

METHODS OF TEACHING COMPUTER KEYBOARD MASTERY IN THE WORD PROCESSING LABORATORY

Seyi DAVID (PhD) & Olaiwola Seun SODAMOLA

¹Department of Arts & Social Science Education, (Business Education Unit),
Lead City University, Ibadan, Nigeria

²Department of Office Technology & Management Education
Federal College of Education (Technical) Akoka Lagos

Abstract

This paper explores effective teaching methods for computer keyboard mastery in word processing laboratories, emphasizing the importance of these skills for students' academic and professional success in the digital age. It is very imperative to know that teaching methods are means of impacting knowledge or experience to students. The content to be taught determines the choice of a particular method of teaching by the teacher. Hence appropriate teaching methods must be incorporated. For practical course like computer keyboarding, the paper highlights demonstrative, discussion, and Computer Assisted Instruction (CAI), advocating for touch typing techniques that utilize all eight fingers without looking at the keyboard. Hence, this requires a greater time for resilient training and commitment must be given to it. The study underscores the necessity of keyboarding skills in the NCCE minimum standard and addresses key aspects such as keyboard familiarization, proper posture, finger fitness, and the integration of game-based learning and typing tutors. Assessment strategies, including timed tests and project-based evaluations, are also discussed. Ultimately, the paper promotes a comprehensive approach to keyboarding instruction that combines structured lessons, consistent practice, and individualized feedback to enhance typing proficiency and accuracy.

Keywords: Methods, Teaching, Mastery, Word Processing and Laboratory

Introduction

Teaching computer keyboard mastery is essential in today's digital age, particularly in word processing laboratories where students learn to type efficiently and accurately. It is essential for developing students' typing proficiency, accuracy, and speed. This skill is critical for academic, professional, and personal success in the digital age. Teaching methods are used to impact knowledge to students they are the means by which the teacher attempts to impact the desired learning or experience. The choice of a particular method of teaching by the teacher determined by number of factors which includes the content to be taught, the objectives which the teacher plans to achieve availability of teaching and learning resources and the ability and willingness of the teacher to improvise if conventional teaching aids are not available, evaluation and follow-up activities and Individual learner difference (Adesope, 2020).

Teaching and Learning

Teaching is about using various approaches and activities to help learners gain the skills and understanding they need for a particular reason e.g. to gain a qualification or to perform a particular job role. Learning is about gaining and using new knowledge to demonstrate a change. This change might relate to the performance of a skill, the demonstration of understanding and/or a change in behaviour and attitudes. The teacher is then able to assess the progress and achievement which the learners are making. However, it's not about the teacher, it's about the learners and the learning

which is taking place. One can teach all that one likes but if the learners don't learn anything, the process is meaningless.

Teaching Method

Teaching methods are means of imparting knowledge or experience to students. A teaching method is considered good when the teacher provides useful activities that would help the learners to discover facts and contribute effectively to the learning activities. Bankole (2022) opined that, the teaching method should allow teacher to present the subject matter beginning from known to the unknown; from simple to complex; to build new facts and ideas on students' previous experience or knowledge and make learning meaningful to the learners by achieving the stated objectives. This means that what you teach should be relevant to students' needs and situations.

Computer Keyboarding

A computer keyboard is an input device used with all types of computers. When learning how to use a computer, proper use of use keyboard plays a very large role. This is the main way one will be interacting with your computer, using keyboard without looking at it often time; and one can perform a variety of functions using just the keyboard. First comes mastering the art of typing, a skill which can significantly enhance one's productivity. Gilbet (2019) emphasized that, for computer keyboarding to be effective and efficient touch typesetting technique which involves the use of all eight fingers to type without looking at the keyboard in learning to reach other key must be incorporated. The importance of computer keyboarding is being included in the NCCE minimum standard. Keyboard mastery requires a greater time and commitment. When writing a letter or calculating numerical data, your keyboard is the main way to enter information into your computer. Computer users can also use their keyboard to control computer without often time depending on mouse? Learning a few simple keyboard commands (instructions to your computer) can help you work more efficiently.

Sitting Position

1. Sit with good posture
2. Center the keyboard
3. Avoid resting your palms or wrist
4. Use a soft touch
5. Relax your hands when you're not typing

Techniques for Teaching Computer Keyboarding Skills

1. **Keyboard Familiarization:** Introduce students to the keyboard layout, including the "home row" keys, letter placement, and number rows. This helps develop motor memory and reduces reliance on looking at the keyboard.
2. **Mouse Use:** Teach basic mouse operations such as clicking, dragging, and dropping to complement keyboarding.
3. **Finger Fitness:** Exercises to associate specific fingers with corresponding keys prepare students for touch typing.

