm, hand, and fingers, are being developed gradually. The teacher needs to observe individual pupils to determine if learning activities need to be changed from handwriting to a different curriculum area which does not require use of the finer muscles. Intermediate grade pupils generally write for a longer period of time to finish a given reasonable assignment without excessive fatigue and tiredness setting in. However, for any age level, expectations from any individual can be too high in activities involving handwriting. If pupils perceive reasons for developing selected understandings, skills, and attitudinal objectives, energy
levels of the involved person generally increase in wanting to further pursue a given learning activity. Varying approaches in teaching may also assist learners to maintain a longer attention span pertaining to teaching-learning situations involving handwriting experiences.

The teacher must remember that each child is unique in many ways and that includes rate of achievement in handwriting. Pupils feel frustrated and may learn to dislike handwriting experiences if they cannot achieve to the level expected of them. Pupils should enjoy handwriting experiences as well as have feelings of satisfaction in all curriculum areas of the elementary school.

In determining educational objectives pertaining to handwriting, the teacher needs to consider and answer the following questions:

1. Can learners satisfactorily achieve the chosen aims?

2. Will pupils feel successful in their accomplishment?

3. Can interest be developed and/or maintained within pupils in achieving desired objectives?

4. Are the stated objectives in handwriting in harmony with neuromuscular skills that learners presently possess?

5. Do the objectives guide learners to develop appropriate attitudes, as well as skills and understandings?

6. Are the objectives stated so that it can be determined if achievement in that direction is taking place?

7. Will learners feel that purpose is involved in achieving the desired objectives?

For initial instruction in handwriting, Lee and Rubin wrote:

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Most things we learn to do, we learn largely through imitation and experimentation, giving special attention to the more troublesome aspects. We usually arrive at our own personal adaptations and idiosyncrasies. Handwriting can be learned the same way.

Many children learn to write their names and perhaps much more before they come to school. In school, each can have a card with his or her name on it in good, clear manuscript writing, so that it is readily available for copying. When children begin dictating sentences for the teacher to write for them, they will soon want to write for themselves. Thus begins their first significant writing "lesson."

The teacher can write the sentence in good, clear manuscript on a strip of paper the appropriate length for the child's picture. The child takes both the strip and the picture to the writing center, places the strip just above the blank space reserved for the sentence, and copies the sentence directly below the teacher's writing.

When this procedure is repeated many times and combined with discussion during dictation, no other writing "lessons" are needed. When a few children have difficulty with a certain letter, the teacher can group these children for a few minutes, explain the problem, and provide a good model for them to copy. They can solve the problem quickly by keeping this model in front of them as they write.

Teachers must be aware that there is a great difference in the small muscle coordination of children of this age. When a child is trying, the writing must be accepted with appreciation for progress, regardless of imperfections. If it is really illegible, perhaps larger writing—or smaller writing—would help.

Society and Handwriting

What does society expect of pupils in handwriting achievement? It is imperative that individuals exhibit legible handwriting when communicating with others. Time is wasted in reading content if it is difficult to determine what others have written due to poor handwriting. Individuals like to read meaningful content which is easy to decode. This is true of content written in friendly letters, business letters, announcements, plays, poems, stories and in letters of application in applying for jobs or positions.
Legible handwriting must be in evidence. The employer generally, all things being equal, will be more influenced with content in a letter that has good handwriting as compared to illegible handwriting. It is true, of course, of application in applying for positions and jobs are also typed. There are other numerous writing occasions in which legible handwriting is a definite asset as compared to illegible handwriting. Society does place value upon individuals exhibiting quality legible handwriting.

The teacher needs to answer the following questions pertaining to what society might expect pupils to learn in handwriting:

1. Will the curricular learnings that pupils develop be useful in society?
2. Are the chosen objectives relevant pertaining to what pupils may need in terms of learnings now as well as in the future?

General Objectives in Handwriting

General objectives in handwriting state the direction of behavior that teachers want learners to achieve over a relatively long period of time. The teacher needs to determine which understandings, skills, and attitudes are to be developed within pupils at the end of a designated interval of time. General objectives may not be achieved during the time a unit is taught or perhaps even during a school year.

Pupils should exhibit continuous progress in handwriting. They need to be taught at their present level of achievement and guided in progressing at their optimum rate of achievement as they progress through diverse years of schooling.

The following, among others, might well be important general objectives...
for pupils to accomplish in handwriting.

