

The Effectiveness of a Proposed Instructional Program Based on Wilen's and Phillips' Strategies and (M.L.C.S.) in Concepts Acquisition among History Department Students at the College of Education

Suad Salman Hassan Al-Zahawi¹

suad_hassan@uomisan.edu.iq

University of Misan, College of Education

Prof. Dr. Ahmed Abdul-Muhsin Kadhim²

ahmed_abdel@uomisan.edu.iq

University of Misan, College of Education

Abstract:

The researcher identified the justifications for building the educational program, its philosophy and intellectual foundations, its general and specific objectives, the organization of educational content, and the determination of teaching methods and tools compatible with the strategies and the subject matter. The researcher used a quasi-experimental design with a pretest-posttest control group. The study sample consisted of (38) third-year students from the History Department, with (18) students in the experimental group and (18) students in the control group at (College of Education, University of Misan). The researcher matched the two groups in several variables: [age in months, prior knowledge test, intelligence test (Raven), and ability]. The researcher formulated (120) A behavioral objective distributed across the six levels of Bloom's cognitive domain (remembering, understanding, applying, analyzing, synthesizing, evaluating) was represented in the research requirements through the educational program prepared by the researcher according to the strategies of Lunenburg and M.L.C.S in acquiring concepts for the students of the History Department at the College of Education / University of Misan. The preparation of the program went through four stages: planning, construction, implementation, and evaluation. The researcher also prepared a teacher's guide and lesson plans for the strategies. The researcher prepared two tools to measure the dependent variables of the study. The first was a concept acquisition test consisting of 54 multiple-choice items, with confirmed validity, reliability, and psychometric properties. The researcher personally studied the students of both research groups (experimental and control), and the experiment lasted for a full academic year, the second semester of the academic year 2024-2025. At the end of the

experiment, the researcher applied the grammatical concept acquisition test to both research groups (experimental and control), and used the Mann-Whitney U test for data analysis, in addition to using statistical measures (item difficulty index, item discrimination index). The effectiveness of wrong alternatives, effect size for Mann Whitney for two independent samples, to ensure the results. The results of this study showed the following: the experimental group excelled in the ranks of scores (concept acquisition) studied according to the educational program compared to the control group studied according to the traditional method, in favor of the experimental group. From the results of this study, the researcher reached several conclusions, including: that the educational program prepared based on Wilen & Phillips strategies, S.M.L.C.

Keywords: Wilen & Phillips strategies, S.M.L.C., History Department.

Introduction:

The (Wilen & Phillips) strategy is considered one of the most prominent strategies that develop reflective thinking in learners. It encourages students to analyze mistakes and reflect on their ways of thinking, and it promotes asking questions and discussing ideas in an environment of acceptance and intellectual freedom, making it suitable for teaching educational concepts that require analysis and understanding. As for the Metacognitive Learning Cycle Strategy (M.L.C.S), it combines the principles of cognitive constructivism and metacognition, aiming to enable students to build their knowledge independently through stages: exploring the concept, presenting it, and applying it (Khidr, 2015: 20). This strategy is considered one of the modern approaches in education, as it helps students monitor, plan, and evaluate their own learning, which develops their independence and enhances their ability to continuously acquire knowledge (Al-Obaidi & Al-Shubeib, 2016: 94; Al-Mousawi et al., 2024: 191). Acquiring concepts forms the cornerstone of the learning process, as concepts help organize knowledge and allow learners to apply it in new situations, serving as a tool to understand facts and relationships between information. Abu Jalalah confirmed this (2001: 24). Concepts help learning stay in the learner's mind longer by focusing the content around main ideas.

This research aims to:

Making the student the focus of the educational process, and capable of thinking more deeply by verifying information themselves when facing new learning situations.

1. Assess the effectiveness of a proposed educational program based on the strategies of Woolnough and Phillips and M.L.C.S in acquiring concepts among History Department students in the College of Education.
2. To achieve this, the researcher adopted the descriptive method in developing the educational program through three main stages (planning, implementation, evaluation).
3. Recommendations in light of the research procedures and the results suggest the following:

Recommending the adoption of the proposed program as a supplementary book for teaching methods topics to third-level students in the History Department at Iraqi universities.

Suggestions to continue this research, the researcher proposes the following:

1. A similar study to the current research to know the effectiveness of the educational program based on Van Philips and M.L.C.S strategy in other variables such as attitude development, achievement, and critical thinking.
2. An experimental study similar to the current study in other educational stages.
3. Introduction to the Research

First: The research problem.

University education is considered a fundamental pillar in shaping modern knowledge and preparing individuals to engage effectively in changing societies. Educational literature emphasizes that the university environment should go beyond merely transmitting information to developing thinking, reflection, and analytical skills. Despite the progress in the fields of education worldwide, university education in Iraq still suffers from structural and cognitive problems, most notably the continued dominance of traditional methods and the absence of teaching methodologies that promote reflective thinking and conceptual depth, especially in the colleges of education. This type of education has led to learning outcomes that often lack higher-order cognitive skills, such as analysis, synthesis, and evaluation.

Field reports and real teaching observations have shown that the 'lecture' method is still the predominant way of teaching teacher preparation courses, including 'History Teaching Methods,' which leads to educational outcomes that are unable to keep pace with the demands of modern education. This weakens students' ability to critically analyze educational and historical concepts, and also limits their ability to build teaching experiences based on deep understanding rather than rote learning, highlighting the need for educational interventions based on active teaching strategies.

In this context, through the researcher's academic and field work teaching 'History Teaching Methods' in colleges of education for sixteen years, and through her direct observations of student interactions, analysis of their educational outcomes, interviews with her teaching colleagues, and review of course plans and student performance evaluation reports, several indicators were noted that confirm the existence of issues in teaching this subject, the most prominent of which are:

- Most instructors rely almost exclusively on the lecture method.
- There's a lack of variety in using interactive or problem-solving teaching strategies.
- Students show a low level of deep understanding of educational and historical concepts.
- There's a clear weakness in students' ability to reflect, critique, formulate questions, and perform educational analysis.

The researcher didn't stop at general observation but also used field tools to support her diagnosis, including conducting semi-structured interviews with 10 history department instructors, analyzing samples of students' answers from previous final exams, and preliminary questionnaires applied to a pilot sample of fourth-year students.

These measures showed that there is a real need to develop an educational program based on effective teaching strategies for developing concepts and reflective thinking, in line with the requirements of academic quality and modern educational trends.

From here, the research problem takes shape in the urgent need to develop an educational program based on the " Wilen & Phillips" strategies and (M.L.C.S) to address the shortcomings in teaching the subject "Methods of Teaching History," and to enable students to deeply and systematically acquire educational concepts.

Accordingly, the research problem is summarized in the following question: How effective is the proposed educational program based on the " Wilen & Phillips" strategies and (M.L.C.S) in helping history department students in colleges of education acquire concepts?

Second: Importance of the Research

The world today is witnessing rapid developments in the fields of science, knowledge, and technology, which have directly impacted various aspects of life, particularly the education system. This major knowledge shift places education in front of complex challenges that require rethinking traditional teaching methods and moving towards education based on critical thinking, creativity, and reflection. Hence, the need to develop university education specifically arises, as it is considered the final stage for preparing the scientific and professional workforce for society (Hamedat, 2009: 294).

These challenges cannot be addressed without relying on modern educational programs based on contemporary teaching strategies that align with the nature of new knowledge and meet the needs of students in the twenty-first century. Therefore, building educational programs based on effective strategies is a fundamental pillar for developing university education, especially those that take into account individual differences and promote deep thinking among learners, which is what this study aims to achieve.

Educational programs are one of the key pillars for the success of any educational system, as they help improve teaching performance, assist in building a comprehensive knowledge system that meets students' needs, and support society at the same time. Al-Aboudi (2022:13) emphasized that effective educational programs help address gaps in the educational system, enhance students' cognitive and skill levels, and serve as a tool for applying the philosophical, social, and cultural foundations of society in the educational reality.

Zidan (2008:10) also pointed out that carefully designed educational programs increase teaching efficiency, improve teacher performance, and help achieve higher educational goals. To fulfill this role, programs must be built on clear and specific objectives derived from the needs of both society and learners, which is reflected in the rest of the curriculum components such as content, methods, and assessment (Al-Shuwaili et al., 2015:166).