Touch Typing Techniques

Touch typing involves using all fingers without looking at the keyboard. It is a core method for mastering typing skills

1. **Posture and Ergonomics:** Teach students to maintain proper posture (straight back, relaxed arms at 90 degrees) and hand positioning (wrists off the keyboard) to prevent fatigue and injury.
2. **Key-Finger Association:** Assign specific fingers to designated keys to promote consistency and muscle memory
3. **Typing Speed Goals:** Set achievable speed benchmarks (e.g., 15 WPM for beginners) to motivate progress while emphasizing accuracy over speed initially.

Instructional Strategies

Effective teaching strategies include structured lessons, practice sessions, and feedback mechanisms

1. **Game-Based Learning:** Use engaging software like "Keyboarding without Tears" or "Dance Mat Typing" that incorporates games to make learning interactive and fun for younger students.
2. **Drill Practices:** Implement repetitive typing exercises to reinforce muscle memory. For adults, reverse typing exercises or authentic writing tasks (e.g., summarizing a class discussion) can be effective.
3. **Typing Tutors:** Utilize software such as TIPP10 or Typing Club that provides real-time feedback on accuracy and speed

Assessment and Evaluation

Regular assessment ensures skill acquisition and identifies areas for improvement:

- 1) **Timed Typing Tests:** Evaluate speed (WPM) and accuracy
- 2) **Project-Based Assessments:** Grade students on word processing projects that require applying both typing skills and software knowledge
- 3) **Formative Feedback:** Use ongoing assessments during practice sessions to guide improvements in technique.

Teaching Methods Categorized

There are different types of teaching methods which can be categorized into four broad types⁴. These are: (Adeyemo, 2020).

(1) Instructor/Teacher Centred Methods

Here the teacher casts himself/herself in the role of being a master of the subject matter. The teacher is looked upon by the learners as an expert or an authority. Learners on the other hand are presumed to be passive and copious recipients of knowledge from the teacher. Examples of such methods are expository or lecture methods.

(2) Learner-Centred Methods

In learner-centred methods, the teacher/instructor is both a teacher and a learner at the same time. The teacher plays a dual role as a learner as well "so that in his classroom extends rather than constricts his intellectual horizons". The teacher also learns new things everyday which he/she didn't know in the process of teaching. The teacher becomes a resource rather than an authority. Examples of learner-centred methods are discussion method, discovery or inquiry based approach.

(3) Content-Focused Methods

In this category of methods, both the teacher and the learners have to fit into the content that is taught. Generally, this means the information and skills to be taught are regarded as sacrosanct or very important. A lot of emphasis is laid on the clarity and careful analyses of content. Both the teacher and the learners cannot alter or become critical of anything to do with the content. An example of a method which subordinates the interests of the teacher and learners to the content is the programmed learning approach.

(4) Interactive/Participative Methods

This fourth category borrows a bit from the three other methods without necessarily laying emphasis unduly on either the learner, content or teacher. These methods are driven by the situational analysis of what is the most appropriate thing for us to learn/do now given the situation of learners and the teacher. They require a participatory understanding of varied domains and factors.

Teaching Methods Applicable to Computer Keyboard Mastery

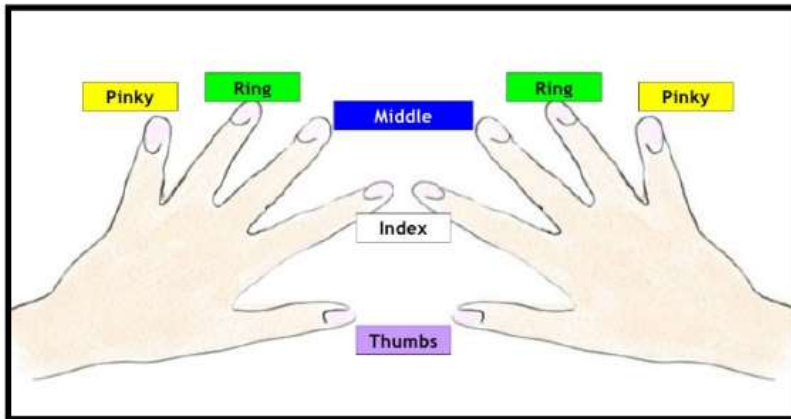
Various instructional approaches have been identified. (Klaumeier, 2021).