A. Understandings Objectives

1. To develop within the pupil an understanding of how to form letters legibly.

2. To develop within learners an understanding of how letters may be aligned properly.

3. To develop within the child understandings pertaining to appropriate spacing of words and letters.

4. To develop within the learner an understanding of the necessity of having proper proportion of letters.

5. To develop within the child appropriate generalizations in achieving legibility in handwriting.

6. To develop within the learner an understanding of approaches to self-evaluation in the area of handwriting.

7. To develop an understanding within pupils of the necessity of exhibiting neatness in handwriting.

B. Skills Objectives

1. To develop within the pupils skill to form legible letters in handwriting.

2. To develop within learners skill to use proper alignment in handwriting.

3. To develop within children skill to use appropriate proportion of letters in handwriting.

4. To develop in children skill to utilize proper spacing of letters and words.

5. To develop within the child skill to evaluate his/her own achievement in handwriting.
6. To develop within pupils skill to exhibit neatness in handwriting.

C. Attitudinal Objectives

1. To develop within pupils a desire in wanting to improve achievement in handwriting.

2. To develop within learners a feeling of wanting to improve in the formation of legible letters.

3. To develop within the child an attitude of wanting to reveal proper proportion of letters.

4. To develop within the learner a desire to space words and letters properly.

5. To develop within the child a desire to assess his/her own achievement in handwriting.

6. To develop an attitude within learners of wanting to reveal neatness in handwriting.

7. To develop an attitude of respect within learners toward quality in handwriting as revealed by others in society.

It is important to emphasize balance among understandings, skills, and attitudinal objectives in teaching handwriting. Desirable attitudes assist in achieving understandings and skills ends. Greene and Petty\(^3\) wrote the following:

The major reason for teaching handwriting is its role in communication. Handwriting is the principal tool of written expression; for this reason it must be legible. Thus the principal objective of handwriting instruction is legibility.

Considering this objective, a teacher should not stress meaningless drill on handwriting but should strive mainly to have pupils produce legible copy. The misapplication of the principle of use and need so frequently evident

is a result of the neglect of sound procedures in instruction. The principal factor overlooked is that handwriting is a developmental process that requires more than just a few years of the child's total period of growth. Simply permitting children to write as they have the need is not giving handwriting instruction nor can handwriting be taught once and then dropped from the instructional program. Production of legible writing at a reasonable speed can be achieved and maintained only as a result of constant and meaningful practice. Thus the handwriting program should be built around these basic goals:

Encouraging pupils to use writing as a means for effective expression.
Helping each child to discover how skill in handwriting aids expression.
Having all pupils strive for neatness and legibility with moderate speed in their writing activities.
Establishing practice periods as appropriate at all grade levels.
Analyzing the handwriting faults of individual pupils and seeking their correction.
Developing in each pupil a sense of personal pride and self-appraisal and a desire for self-improvement.
Developing correct posture and the proper use of writing tools.

Specific Objectives

Selected teachers, principals, and supervisors wish to have clearly stated objectives, as advocated by behaviorists, in teaching-learning situations. The teacher then may need to write measurable objectives in handwriting. There is relatively little leeway in determining what is to be taught when viewing specific objectives. After instruction, the teacher may determine if learners have or have not achieved the precise objectives. It is vital to have pupils achieve relevant handwriting objectives. Reasonable specific objectives need to be written for learners. Learners might then be successful achievers. Learning activities to achieve specific objectives in handwriting should be interesting, have purpose, and be on the understanding level of pupils. Provision must be made to provide for individual differences when measurably
stated objectives are used in teaching handwriting.

The following are examples of specific objectives for pupils to achieve in handwriting.

1. The pupil will write three sentences using recommended alignment of words and letters.
2. The pupil will write the lower case cursive letters "a," "b," and "c" correctly as presented in class by writing a sentence.
3. The pupil will write five sentences using proper spacing of letters within each word.

The teacher after instruction may assess if pupils have or have not achieved stated objectives. It is important to correlate the teaching of handwriting with other curriculum areas in the elementary school. There are many learning activities in handwriting which correlate well with writing activities in social studies, science, mathematics, reading and other language arts areas, health, music, art, and physical education. Pupils need ample opportunities to practice quality handwriting in other curriculum areas in the school/class setting.