Al-Dab' (2008: 89) emphasizes that concepts help bridge the gap between simple knowledge and advanced knowledge, as they assist the learner in analysis, application, and understanding. In the same context, 'Adas (2005:110) believes that acquiring concepts is one of the essential components in any subject, especially in the methods of teaching history, which require deep understanding of content and analysis of historical contexts.

The importance of this research comes from the fact that it is conducted within the context of Iraqi university education, which suffers from multiple challenges related to weak traditional teaching methods and reliance on rote learning and memorization, making the adoption of new strategies urgent. The study also contributes to filling a research gap, as it is considered one of the rare studies – according to the researcher – that investigates the effectiveness of a program based on the Wilen & Phillips strategies and (M.L.C.S) in acquiring educational concepts.

Colleges of Education in Iraq are considered a vital field for preparing future teachers, making the development of history teaching methods there a national necessity that keeps up with educational updates and meets the expectations and challenges of society.

The importance of this research is reflected as follows:

1. Developing university education by proposing an educational program based on contemporary strategies that keep up with knowledge advancements and help move beyond traditional methods that lack interaction and critical thinking.
2. Highlighting the effectiveness of the strategies (Wilen & Phillips) and (M.L.C.S) among Education College students, as these strategies are based on constructivist and metacognitive theories, offering students opportunities for reflection and self-assessment of their experiences.
3. Responding to the urgent need in teaching history methods to university students by enhancing the acquisition of concepts for History Department students, developing their ability to analyze concepts and link them to their contexts, which contributes to a deeper understanding of the subject matter.
4. Bridging the gap between theory and practice by providing a practical model for employing effective teaching strategies in the course "History Teaching Methods," which enhances the connection between theoretical preparation and practical training for student teachers.

5. Contributing to the development of university educational programs by introducing modern teaching methods, which can be useful in preparing teachers in various specializations, not just history, thus giving the study a more generalizable aspect.

Third: Research Objective

Fourth: Research Hypotheses:

1. There is no statistically significant difference at the 0.05 level between the average scores of the experimental group students and the average scores of the control group students in the post-test for acquiring concepts after applying the program based on " Wilen & Phillips" strategies and (M.L.C.S).
2. There is no statistically significant difference at the 0.05 level between the average scores of male and female students in the experimental group in the post-test for acquiring concepts after applying the program based on " Wilen & Phillips" strategies and (M.L.C.S).

Fifth: Research Limits: The current study is defined by the following limits:

1. Subject Boundaries (Cognitive): The educational program based on the strategies of " Wilen & Phillips" and (M.L.C.S) in concept acquisition for students of the History Department in the course of Methods of Teaching History. It is limited to the concepts and components specified in the content of the approved curriculum within the official syllabus, sources in Methods of Teaching History, consisting of eleven study units, each with different contents as they include several topics.
2. Human Boundaries: Third-year students in the History Department – College of Education – University of Misan.
3. Spatial Boundaries: University of Misan / College of Education.
4. Temporal Boundaries: Academic year 2024–2025.
5. Definition of Terms

First: Effectiveness: Defined by each of the following:-

1- (Shahata and Zainab, 2003) stated that it is "the extent of the effect that experimental treatment, considered as an independent variable, can have on one of the dependent variables." (Shahata and Zainab, 2003, p. 23)

2- Al-Tamimi et al. (2018) stated that it is: "The ability to achieve the expected results while taking into account saving time and effort, and it may not relate to the amount of work done." (Al-Tamimi et al., 2018, p. 24)

Theoretical definition of effectiveness: The ability to achieve goals to reach results.

Operational definition: The ability of the educational program (independent variable) based on Van Fibes' strategies and the learning cycle (M.L.C.S) to produce a positive effect and achieve a goal in acquiring concepts, measured by the scores that the experimental group obtained in the concept acquisition tests prepared by the researcher, with data then processed using the necessary statistical methods.

Second: Educational program: Zayer and Khudair (2015): "An operational work aimed at designing educational work and deriving its foundations from educational theories." (Zayer and Khudair, 2015, p. 15)

Seel et al 2017: "It is a scientific system primarily concerned with generating detailed and precise prescriptions for developing, implementing, evaluating, and maintaining situations aimed at initiating and facilitating learning processes within academic fields." (Seel et al, 2017:6)

3- The theoretical definition of the educational program:

It is a set of integrated and planned knowledge and skills within a comprehensive educational system that includes activities, plans, and self-assessment or formative evaluation, which are related to the cognitive, skill-based, and emotional aspects of the learner, and are designed and planned to achieve educational goals within a specific period.

The operational definition is: a form of instructional design that includes the procedures, activities, and organized practices prepared by the researcher to align with the assumptions of my strategy and Wilen & Phillips (m.l.c.s) learning cycle-based learning strategy, aiming to enable third-year history students to acquire educational concepts within the History Teaching Methods courses.

1. Strategy: "It is plans directed to performing tasks successfully or creating systems to reduce the level of mismatch between the current knowledge of the learner and the goals they want to achieve." (Schunk, 2000, 113; Al-Nabhani & Ahmed, 2020)
2. "It is a comprehensive and integrated plan that includes all elements and methods of both specialized and general teaching, overlapping and suitable for the objectives of teaching situations, through which the educational objectives can be achieved with minimal resources." (Al-Nabhani & Ahmed, 2020: 31)

Theoretical definition of strategy: a set of procedures including methods, rules, and organized techniques that the teacher follows in utilizing material and human resources in order to achieve specific objectives.

Operational definition: it is the scientific and practical steps taken to achieve the desired goals in light of the educational program based on my teaching strategies for the Methods of Teaching History course.

3- Wilen & Phillips Strategy is defined by:

1- (Mostafa, 2002): "It is the strategy through which students learn by imitation. Therefore, the teacher should be careful to make themselves a good role model in their thinking and be an example for their students, guiding them towards proper thinking skills and developing them." (Mostafa, 2002:69)

2- (Hassan, 2019): "It is a metacognitive strategy that helps the learner develop the ability to think as well as perceive, and to detect mistakes that the learner makes through learning processes, as it trains the learner in thinking and mental operations." (Hassan, 2019:18)

Theoretical definition: It is a metacognitive strategy that helps the learner develop the ability to think as well as perceive, and to detect mistakes that the learner makes through learning processes, as it trains the learner in thinking and mental operations.

Operational definition: The educational procedures carried out by the researcher during the educational program in the study of teaching methods of history according to organized cognitive and metacognitive steps to acquire educational concepts.

1. Cognitive Learning Cycle Strategy (L.C.S.M).
2. Defined by (Hossam El-Din, 2002) as a strategy that combines metacognitive strategies with Piaget's theory of cognitive development, emphasizing the interaction between teacher and learner during the learning situation. It relies on activities and the use of metacognitive strategies in each of its stages: exploration stage, concept introduction, concept application, and concept evaluation. (Hossam El-Din, 2002:159).
3. Al-Sir and others, 2021: "It is one of the strategies that help improve achievement using the Learning Cycle Strategy, giving the chance to gain experiences, boosting learner self-confidence, and developing higher-level thinking for exploratory and investigative processes." (Al-Sir et al., 2021:87) Theoretical Definition: It is an educational model based on constructivist theory and is used to enhance deep understanding through active learning and inquiry.

Operational Definition: It is an educational strategy applied based on an existing curriculum in the subject of History Teaching Methods and is implemented through its four stages. It aims to develop the ability to acquire concepts among third-year students in the College of Education by involving them in learning situations.

Acquiring concepts:

1. (Zayer and Dakhel, 2013): 'A set of stimuli to which the learner responds and can recall continuously whenever they want, because it results from a pre-arranged knowledge based on a series of ideas ready in the learner.' (Zayer and Dakhel, 2013: 156)
2. (Al-Jaafari, 2020): 'It is the amount of stimuli that allows the learner to acquire them by observing them once and recall them in the same form they were acquired.' (Al-Jaafari, 2020: 25)

The theoretical definition: The amount of stimuli presented to learners to know what represents the concept and what does not, by observing it once through the activities and exercises presented by the teacher, enabling the learner to recall it in the same form it was acquired.

The operational definition: It is the ability of third-year students in the History Department (research sample) to identify the components of any educational concepts present in the subject of Methods of Teaching History (definition, distinction, concept). It is measured by the score that students obtain in the educational concepts acquisition test prepared by the researcher.