1. **Touch Typing:** Focuses on muscle memory by teaching students to use all fingers without looking at the keyboard. This method is widely regarded as effective for developing speed and accuracy
2. **Game-Based Learning:** Programs like *Keyboarding without Tears* (KWT) incorporate interactive games to engage learners while teaching proper techniques. Research shows KWT significantly improves speed and accuracy compared to traditional methods.
3. **Mixed Methods:** Combines structured programs with free web-based activities. While effective, studies suggest structured curricula yield better results.
4. **Individualized Instruction:** Tailored feedback on posture, hand positioning, and progress monitoring enhances learning outcomes.

Application of Fingers on Keys

Find the Home position with both hands. The Home position is where your hands will start when you're typing, and where your fingers return to after striking a key. (Bourner, 2000). Most keyboards have raised bumps on the F and J keys. These indicate where your index fingers are placed.

- Slightly arch your fingers and place your fingers on the keys next to F and J.
- Your left pinky rests on A, your left ring finger on S, and your left middle finger on D
- Your right pinky rests on; your right ring finger on L, and your right middle finger on K.
- Your thumbs rest on the spacebar.



Practice typing the Home Keys. Get used to pressing each key with its corresponding finger. Memorize the key that each finger rests on through repetition. If one wants the home keys permanently imprinted in one's memory then, repetition is essential.

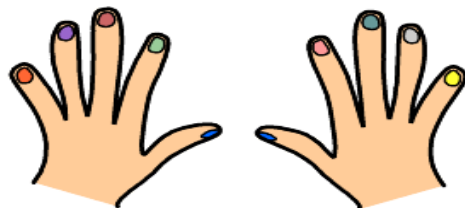
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Expand to the keys surrounding the home keys. Once you have a good handle on the Home keys, one can start expanding to the other keys on the keyboard. Use the repetition exercises to memorize the locations of the other keys. Use the nearest finger to reach the key. If you are keeping your wrists elevated, you will be able to easily strike the keys that are slightly outside of your reach.

Locating Other Keys through Home Keys



How the keys are organized

The keys on the keyboard can be divided into several groups based on function:

- **Typing**

(alphanumeric) keys. These keys include the same letter, number, punctuation, and symbol keys found on a traditional typewriter.

- **Control keys.** These keys are used alone or in combination with other keys to perform certain actions. The most frequently used control keys are Ctrl, Alt, the Windows logo key, and Esc.
- **Function keys.** The function keys are used to perform specific tasks. They are labeled as F1, F2, F3, and so on, up to F12. The functionality of these keys differs from program to program.
- **Navigation keys.** These keys are used for moving around in documents or webpages and editing text. They include the arrow keys, Home, End, Page Up, Page Down, Delete, and Insert.
- **Numeric keypad.** The numeric keypad is handy for entering numbers quickly. The keys are grouped together in a block like a conventional calculator or adding machine.

Using keyboard shortcuts

Keyboard shortcuts are ways to perform actions by using your keyboard. They are called shortcuts because they help you work faster. In fact, almost any action or command you can perform with a mouse can be performed faster using one or more keys on your keyboard.

Useful shortcuts

The below lists some of the most useful keyboard shortcuts.

Shortcuts	Meaning
Windows logo key	Open the Start menu
Alt + Tab	Switch between open programs or windows
Alt + F4	Close the active item, or exit the active program
Ctrl + S	Save the current file or document (works in most programs)
Ctrl + C	Copy the selected item
Ctrl + X	Cut the selected item
Ctrl + V	Paste the selected item
Ctrl + Z	Undo an action
Ctrl + A	Select all items in a document or window
Ctrl+I	Italicize selected text
Ctrl+P	Print
Ctrl+W	Close opened window
Ctrl+O	Open a new document
Ctrl+E	Center alignment
Ctrl+N	Create new document

General Teaching Methods

1) The Demonstration Lesson

The most effective way to teach a manipulative skill is to demonstrate it. One of the two most essential teaching skills is the ability to demonstrate; the other is the ability to explain. Both are vital to the success of either an operation lesson or an information lesson. (Bourner, 2000).

Teacher Preparation

1. Rehearse your drill task presentation in advance of the lesson.
2. Anticipate any difficult steps, possible interruptions e.t.c.
3. Have all computers within reach and conveniently arranged.
4. Time the demonstration NOT to exceed planned time.
5. Plan to use a skill or method to advantage; work from simple to complex, one step at a time.