Yelon and Weinstein4 wrote:

Reinforcement, in the behaviorist view, is the single most important factor in learning. The law of reinforcement, sometimes called the law of effect, defines the shaping of behavior through reinforcers. A common example is the laboratory situation in which pigeons are trained to press levers for food; the training is accomplished by providing food each time the lever is pressed. Similarly, the law of reinforcement applies to human behavior; children may learn polite table manners, for instance, if their parents smile approvingly each time they eat correctly.

Every element of human thought and feeling, according to behaviorist learning theory, may be defined in terms of reinforcement—not just table manners but good study habits and socially approved behavior of all kinds, even love itself. Techniques which manipulate reinforcement alter the learning process.

Learning Activities in Handwriting

There are a variety of learning activities that may be provided for learners in handwriting. Individual differences must be provided for in any classroom. Pupils will vary much from each other in handwriting achievement. The teacher must consider the present achievement level of each child in handwriting before learning activities are selected to achieve new stated objectives. The kinds of learning activities that are selected in handwriting may well depend upon the way this school curriculum area is organized. For example, the classroom teacher may decide to teach handwriting as a separate subject with no relationship being emphasized with other curriculum areas in the elementary school. The teacher then assumes that pupils automatically will use acquired handwriting understandings, skills, and attitudes in new writing situations involving the social studies, science, mathematics, the language arts, health, music, physical education, and art. The writer definitely feels that classroom teachers must assist learners to see the uses of what has been learned previously. Thus, learners must perceive that what has been learned earlier can be utilized in ongoing learning activities.

The teacher of handwriting will definitely wish to correlate handwriting with other areas in the school curriculum. If the teacher is teaching spelling, he/she will also wish to emphasize quality handwriting. Handwriting errors can make for incorrect spelling of words. For example, learners who do not cross the "t" in cursive writing and leave a loop in that same letter are
actually writing the letter "l" when the letter "t" was intended to be written. The teacher then may definitely want to correlate handwriting with spelling.

Handwriting may be taught as being related to any curriculum area in the elementary school. For example, in the final product that is written in a health unit of study, a learner may exhibit improved handwriting in a report on proper dietary habits. The quality of handwriting exhibited may be assessed in terms of what the learner can reasonably well achieve. Additional examples of relating handwriting to different curriculum areas will now be discussed.

Mathematics and Handwriting

Products of learners in mathematics become difficult to evaluate if the written work is slovenly done and illegible. Thus, the teacher has an important responsibility in guiding learners to write numerals and symbols in mathematics legibly. The learner may then communicate ideas more effectively if this is done. Individuals communicate content in many different ways. Writing numerals and symbols pertaining to mathematics is a form of communication of ideas to others. It is imperative then that numerals and symbols be written legibly so that effective communication of ideas may take place. Neatness in these written products is also important.

Occasionally, learners will be writing reports in mathematics based on research. If pupils are studying the Roman system of numeration, they may wish to gather information from different reference sources and complete a written report on this topic. The best handwriting of the individual pupil needs to be expected in the final product.
Science and Handwriting

There are numerous opportunities for pupils to utilize handwriting in the science curriculum. Among these important learning activities might be the following:

1. A committee of pupils or individual learners may write up the findings of a science experiment.
2. Individually or within a committee, pupils might write a method of procedure to follow in order to conduct an experiment.
3. A report may be written on a chosen topic related to an ongoing science unit. Topics, such as "magnetism," "electricity," "atoms," "electrons," "protons," and "neutrons" might well make for quality content in written reports.
4. Temperature readings could be recorded on a daily basis in a unit on "Climate in Our Community."
5. Notes may be written pertaining to a select portion read from an encyclopedia or science textbook.
6. An outline might be written from content read using a variety of reference sources.
7. Criteria or standards ought to be written on being an effective member and/or leader of a discussion group.
8. Summaries could be written on main ideas presented in a filmstrip or film presentation relating to the science unit being studied.

Science teachers must always think of a variety of learning activities for learners in order to provide for individual pupils within a class.
Social Studies and Handwriting

In a self-contained classroom or in a departmentalized plan of teaching, the teacher can stress the importance of handwriting pertaining to writing activities in the social studies. The following, among others, might provide quality learning activities for pupils:

1. Business letters could be written to order free charts, pictures, and other audio-visual aids related to the ongoing social studies unit.

2. Friendly letters might be written to pen pals. These pen pals may come from countries presently being studied in social studies, or having been studied in the past.