The concept has been defined by:

1. (Al-Nuaimi, 2005): It is a mental image expressed by a symbol or scientific term that has meaning. (Al-Nuaimi, 2005:18)
2. (Al-Maamari, 2021): "An inferential process indicated by carrying out a classificatory construction of evidence (its specific examples and referring to it by a name or symbol), which is the name of the concept to be conveyed to the learner so they can generalize those concepts and reduce environmental complexities" (Al-Maamari, 2021:28)

Theoretical definition:

A fundamental focus around which the educational program revolves, considered one of the aspects of learning that must be taken into account according to students' characteristics, age level, and mental development, where imagination and curiosity interact to understand new phenomena or things, to develop concepts in the learner and build positive attitudes towards them.

Operational definition: The ability of third-year students in the History Department to define the concept of teaching methods, and then distinguish it from other examples that do not apply to it, ultimately applying it in new situations. This is measured through their answers to the items in the educational concepts test prepared for the purposes of the current study.

Students of the College of Education: They are a group of students considered as inputs for the educational process. They are graduates of the preparatory stage and then enroll in the Colleges of Education, particularly in the History Department, third year. At this stage, the learner studies a set of courses, including the course on History Teaching Methods.

Theoretical aspects:

The Concept of an Educational Program

Setting the main objectives directly related to the subject matter is one of the first steps when organizing any educational program. Once these objectives are identified, the fields of human behavior are determined, and then these are translated into specific goals that serve the general objectives. (Al-Khoury, 1983, p.22).

Abadi (2006) defined it as a set of various procedures related to selecting the educational material to be designed, analyzing it, organizing it, developing it, and assessing it in a way that helps the learner learn faster and better on one hand, and following teaching methods with as little effort and time as possible on the other. (Abadi & Ayala, 2006, p.21)

Salama (2003) defined it as a studied process aimed at addressing the diverse capabilities of learners, and the many and varied interactions between the content, teacher, learner, and educational tools and contexts over a specific period of time. (Salama, 2003, p.18)

Educational programs vary in their comprehensiveness and the resources required for them. They can be broad and internally inclusive, helping learners achieve educational goals according to their needs and abilities, in addition to assessing whether the learner has achieved these goals through learning (Al-Mousawi, 2018, p. 38).

Therefore, definitions of an educational program have multiplied and differed, but despite that, they agree on many points. They all agree that it is a set of organized knowledge and information that should be taught to learners to achieve the intended goals. For these educational programs to be more effective and impactful, they should include a number of principles and methods derived from research results and studies.

The Need for Educational Programs

Many studies and scientific research have emphasized the reliance on educational programs in the education sector, highlighting the noticeable need for this type of program due to its importance. These studies stressed the creation of a science concerned with designing the educational environment, which includes information and practical steps for application, design, and assessment. This is what is referred to as the educational program, distinguished by a knowledge framework that describes educational activities with the goal of reaching the highest levels. There are some educational outcomes, and many factors emphasize the importance and necessity of educational programs. Some of the main factors highlighting this need are:

1. The low educational level of students in many schools, as the curricula do not take modern approaches into account and their content is somewhat rigid.
2. The inadequacy of traditional teaching methods in providing enough time for schools to focus on important aspects of students' personalities, such as cognitive, psychological, and moral aspects. (Al-Obaidi, 2008: 17-19)
3. The noticeably rapid changes in society across various fields of life.
4. The limited focus of educational institutions on mental processes and their development, as they mostly train students to memorize information by heart, which is considered an ineffective method for achieving educational goals and understanding the material well enough to apply it in real life. This has led our students to adopt a rigid way of thinking, which then carries over into higher stages of education. Therefore, there is a clear need to develop educational programs that foster thinking. (Mahmoud, 2008: 2)

5. Recent and contemporary studies and literature confirm the need to build educational programs aimed at helping students utilize their mental abilities and develop their motivation according to the learning style they prefer. It has been scientifically proven how effective it is to consider these learning styles. However, this type of program has not received enough attention or practical application at the intermediate level until now. Among these studies are Al-Mousawi (2018) and Al-Suwaidi (2022).

From the above, it is clear, according to the researcher, that there is an urgent need to use educational programs in universities, as they enable learners to keep up with the huge developments in learning systems on one hand and increase their motivation toward studying on the other. They can also be applied in the practical side of life. An educational program is essentially a translation of what the instructional design contains a plan that includes a set of activities, practices, procedures, and learning materials aimed at raising students' academic level, developing thinking skills, and creating motivation. These are planned and implemented within a specific context and timeframe to achieve the desired goals. Building the educational program this stage is also considered to indicate mental activities aimed at thinking about designing the educational-learning program, building objectives, measurement tools, determining content and teaching strategies, and making decisions in their implementation (Al-Mousawi, 2018, p. 32).

The educational program planning stage includes two main phases:

1. Analysis stage: This is the first stage of planning, during which information is collected, studied, analyzed, and translated into activities that must be completed before designing, building, or developing any program. The purpose of this step is to determine whether the problem can be solved through building and designing an educational program. It includes analyzing needs and problems, analyzing learner characteristics, analyzing resources, analyzing obstacles, and analyzing tasks and responsibilities. This step involves an in-depth and precise study and analysis of the educational reality where the problem exists, as well as the available learning resources in this context (Al-Najdi et al., 1999, pp. 270-279).
2. Design and Construction Stage: The design stage is one of the practical and logical steps that include the required procedures for organizing, implementing, and developing the educational process in a way that aligns with the learner's cognitive characteristics (Al-Hila, 1999, 25). This stage begins with establishing the basic and primary plans, arranging educational tools, selecting appropriate teaching resources, and specifying teaching methods and approaches that achieve the educational objectives (Qutami, 2000, 140-142).

The stage of building educational programs involves applying a lot of knowledge about the learner, learning, and learning resources to determine the specifications of this educational system that meets the educational objectives. This stage includes several procedures and steps that the designer applies according to the procedures carried out in the analysis stage. It involves

creating the plan that defines the objectives, arranging them in an organized sequence, and determining the learning situations (Al-Najdi et al., 1999, 279).

The design stage of educational programs includes a set of procedures for designing and building the educational program, and the elements can be identified as follows:

First: Defining Behavioral Objectives: Behavioral objectives refer to specific procedures that the learner acquires through observable and measurable educational activities. Therefore, they provide a detailed view of the learner's abilities that appear after the learning process within a time frame not exceeding a single lecture, as they are considered the main criterion for evaluating the educational process (Al-Hayla, 2002, p. 70).

They are the outcomes of education that can be best identified in light of changes in learners' behavior. Moreover, they indicate the specific procedures the learner acquires through observable and measurable educational activities. Accordingly, they give a detailed view of the learner's abilities that appear after the learning process within a time frame not exceeding a single lecture, as they are the main criterion for evaluating the instructional process (Al-Khawaldeh, 1997, p. 175).

Specialists in teaching and assessment emphasize the importance of formulating educational objectives in behavioral terms, which include the action, present tense verb, behavioral action, content, and learner, and measure the learner's performance level (Zaitoun, 1994, p. 54).

Second: Developing Educational Content: The process of developing content helps the learner store the information they have learned in a logical and organized way, which enables them to retrieve this information and use it in new situations easily and smoothly (Darwaza, 1986, 127). The process of development is not separate from the process of analysis, although the latter comes first and is a necessary requirement for it. If the goal of analyzing educational content is to understand the parts of this content and the relationships that govern them, then the goal of the organization process is to gather and assemble the parts. The two processes are interconnected and cannot be separated from each other; rather, they are considered two aspects of a single process (Darwaza, 1988, 24).

Third: Defining Teaching Strategies: Teaching strategies refer to the methods, activities, educational techniques, and tools whose use leads to learning. They outline the main components of a set of educational materials and the methods used to demonstrate outcomes in a specific way for the learner (Al-Hilla, 1999, 188)

Teaching strategy is a set of teaching procedures chosen in advance by the teacher or instructional designer, which they plan to use during teaching, in a way that achieves the teaching objectives as effectively as possible, considering the available resources. (Al-Mousawi, 2018, 35).

In this educational program, the researcher identified the two strategies referred to in the studies of Al-Otaibi (2016) and Khattab (2007), which make the learning process active and constructive, form new cognitive structures, achieve successful interaction with tangible stimuli, and benefit from the experiences gained in new situations. These will be discussed later in the current chapter of the study.