Presentation

1. Make sure all students can see and hear the lesson through projector.
2. Be enthusiastic, professional, effective but not dramatic.
3. Observe all safety rules and procedures in the laboratory.
4. Keep eye-contact with the class; ask and encourage class questions.
6. Explain *why and how*: use the techniques of *show and tell*.

Precautions

1. Avoid interruptions; keep demonstration smooth and continuous.
2. Never demonstrate on a student's material.
3. Work towards one aim.
4. Allow time for possible student participation. (Nilson, 2019)

After Demonstration

- 1) Make arrangements to have the trainees practice the skill as soon as possible in a practical class session.
- 2) Observe and analyse trainee(s) performance and correct mistakes.
- 3) Offer reinforcement where necessary.
- 4) Give attention to weak or slow students.
- 5) Check trainee's completed work for accurate performance and record.
- 6) Allow sufficient time interval before demonstrating another operation.

2) The Discussion Method

Discussion involves two-way communication between participants. In the word processing laboratory situation an instructor and trainees all participate in discussion. During discussion, the instructor spends some time listening while the trainees spend sometimes talking on areas of difficulties. Okike, (2000) buttressed that the discussion is, therefore, a more active learning experience for the trainees than the lecturer. Students share experiences, ideas and attitudes. As it helps to foster trainees' involvement in what they are learning, it may contribute to desired attitudinal changes. Discussion may be used in the word processing laboratory for the purpose of lesson development, making trainees apply what they have learnt or to monitor trainees learning by way of feedback.

Application

Discussion may also be used, following demonstration, to help trainees apply what they have learned. The instructor can ask questions that help trainees to relate concepts and principles to contexts that are familiar to the trainees or in which they will ultimately be needed. In this way, discussion contributes to the transfer of learning.

Feedback

Ahmed, (2021) affirmed that, the discussion method also provides an opportunity to monitor trainees learning during practical session. The answers provided by trainees and the questions they ask, reveal the extent and quality of learning taking place. Instructors can use this information to repeat or modify an explanation to improve learning. They can also provide feedback to trainees, thereby helping to reinforce learning that has taken place.

3) Computer Assisted Instruction (CAI)

This is a program of instructional material presented by means of a computer or computer systems. Li,X., and Zhang (2022) mentioned that, there are copious number of software that serves as typing tutors for students to learn mastery of keyboard independently. If the computer has a tutorial program, the student is asked a question by the computer; the student types in an answer and then gets an immediate response to the answer. If the answer is correct, the student is routed to more challenging problems; if the answer is incorrect, various computer messages will indicate the flaw in procedure, and the program will [bypass](#) more complicated questions until the student shows mastery in that area. Program instruction method of teaching is an autocratic and individualized strategy.

Features of Computer Assisted Instruction

CAI programs have the following features: (Jones, 2018)

1. Interactive and can illustrate a concept through attractive animation, sound, and demonstration.
2. Allow students to progress at their own pace and work individually or problem solve in a group.
3. Provide immediate feedback, letting students know whether their answer is correct. If the answer is not correct, the program shows students how to correctly answer the question.
4. Capture the students' attention because the programs are interactive and engage the students' spirit of competitiveness to increase their scores.
5. Move at the students' own pace and usually do not move ahead until they have mastered the skill

Conclusion

Teaching computer keyboard mastery requires a combination of foundational skill-building, touch typing techniques, engaging instructional strategies, self-regulation practices, and integration with word processing tasks. By employing these methods in a structured manner, instructors can help students develop proficiency in keyboarding that supports their academic and professional endeavors. (Sharma, et al. (2020). For practical course like computer keyboarding, the importance of demonstrative methods, discussion methods and programmed instruction method cannot be over emphasized. This is owing to the fact; these methods will make lecturers to attain effective and efficient means of teaching computer keyboarding and students performing excellently in such a manipulative skill. As Computers are becoming common place in both schools and homes. One requires resilient training and investment of time, commitment for acquisition of typing skill. Voice recognition software is available for inputting text into a computer, but it still has a way to go if it will replace the keyboard as the dominant means of interacting with the computer.

Recommendations

1. Adopt Structured Programs by using se research-backed tools like *Keyboarding Without Tears* for consistent results.
2. Introduce computer keyboarding in start early to build a strong foundation.
3. Provide real-time feedback on posture, accuracy, and technique by Incorporating Feedback Mechanisms:
4. Engage Learners with Games: Use game-based learning to make lessons enjoyable and effective.
5. Focus on Self-Regulation, encourage students to set goals and practice regularly for sustained improvement.

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