3. Generalizations and main ideas may be written on content read from diverse reference sources.

4. Important facts read relating to a relevant question raised by learners in an ongoing social studies unit may be recorded.

5. Announcements can be written inviting another class to observe culminating activities for a specific unit in social studies.

6. Speaking parts for a play may be written cooperatively by a committee of pupils relating to a specific part of a social studies unit. In a unit on "Discovering New Lands" learners might write a play to interpret how explorers felt when new lands were being discovered. The play can be presented to other members of the class and to other classes of children.

7. Directions could be written in making relief maps which relate to a unit being studied. For example, if pupils are studying a unit on Australia, they might make a relief map on that country.
8. Standards can be developed by the class on giving effective oral reports. Reports may be given to the entire class by individual pupils or by a committee of children. Reports given could be assessed in light of these written standards.

9. An outline may be written relating to important conclusions reached in reading an important selection in social studies.

10. When pupils are engaged in presenting hypotheses pertaining to content in a picture, object, or problem, handwriting experiences then become a reality in functional situations in the classroom.

11. Learners may take notes relating to a discussion that has taken place.

Handwriting and the Language Arts

Handwriting is a part of the language arts curriculum in the elementary school. Handwriting thus becomes an inherent part of language arts as well as the other curriculum areas in the elementary school. Selected learning activities, among others, that pertain to handwriting in the language arts could be the following:

1. Pupils with teacher assistance might label objects in the classroom in a reading readiness program using manuscript writing.

2. Handwriting textbooks can be utilized in lessons as the need and purpose arises.

3. Experience charts might be developed with teacher guidance in a reading readiness program. Learners may notice what is said orally can be written down in manuscript letters. Cursive writing will be introduced later on.

4. Learners can write ideas over content that has been read pertaining
to different purposes in reading. These purposes involve critical reading, reading to follow directions, factual reading, reading for a sequence of ideas, creative reading, reading for main ideas, and reading to develop generalizations.

5. Pupils need ample opportunities to practice forming letters correctly, writing letters and words with recommended alignment, slanting letters properly, spacing words and letters legibly, and using proper proportion of letters.

6. Pupils with teacher leadership may write news items. The resulting newspaper could be sent home weekly, biweekly, or monthly on important happenings in class.

Health and Handwriting

Many interesting learning activities provided for pupils in the area of health could also help learners achieve important goals in handwriting. The following learning activities in health education may assist learners to improve in handwriting:

1. Learners may take notes over a talk given by a physician pertaining to improving health practices in everyday living.

2. Main ideas could be written covering a set of slides or pictures presented by a registered nurse related to improving healthful living in the community.

3. Each pupil might write a personal experience chart pertaining to contents from a filmstrip relating to a facet of healthful living.

4. Letters can be written to members of the city council making recommendations on improving polluted areas.
5. Menus for a week may be written pertaining to balanced diets for individuals.

6. Business letters can be written to order free materials relating to health units of instruction.

In Summary

When writing objectives for learners to achieve, it is of utmost importance for the teacher to consider each pupil's present achievement level. The teacher also must consider trends in society and their importance in determining handwriting goals. Objectives may be stated broadly as is the case of general objectives in the curriculum area of handwriting. Specific objectives can also be written which may be achieved in a relatively short period of time. General objectives are achieved over a longer period of time. The teacher must determine rational balance among understandings, skills, and attitudinal objectives that learners are to achieve. Each category of objectives is vital to emphasize in teaching-learning situations.

The teacher must think of various methods to use in teaching handwriting. These varied approaches are necessary to provide adequately for each learner in class. Handwriting correlates well with each curriculum area in the elementary school. The pupil must exhibit improved handwriting in the final product that has been written. The child generally may not reveal improved handwriting at the time that content is being written. Ideas come first when writing content. However, the learner can always show improved handwriting in the final written product. Legibility in handwriting must permeate a be emphasized as being important in all curriculum areas in the elementary school.
Questions for Thought and Discussion

1. In your own thinking, what role should textbooks have pertaining to the teaching of handwriting for elementary school pupils?

2. In developing the handwriting curriculum, what standards or guidelines should the teacher follow?

3. Examine several series of handwriting booklets for elementary school pupils:
   (a) which objectives are stressed most frequently for learners to achieve?
   (b) which methods of teaching are emphasized frequently in order that pupils may achieve the desired objectives?
   (c) which assessment procedures are recommended to determine learner progress in handwriting?

Selected References