Fourth: Identifying educational activities and tools: The importance of educational activities and tools lies in helping convey situations, attitudes, information, and skills included in the content to students, and they contribute to keeping the information in the learner's mind. (Al-Hayla, 1999, 222).

Despite the importance of educational tools for the learning situation, selecting or designing them has become very difficult due to the lack of fixed standards that can be relied upon in choosing these tools. And the lack of experience of the teaching staff, especially the teachers.

1. Take the allocated time into account.
2. Be more engaging for the learner to explore and discover information and be attractive.
3. Be related to the lesson topic.
4. Be more beneficial and cost-effective.
5. Achieve the educational objectives.
6. Facilitate the learner's understanding. (Al-Yaqoubi, 2011:17-18)

Second: Program implementation stage: At this stage, the program is put into actual practice in real conditions, applying classroom teaching and checking that all activities are carried out with quality and precision, and starting teaching using the tools and materials that were prepared. The implementation stage provides the implementer, who developed the program, with information about the program, its components, how well it meets its goals, and its educational content in real conditions. This requires the implementer or the implementation team to be well trained in data collection, teaching, and assessment of all components of the educational-learning process.

Plinder (1993) pointed out that there are several factors at this stage that affect the educational program, the most important of which are the teacher's characteristics, the components of the subject matter, and the environmental facilitation. The teacher (the implementer) must be well-trained in teaching and possess the necessary knowledge and skills in the field of learning and education, which makes the program more effective, increases students' understanding, and facilitates the teaching process. Due to the importance of this stage in determining the appropriateness of the educational program and its components, the teacher needs to be qualified to carry out the teaching process (Plinder 1993:61).

The components of the subject matter also affect the design, as the structure of the subject is determined by its content, tasks, included materials, and the progression of the topic according to principles that allow successful teaching at the specified level within the prepared experiences and materials for those situations. In addition, environmental facilitation, such as the availability of material and time resources and providing a calm environment, also impacts the success of the educational program and the achievement of its intended goals (Qutami et al., 2000:145).

Third: Evaluation Stage: The extent to which the goals are achieved indicates the process that contributes to obtaining basic and accurate data and information, which in turn helps in judging whether the outcomes in the educational process have been reached (Al-Mousawi, 2018:38). This process is diagnostic and remedial, providing the teacher who designs the educational program with feedback on their performance and teaching effectiveness. Evaluation includes several types:

1. Pre-Evaluation: Pre-evaluation is done before starting the educational process by carefully assessing its components. It aims to determine learners' readiness and levels for learning, or to identify behaviors and inputs in advance, before beginning the teaching process to adjust the learning environment beforehand.
2. Formative Evaluation: Formative evaluation occurs during the educational process and is carried out by the teacher over short periods, which may be at the end of a lesson, a unit, or a semester. It is also referred to as continuous evaluation (Al-Kubaisi, 2007:65).
3. The final or summative evaluation is carried out after completing the educational process and aims to determine the extent to which the intended learning objectives have been achieved. (Nashwan, 1999: 204) The researcher sees that, in general, educational programs include a set of steps and procedures that ensure proper planning of the educational process, where these steps and procedures are measurable and implemented in a learning situation. At the same time, they serve as a means to reduce effort, time, and cost in the educational process, with the goal of achieving the best results. Types of educational-learning programs: Literature has confirmed that there are several types of educational programs, which can be summarized as follows:

First: Training programs: These are organized and planned activities aimed at training participants to develop their knowledge and experience and to enhance their productive efficiency. (Good, 1973: 4)

Second: Guidance programs: These involve the behavior carried out by a certain group under the supervision of a program specialist, where activities are designed according to the needs of the group. (Al-Mousawi, 2018: 39)

Third: Language Learning Programs: These are programs designed to teach languages to those who want to learn them, in the form of activities, language functions, or real-life situations that attract learners. (Shehata & Al-Najjar, 2003: 75)

Fourth: Special Education Programs: These are programs related to the organizational and administrative aspects of services for students with disabilities, aiming at developing them in various personal aspects.

Fifth: Educational Programs: These programs include a set of interconnected educational activities with specific goals according to a certain plan or schedule, aiming to develop skills related to a general objective or final outcome. Educational programs for developing thinking are considered among the most advanced programs currently, as they focus on building cognitive processes and thinking skills of various kinds. (Al-Mousawi, 2018: 40)

Sixth: Educational-Learning Programs: These are sets of plans aimed at implementing lessons that include (goals, an introduction, and a proposed timeline for executing and analyzing the content into behavioral objectives, teaching methods, activities, tools, use of resources, enrichment activities, guidelines, and evaluation. (Al-Ziyadat, 2007: 547)

As for the current study, it is an educational program based on the strategies of Wilen & Phillips and the M.L.C.S developed learning cycle. It consists of units included in the Teaching Methods of History course for third-year students in Colleges of Education, and these units include (the general objectives, the educational concepts of this course, in addition to activities, exercises, and enrichment activities).

Wilen & Phillips' strategy is one of the metacognitive strategies that help learners realize the importance of thinking, develop it, and recognize and uncover the mistakes they make through learning processes. It was suggested by Wilen & Phillips in 1995, focusing on training thinking and its mental processes. It's essentially the learner's ability to think and use certain learning strategies more effectively. Teachers carry it out by expressing their thinking aloud to provide a model for learners on how to use metacognition while working on group tasks, allowing learners to hear how teachers plan, monitor, and evaluate their work. This helps learners hear what's going on inside the teacher's mind. Learners can observe how metacognitive skills are practiced and used. This modeling can also be done by a peer who is different from the teacher. In this case, the strategy includes the student modeling their thinking out loud in front of a peer, while the other observes the thinking processes of the speaking peer. Another possibility is that this can help develop metacognitive skills and how to practice them. (Masoud, 2023: 9)

This strategy is based on making learners' knowledge clear and understanding how teachers think about specific problems, and it is called the Modeling strategy. It occurs through thinking 'out loud,' where the teacher expresses thoughts using words, aiming for thinking out loud. It is considered an effective and good method, providing learners with effective specific examples (Ashour and Muhammad, 2009: 87-88). Thinking out loud reveals the skilled learner and how they think when speaking aloud in front of a group of peers, allowing others to imitate their thought process. The modeling of thinking helps develop and acquire the vocabulary learners need to enhance their thinking (Abu Jadu and Muhammad, 2015: 356). The strategy (Wilen &

Phillips, 1995) emphasizes creating classroom environments. The strategy is named after William Wilen, a Professor of Education at Kent State University, Ohio, USA, and John Erol Phillips, a Professor of Education at the University of Malaya, Kuala Lumpur, Malaysia. Their study proposed this strategy for teaching social studies in 1995. This is because of its impact on acquiring thinking skills, and also thinking skills must be integrated into the curriculum context, creating a connection between content, teaching methods, and thinking skills.

<http://www.socialstudies.org/sites/default/files/publications/se/5903/590303.html>

Any thing that enhances thinking can be achieved through interactivity and modeling within the metacognitive approach, as highlighted by social studies at the University of Wisconsin (1995). Neuman and his assistant tried to plan what teachers should do to create classroom environments that boost thinking. Based on that, the initial dimensions of a thinking-enhancing classroom environment were identified, aiming to observe the types of classroom activities as well as discussions that contribute to the learner's development of the lesson material. This depends on the learner's level of understanding, being aware of information processing, conscious of task requirements, focused, and knowledgeable about strategies that facilitate thinking. (Masoud, 2023: 11) The importance of using the Wilen & Phillips strategy in teaching.

1- One of the most important components of this strategy is that the teacher shows the student how they think when solving problems instead of just giving the answers, and then trains them on how to think about solutions instead of giving ready-made solutions.

2- One of the main reasons for using this strategy is that it includes many techniques that help develop higher-order thinking skills that both the teacher and student use, such as thinking aloud, teacher modeling, and self-questioning, like when the teacher asks themselves about their plan in answering and its adequacy. Should they review their thinking or the steps they took again? The student also asks themselves similar questions.

3- Cooperative learning in group work allows them to work together, which adds some advantages of cooperative learning like positive participation and developing social skills. (Hassan, 2019: 40)

4- Learning thinking skills becomes easier when the teacher models in front of the students by expressing the thinking strategies they use clearly and out loud while solving a problem.

5- It helps students develop awareness of the cognitive processes they engage in, and when they listen to their peers (especially skilled students) describe the cognitive processes they use, their thinking flexibility grows and they accept diversity in approaches to tackle the same problem. The same applies when the teacher demonstrates their thinking processes and presents new ideas in front of the students (Khattab, 2007:135).

Procedural steps for the Wilen and Phillips strategy:

This strategy includes the following steps:

1- Introduction of the skill: The skill is presented either directly by the teacher or through a learning material prepared by the teacher. It includes defining the skill, its importance, the thinking process involved in it, and clarifying it with examples, along with showing some common mistakes students might make, their causes, and ways to overcome them. In other words, the teacher provides clarification on the methods to reach a certain pattern to be used in problem-solving or the learning process, explaining why these methods are important, when students need to use them, the goal of performing the task, and connecting new experiences with previous ones (Khattab, 2007:183).

This stage aims to:

- 1- Clarify the goal of the learning process.
- 2- Connect the lesson to previous experiences.
- 3- Identify the mistakes that the student is likely to make. To achieve this, a problem or question is presented that puts the student in a thinking state to solve it, highlighting the main mistakes the student is expected to make during the solution, their causes, and how to overcome them, which makes the student aware of the problem. (Nasser, 2013:29)

Modeling by the teacher: In this stage, the teacher acts as a model for the students in solving a particular problem, understanding a certain concept, or performing a learning task. The teacher thinks out loud while solving, explaining what is going through their mind and the thought processes, while the students listen to the teacher, who guides themselves through the mental processes involved in the solution, using self-questioning and verbally clarifying the reasons behind each step and how to overcome difficulties in understanding. The teacher provides a model of the thinking process through verbal expression of what is going on in their mind. (Nasser, 2013:29) The teacher pretends to think out loud in front of the students, showing how they use the skill while solving a specific problem, in front of the students.

He engages in self-questioning and verbally expresses what he is thinking, where the teacher models the thinking strategies they use to develop metacognitive behavior, including (what I know and what I don't know), thinking out loud, self-questioning during the thinking process, and clarifying what goes on in their mind in front of the students. The teacher's role is as a guide, mentor, and evaluator, facilitating group work through activities and answering their inquiries. The teacher's role in this strategy can be summarized as follows:

1. Training students on how to summarize the learning process.
2. Training students on how to connect previous knowledge with new knowledge.
3. Training students on self-monitoring during the learning process.
4. Building a strong relationship with the students.

5. Encouraging interaction between the teacher and students and among the students themselves.
6. Gradually modeling, starting with easy situations and progressively increasing difficulty. (Atiya, 2010, p.219)
7. Presenting students with problems, where they can be divided into small groups to agree on certain paths or models for solutions. In this strategy, the teacher presents certain models and thought processes to the students before asking them to use these models and processes in problem-solving, making the teacher's role active and positive. (Afaneh & Yousuf, 2009: 174)

Modeling by the student: The teacher divides the students into groups of two, assigns roles within each group, and uses the Think-Pair-Share method for collaboration as follows:

1- One student in each group acts as the model just like the teacher did, but in a new paragraph, explaining their thinking to their partner in the group while solving the problem, reading aloud what is going on in their mind and expressing it verbally using self-questioning and stating the reasons behind each step. The other student in the group takes on the role of the observer, recording the methods the model uses and the problems they encounter, pointing out mistakes without giving the solution, and if the model cannot correct the mistake, the observer may offer a suggestion or hint on what needs to be done to fix it without providing the solution. (Rahu, Mohammed, 2013: 95)

2- After finishing solving the problem and the allocated time, the roles are switched to tackle a new problem. The student who played the model role in one activity takes the observer role in the next activity, and vice versa.

3- Responses are evaluated after the learner finishes solving the directed activities. The teacher collects responses randomly from the groups, selecting a student from one of the groups to answer the question and asking them to present and explain the different methods they and their partner used in solving the question and how they thought through it. After presenting the solutions they and their partner came up with, the teacher asks the groups for other methods of solving the problem that are different from what their peer presented to avoid repetition (Wilen & Phillips, 1995, pp. 136–138). This way, learners become aware of their thinking processes, and the teacher ensures they understand the thinking process. Based on what they say, the teacher discusses the solutions they reached and provides feedback along with additional explanations that help them think like experts. Similarly, when they listen to their peers describing their mental processes, they develop flexibility in thinking. Presenting different ways to solve the same problem, and the diagram (1) illustrates the role of the model student and the observing student: Role of the model student and the observing student.

Student observer	The ideal student
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- | | |
|--|--|
| <ul style="list-style-type: none"> - It listens to the model and records the solutions they propose and the problems they encounter. - It alerts them to errors by indicating a mistake without offering a solution. - If the model doesn't recognize the error, it offers alternatives and guidance without providing the solution itself. - It ensures the model thinks aloud at each step and alerts them if they skip a step or more without explaining their reasoning. | <ul style="list-style-type: none"> - Models and illustrates their thinking process to the observing learner during the problem-solving process. - Thinks aloud, explaining their thoughts and thought processes. - Explains the reasons behind each step. - Guides themselves verbally through self-questioning. - Presents different and varied approaches to the problem. |
|--|--|

4-Assessment: After completing the guided activities, the teacher randomly selects one student from each group to answer the questions and explain the different approaches they and their group members developed, along with their thinking methods. The teacher then asks the other groups to present their own alternative solutions, ensuring that all the methods they arrived at are recorded. Based on the students' responses, each group receives a score. (Hassan, 2019, p. 44)

Features of the Wilen and Phillips Strategy:

- 1- The teacher's role modeling provides a fundamental foundation for the learner by demonstrating desired behaviors and thinking in the desired manner, which the learners are expected to master through practice.
- 2- The phrase "Think as I think" is a powerful tool for influence, even more so than "Do as I say."
- 3- It is effective in teaching thinking skills if the model teacher clearly and audibly explains the methods they use to solve a specific problem.
4. It is not limited to demonstrating the process step-by-step to the learners, but also includes clarifying the available options at each stage and specifying the reasons for choosing each option. (Al-Kaabi, 2018, pp. 29-30)
5. It is an important method for learners to clarify their thinking to others, overcome errors in their perception, guide them in the right direction, and encourage creative thinking. It includes several strategic approaches such as thinking aloud, self-questioning, cooperative learning, and also think-pair-share. (Khattab, 2007, p. 53)

Based on the above, the Wilen and Phillips strategy is suitable for the current research because it shifts thinking processes from an implicit, invisible level to a verbal, observable, and trainable level. This is achieved through modeling, thinking aloud, and self-questioning. Since acquiring educational concepts requires planning, monitoring, and evaluation, this strategy provides a direct educational mechanism for training learners to monitor their thinking while addressing

topics related to history teaching methods. Therefore, in this research, the strategy is not used as an independent classroom activity, but rather as a metacognitive component in the proposed educational program.

According to the researcher, the " Wilen & Phillips" strategy is an effective educational strategy that enhances learners' understanding and develops their analytical and critical thinking skills. The researcher believes this strategy is of paramount importance in developing the educational program because it provides a logical organization of content and a clear sequence that helps learners connect and acquire knowledge gradually and systematically.

The Metacognitive Learning Cycle Strategy: This is a model that combines metacognitive thinking strategies with the learning cycle, which translates some ideas of cognitive constructivism. Its most important feature is that it allows the learner and teacher to express their ideas collaboratively. It consists of four stages:

1- (concept evaluation case study, concept exploration case study, concept presentation case study, concept application case study). This strategy was adopted in the current study due to its effectiveness in helping learners acquire and retain scientific concepts. It emphasizes interaction between the learner and teacher during the learning process, manages the learning process through cooperative groups, and promotes the principle of self-questioning, which stimulates metacognitive thinking in learners. (Khader: 2015, p. 36)

2- The student's positive role is evident in their ability to set goals, connect prior and subsequent knowledge, identify new knowledge needs, seek it out, self-assess, and monitor their progress toward achieving goals. This leads to the development of their awareness and thinking skills. Regarding the teacher's role (laboratory supervisor), it is defined as follows: Guiding, monitoring, and encouraging students to ask self-questions, to think and reflect on ideas, and helping them overcome the difficulties and obstacles they face.

- The previous strategies emphasize and focus on the features of metacognitive thinking (awareness, planning, monitoring, and evaluation) (Abu Bashir, 2012, p. 61).

- The strategies used in this study complement each other. The metacognitive learning cycle relies on posing self-questions that stimulate students' motivation and activate their metacognitive thinking, both theoretical and practical. This makes the student appreciate the value of their learning and the importance of their prior experiences, thus making their learning meaningful. The metacognitive learning cycle is closely linked to cooperative learning, as all stages of the cycle are implemented through collaborative group work, with groups ranging from 4 to 6 students. This type of learning fosters flexible thinking in students, encourages reflection on their ideas, and promotes acceptance and respect for each other's opinions. Throughout the metacognitive learning cycle, a student record, or "experiment report," is used. In this report, the student records their ideas, observations, and everything related to the concept under study. After recording, the student can reflect on their ideas and discuss any unclear or unfamiliar points with

their classmates or the lab supervisor. Through the metacognitive learning cycle strategy, the student can the cognitive aspect involves self-assessment of one's own progress and achievement of learning objectives. The score a student gives themselves indicates their grasp of concepts, their ability to accurately apply the stages of the metacognitive learning cycle, and their evaluation of the difficulties encountered and how they overcame them.

Blank (2000) was the first to use the Metacognitive Learning Cycle (MLCS) strategy. She considered it one of the most sustainable methods for modeling and implementing lessons, allowing thinking to be directed toward achieving a specific goal. Abu Bashir (2012, p. 61) views it as a teaching practice used in teaching metacognitive thinking. It is also used in learning scientific concepts, increasing achievement, and retaining knowledge over a long period. Arian (2003) believes that learning through metacognitive experiences, awareness of them, and the ability to manage and use them in different educational situations reduces learning difficulties and contributes to advancing levels of thinking, processing, and applying acquired knowledge. Aram (2012) confirms that using metacognitive thinking strategies helps students play a positive role in Collecting, organizing, monitoring, and evaluating information during learning. The design of the metacognitive learning cycle came as a result of the criticism directed at the regular learning cycle (Figure 2) with its various stages regarding its lack of attention to metacognitive thinking, the importance of which was emphasized by some educational researchers, such as Amir Saidi and Al-Balushi (2009, 431). Another criticism directed at the metacognitive learning cycle is its lack of a prediction element. Good (1989) believes that adding a prediction mechanism at the beginning of the regular learning cycle, with continuous feedback between the three stages, leads to the separation of empty concepts that students retain, and the use of prediction sheets makes them more aware of their incorrect ideas.

The stages of the Learning Cycle (MLCS) strategy, developed by the researcher, aim to prepare and equip the learner for the next stage. It is distinguished by its consideration of learners' cognitive abilities, presenting only concepts the learner can grasp. The learning cycle encourages learners to think critically through cognitive balance and allows them to directly discover phenomena. This equips learners with the ability to apply their learning in other situations. The learning cycle is most successful when the teacher addresses learners' questions and cognitive aspirations through their teaching experience. The researcher concludes from the above that there has been no research addressing an educational program based on metacognitive strategies within the learning cycle. This program aims to help learners rely on critical thinking to understand their own thinking, embodying an approach to the four stages through questions that require learners to seriously demonstrate their thinking. This strategy combines Piaget's theory with metacognitive strategies and emphasizes interaction between the learner and teacher in the learning situation. This is achieved through seven stages: (Exploration stage, Stage The explanation, expansion, and evaluation phases of the learning cycle strategy are constructive, enabling learners to build their own knowledge under the guidance and supervision of the teacher. This makes learning meaningful and emphasizes the learner's ability to use the scientific

method in the pursuit of knowledge. It is a constructive model used by teachers with learners in the classroom to develop knowledge and awareness of personal and situational variables. Its importance lies in achieving learning outcomes and empowering learners to construct their own knowledge through diverse experiences (Majoul, 2015: 12). The objectives of the learning cycle strategy are:

- 1- To utilize learners' prior knowledge in various new learning situations by proposing solutions, formulating decisions, recording observations, and writing reports supported by evidence and proof for all conclusions reached.
- 2- To motivate learners to discover different relationships, concepts, and cognitive structures, and to stimulate their curiosity and interest in knowledge through questions and logical explanations.
- 3- To help learners use prior knowledge to build new knowledge through a stimulating and engaging learning environment. Exploration, discovery, and interpretation.
- 4- The importance of learners communicating with each other.
- 5- Emphasizing learner activity by making the learner the focus of the educational process. (Al-Khaikani, 2025: 36)

The Teacher's Role in the Learning Cycle Strategy

- 1- Helping the learner define objectives and activities.
- 2- Helping the learner choose experiences appropriate to the topic.
- 3- Supervising the organization of cooperative learning and employing assessment activities.
- 4- Providing a suitable learning environment and time management.

Third: Concepts: One of the important foundations of human knowledge is concepts at all levels. Students learn concrete and abstract concepts at different stages of development in order to organize and classify their experiences and find relationships between their elements. Therefore, concepts are the tools of thought for learners and the building blocks of knowledge. (Bani Jaber et al., 2002: 32). Concepts are the basis for understanding science and its development. To the extent that we can find ways to improve student learning, we will have succeeded in creating motivation. He has to discover more of the same scientific concepts, as understanding a concept leads to understanding other new concepts. Therefore, it is necessary to ensure that learning the concept proceeds according to its requirements and the requirements of the students' mental development. (Hussein, 2004: 11). Studying concepts provides the learner with experiences and facts, and transforms learning into real meaning within the minds of learners at their level of understanding the truth. It is the process of linking concepts to the content of the educational material and arranging them in a logical order, which will facilitate the study of the cognitive

content, which facilitates understanding the material to be learned by presenting it in the form of main ideas. Thus, we find that arranging and organizing the educational material in the form of concepts will help retain the effect of learning for a longer period in the learner's mind. (Al-Hilah & Tawfiq, 2013, pp. 212-214).

Psychologists' Views on Concept Acquisition: Educators and psychologists have shown increasing interest in concepts, demanding that educational curricula be centered around fundamental concepts and that teaching these concepts aligns with learners' characteristics and maturity levels. Learning and acquiring concepts is a general objective that educators and psychologists strive to achieve. Several models have emerged that emphasize how concepts are learned, including:

- Bruner's Model (Constructivist Cognition)
- Piaget's Model (Cognitive Selection)
- Gagné's Model (Hierarchical Model)
- Ausubel's Model (Meaningful Learning) (Al-Hamzawi, 2013, p. 34)
- Nasser's Study, Reda Abdel, 2013

Iraq	Researcher
To identify the effectiveness of teaching using the Willen and Phillips strategy on the achievement and metacognitive skills of second-year intermediate students in physics.	Study Objectives
Governmental intermediate and secondary day schools in the districts of Al-Qadisiyah Governorate	Academic Stage and Subject
Experimental Methodology	Curriculum of the Current Study
Boys' Secondary School, 41 Students	Sample Size and Gender
/ Metacognitive Skills Scale	Study Instruments
Chi-square test, difficulty index, discrimination index (0), mean and standard deviation, Cronbach's alpha coefficient	Statistical Methods
Statistically significant differences were found between the mean scores of the experimental and control groups in the achievement and	Results of

metacognitive skills variables, favoring the experimental group.	study
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Hassan's 2019 study

Murtaza Awda, 2019	Researcher and country
The study aimed to determine the effect of the (Wollen and Phelps) strategy on the acquisition of historical concepts and historical thinking skills among fifth-grade literary students in the subject of history.	Study Objectives
Public middle and secondary schools in Iraq	Study Stage and Educational Material
History subject taught for the fifth literary grade	Methodology
Experimental descriptive	Sample Size and Gender
T-test, standard deviation, Cronbach equation, use of SPSS program	Research Instruments
There is a statistically significant difference at the level of (0.05) between the average scores of the students of the experimental group that studied using Wilen & Phillips and the average of the control group that studied according to the usual method in testing the acquisition of historical concepts in favor of the experimental group.	Study Results
There is a statistically significant difference at the (0.05) significance level between the mean scores of the experimental group students who studied using the Wilen & Phillips strategy and the mean scores of the control group students who studied using the traditional method in the historical thinking skills test, in favor of the experimental group.	

Comparing Studies Related to the Wilen & Phillips Strategy with the Current Research

First: Points of Agreement:

1- In terms of objectives: Previous studies agreed in their aim to verify the effectiveness of the Wilen & Phillips strategy or metacognitive strategies in improving learning outcomes, although they differed in the dependent variables they focused on. Some studies targeted academic achievement, while others focused on metacognitive skills or problem-solving.

The current research agrees with these studies in adopting the Wilen & Phillips

strategy as a component of the educational program and revealing its impact on improving learning outcomes. However, it differs from them in its integration with the seven-step metacognitive learning cycle strategy within a comprehensive educational program.

2- In terms of research methodology: All three studies adopted the experimental method because it is suitable for revealing the effect of the independent variable on the dependent variables, which provided a suitable degree of experimental control. The current research agrees with these studies in adopting the experimental method as the most appropriate method for achieving the research objectives and testing its hypotheses.

3. Regarding the experimental design: Previous studies employed a two-group design (experimental and control), ensuring equivalence between the two groups in several variables that could influence the experimental results. The current research aligns with these studies in adopting the same experimental design, while also adhering to the control and equivalence procedures to guarantee the validity of the results.

4. Regarding the research instruments: Previous studies utilized tests and scales appropriate to the nature of their variables, verifying their psychometric properties in terms of validity and reliability. The current research concurs with these studies in developing measurement instruments with suitable psychometric properties before administering them to the sample.

5. Regarding the statistical methods: Previous studies employed several statistical methods, such as the t-test, Cronbach's alpha coefficient, Pearson's correlation coefficient, and item analysis, to verify the validity and reliability of the instruments and to test the research hypotheses. The current research aligns with these studies in employing statistical methods appropriate to the nature of the experimental design and the measurement instruments.

6- In terms of results: All studies concluded that there were statistically significant differences favoring the experimental groups, confirming the effectiveness of the Wilen & Phillips strategy and metacognitive strategies in improving learning outcomes. The current research aligns with these studies in its starting point, which affirms the effectiveness of this strategy, while also seeking to verify its impact on two dependent variables: concept acquisition and reflective thinking.

Second: Differences

1- Academic Stage: Previous studies differed in their academic stage. Hasaballah's study was conducted on female students at the College of Education, while Nasser's study was conducted on students at a different academic stage. Hassan's study also differed in its research population. The current research differs from all of them in its application to students in the History Department at the College of Education, University of Misan, who represent an academic segment with characteristics different from the samples in previous studies.

2- Subject Matter: Previous studies addressed diverse subjects according to the objectives of each study. The current research differs from them in its application of the program to the subject of History Teaching Methods, a subject of an educational and professional nature that differs from the subjects addressed in previous studies.

3. Sample Size: Sample sizes varied among studies depending on the nature of their populations and the researchers' capabilities. The current research differs from these studies in that the sample size is determined by the nature of the research population within the History Department and the adopted sampling procedures.

4. Dependent Variables: Previous studies addressed diverse variables, such as problem-solving skills, academic achievement, and metacognitive skills. The current research differs in that it addresses two interrelated variables: concept acquisition and reflective thinking, reflecting a trend towards studying learning outcomes in greater depth.

5. Measurement Tools: Previous studies used achievement tests, metacognitive skills scales, and tools appropriate to their variables. The current research differs in that it developed a test for concept acquisition and a test for reflective thinking that align with the objectives of the educational program.

6. Statistical Methods: The statistical methods used varied among the studies, according to the nature of each study's design and instruments. The current research differs in its selection of a set of statistical methods consistent with the nature of its hypotheses and experimental design, as well as its reliance on effect size when interpreting the results.

Research Procedures:

Research Methodology: This refers to the approach the researcher uses in addressing her study based on its topics and variables (Abdulhadi, 2006: 112). In terms of procedural processes, research methodologies are classified as descriptive, historical, and experimental (Halli, 2017: 87). To achieve the research objective, the researcher adopted two methodologies:

1- Descriptive Research Methodology: This is defined as a type of research method that studies the current social, economic, and political nature, clarifying the phenomenon, its scope, changes, and degrees of correlation with other phenomena (Omar, 2009: 69). The descriptive method is considered the most widely used scientific research methodology and is fundamental to it when

studying any problem or phenomenon that must be described with quantitative and qualitative definition. The descriptive research methodology does not stop at this point but goes beyond it to reach understanding and interpretation. Therefore, it provides the researcher with the three pillars of science (understanding, prediction, and control) (Dawood, 2016: 61). This methodology focuses on The approach involves studying the factors influencing a problem or phenomenon to identify its root causes, as well as examining its characteristics, determining the relationships between them, and identifying external factors affecting them, in order to find solutions that facilitate understanding the present and predicting the future (Dashli, 2016, p. 61).

This approach was adopted in the procedures for designing the proposed program and its development phases (problem analysis, goal setting, content analysis, student needs assessment, program implementation, and program evaluation).

2- Experimental Research Methodology: This refers to research based on scientific experimentation that reveals causal relationships by controlling all factors affecting the dependent variable(s), except for one factor that the researcher controls and modifies to measure its effect on the dependent variable(s). An experiment in scientific research is defined as a process using at least two groups identical in all variables or conditions except for one variable whose presence or absence represents the independent variable. It begins with a hypothesis or hypotheses that include expected relationships between two variables. The research process proceeds towards verifying the hypothesis and accepting or rejecting it. (Attia, 2009, p. 177). To identify the role of each variable within this scope—that is, any intervention based on specific procedures for reshaping the phenomenon, obtaining results, interpreting them, and analyzing them—the researcher focuses on studying one factor while isolating others to ensure no influences on the study's outcome. Accordingly, the researcher possesses knowledge of the function of each variable, which helps in accurately determining the results and predicting the future of the problem or phenomenon (Alian, 2001, p. 55). The researcher adopted this approach to test the effectiveness of a proposed educational program based on the Wollen and Phillips strategies in the experimental design. The experimental design of research is defined as "a comprehensive plan developed to collect data in an experimental research project. It aims to answer the research questions or test hypotheses" (Batchirji, 2015, p. 103).

The current research includes one independent variable, which is the proposed educational program based on the Wollen and Phillips strategy and the M.L.C.S. strategy, and two dependent variables: concept acquisition and reflective thinking development. The researcher chose a quasi-controlled experimental design with pre- and post-testing, as it is suitable for the conditions of the current research. Table (5) shows the experimental design.

Experimental Design of the Research

Search tool	Independent variable	Groups of paper
Concept acquisition test	The educational program is based on the strategies of Wilen	Experimental group

	& Phillips, and M.L.C.S.	
	The standard educational program	Control group

Table (2) Quasi-Experimental Design with Two Research Groups

The experimental group refers to the group exposed to the experimental or independent variable to determine its effect. The control group refers to the group not exposed to the experimental variable and remaining under normal conditions. This group offers significant benefit to the researcher, as the difference between the experimental and control groups results from the experimental variable to which the experimental group was exposed. This variable forms the basis for judgment and determining the outcome (Al-Ta'i, 2025: 86). A- Defining the Research Population: This refers to the set of elements and components that pertain to a specific phenomenon and is called the statistical population. The purpose of defining the population is to establish the scientific boundaries for data collection and to obtain conclusions through conducting the study (Ta'ma & Hanoush, 2009: 37). Accordingly, the researcher defined the research population as third-year history students in the Colleges of Education at the Universities of Basra, Dhi Qar, and Misan for the 2024/2025 academic year, totaling 262 students (male and female). These students are distributed across four colleges. The researcher obtained the research population data from the Studies and Planning Division of each college.

A/College Sample: After selecting the University of Misan – College of Education – as the location for the experiment, the researcher visited the History Department, which has 38 students (male and female).

By random selection, Section (A) was chosen to represent the experimental group, consisting of 19 students, who will be taught according to the educational program based on the Wilson and Phillips strategies and the MLCS (Multiple Learning Strategies). Section (B) was chosen as the control group, consisting of 19 students, who will be taught according to the regular program.

Secondly: Equivalence of the two research groups (internal integrity): The internal integrity of the research can be verified by ensuring that internal factors have been controlled in the experiment (Al-Azzawi, 2008: 118). The dependent variable is affected by multiple factors other than the independent variable; therefore, it is necessary to control these factors and allow the independent variable to influence the dependent variable, as it is affected by the experimental procedures, external conditions, and other factors (Obaidat, 1998: 282-283). Before starting the experiment, the researcher ensured the equivalence of certain variables that might affect the integrity of the experiment and the accuracy of its results. This was achieved by conducting a process of equivalence between the students in the two research groups regarding the variables before commencing actual teaching, specifically:

- Chronological age, calculated in months.
- Prior knowledge - Raven's Progressive Matrices - Controlling for extraneous variables
- Research requirements:

One of the requirements of this research is preparing the educational materials and study plans to implement the proposed program:

1- Determining the educational material (student textbook): The researcher relied on the curriculum specified by the Ministry of Higher Education and Scientific Research for teaching the subject of History Teaching Methods, using several textbooks (Teaching Methods) for third-year students in the History Department at Colleges of Education in Iraq for the academic year 2024/2025, which the students will study during the experimental period.

Formulating behavioral objectives: Defining behavioral objectives is an important and necessary process, as it is the fundamental element in the educational process and the first step in any organized work (Abu Jadu, 2003, p. 253). An objective represents a linguistic formulation describing a specific behavior that can be observed and measured, and which the learner is capable of performing. The end of a specific educational activity is a term describing the desired change at a particular level, whether it be the learner's experience or behavior, cognitively, skill-wise, or affectively, upon successful completion of an educational experience. This change must be observable, measurable, and evaluable (Al-Adwan & Al-Hawamdeh, 2011, p. 68).

Preparing Lesson Plans: Lesson planning is fundamental to the educational process. It is a crucial element representing a comprehensive and conscious vision of all aspects and dimensions of the educational process.

Research Tools: Research tools can be defined as the means used by the researcher to obtain the required information and collect data that fulfills the research objectives and hypotheses (Abbas et al., 2012, p. 237).

The importance of tests in educational research stems from their being among the most accurate and objective tools (Al-Azzawi, 2008, p. 125). Therefore, the researcher chose tests as the tools for her research. Selecting a measurement tool involves preparing it according to a systematic method of several steps, including a set of procedures that adhere to specific conditions and rules. Specifically designed to determine the degree to which an individual possesses a particular trait or ability through their response to a subset of behaviors included in the test items, meaning measuring the behavior indicative of the trait rather than directly measuring the trait itself (Awda, 1993, p. 53). Since the research instruments are the means by which its objectives are achieved, the researcher developed a concept acquisition test. Educational Concept Acquisition Test: One of the requirements of the current research was to develop a test to measure the extent to which the sample members acquired educational concepts. Due to the lack of a readily

available test that was valid and reliable and included the concepts found in the prescribed sources for the third-year history teaching methods course in colleges of education/history departments, the researcher had to develop an educational concept acquisition test that suited the nature and objectives of the research. In preparing the test items, the researcher relied on some of the main and important concepts of the chapters under investigation, totaling (18 concepts). Each concept has three items: the first measures definition, the second differentiation, and the third application. The test was constructed according to the following steps:

7-1-1- Defining the objective of the test: The test developed by the researcher aimed to measure the extent to which educational concepts were acquired in the subject of history teaching methods, and to demonstrate the effect of the independent variable on the level of acquisition of educational concepts among the research sample.

7-1-2 - Defining the Levels of Concepts Measured by the Test: The researcher defined the dimensions of the test according to the levels of concept acquisition adopted in her study, namely (defining the concept, distinguishing the concept, and applying the concept), each of which can be defined as follows:

A- Definition of the Concept: "The learner's ability to identify the verbal meaning of the targeted concept and to state it based on what has been previously presented." (Al-Titi, 2007, p. 66)

B- Discrimination of the Concept: "The learner's ability to recognize positive and negative examples of the concept, i.e., those that fall under and belong to the concept, and those that do not. This means that the learner was able to distinguish between things and events that can be identified and discovered using the learned concept from among a different set of phenomena, things, or events."

C- Application of the Concept: "Using previously learned concepts, laws, facts, and theories to solve a problem presented in a new situation or context." (Abu Jadu, 2013, p. 42).

2-Determining the number and type of test items: In determining the number of test items, the researcher relied on some important concepts in the main chapters of the experiment, which number (18) of the scientific material that will be studied during the study period. The concepts were presented to a group of specialists, especially those specializing in history teaching methods. The researcher prepared a test consisting of (54) items in its final form, Appendix (1), of the multiple-choice type, to measure the three levels of concept acquisition, as it is the most common type of test in experimental studies and the most characterized by objectivity and comprehensiveness, as it limits the subjectivity of the grader, and its evaluation criteria are fixed, so the answer to it is clear and specific. (Al-Khawaldeh & Ismail, 2001, p. 376) Each item consisted of a sentence containing a (question), followed by four alternatives (answers), one of which represents the correct answer and the rest are considered incorrect. The grading was as follows: one mark was given for correct answers and zero for incorrect answers, and the alternatives were formulated to be specific and not open to interpretation. Avoid using language

that might prompt students to identify the correct answer, and ensure the paragraphs are free of unfamiliar terminology.

3-Test Instructions: The researcher has provided the following instructions for the Concepts Test:

A. Answer Instructions: Write your name, grade, and section in the designated spaces on the answer sheet.

B. You have a test consisting of (54) multiple-choice questions. The total marks for each question are (54).

C. An unanswered question or one with more than one correct answer will be considered an incorrect question.

D. You are required to answer all questions on the test.

E. Answers should be written on the answer sheet.

E. Time allowed: (45) minutes.

Scoring Instructions: Award one mark for a correct answer and zero marks for an incorrect or unanswered question. The answer key for the test items is attached (see Appendix 1).

Test Validity: This means that the test measures what it was designed to measure. A valid test is one that measures the subjects it was originally intended to measure, without measuring anything else alongside them (Salama, 2002, p. 184). To verify test validity, the researcher investigated two types of validity:

A: This type of validity relies on expert observations. An item that receives a high percentage of agreement, often 0.80 or higher, is accepted. (Al-Jabri, 2011, p. 218). To verify the face validity of the test and determine the extent to which the test items accurately reflect the intended trait or characteristic, the researcher presented the initial version of the test, along with the level of each item, to a group of experts and specialists in the fields of measurement, evaluation, curriculum, and teaching methods. These experts provided their opinions and observations on the clarity and phrasing of the items, their accuracy in measuring the specified levels, the logic and appeal of the alternatives, and any other feedback that could improve the test's quality. The researcher obtained an agreement rate of 80% or higher, which established the validity of the test items. Based on the experts' feedback, some items were modified to reach the final version, thus confirming the test's face validity.

Determining the Validity of the Concept Acquisition Test Questions for History Department Students:

B: Content Validity: This refers to the extent to which the test content accurately represents the intended trait. The content must accurately represent the predetermined range of items. The

scope of the test encompasses the knowledge, skills, and processes assessed by the test items. This type of validity is called "representational validity" because it depends on the extent to which the test represents the measured attribute (Al-Saadi, 2015, p. 128).

The researcher based the items of the educational concepts acquisition test on the main concepts of the subject matter. The test, its conceptual levels, and the subject matter content were presented to a group of specialists (see Appendix [insert appendix here] for content analysis to determine the extent to which the test accurately reflected the content). After considering their feedback, some items were modified, while others achieved an average agreement rate of over 80%. Thus, both face and content validity were achieved, and the educational concepts acquisition test was ready for administration to the pilot sample.

Pilot Test Application: First Pilot Test: The researcher administered the test to a pilot sample of (65) students from the College of Education for Human Sciences at the University of Basra on 27/10/2024. The test was conducted after agreement with the administration of the History Department at the University of Basra, following the students' completion of the three units. The first part of the material was presented, and students were notified of the date of the History Teaching Methods exam one week in advance. The researcher aimed to achieve the following through this pilot test:

- Clarity of the exam items.
- Clarity of the exam instructions.
- Accuracy in the time taken to answer the exam items.

After completing the exam, it was found that all the exam items were clear and understandable. The time taken by the students to answer the exam items was calculated by recording the time on each student's answer sheet upon completion. The average time for answering the exam items was (45) minutes, and it was calculated according to the following equation:

Average Test Time = Student 1's Time + Student 2's Time...etc./ Total Number of Students

Second Pilot Application (Statistical Analysis Sample): One of the fundamental criteria for constructing a good test is conducting a statistical analysis of its items. This analysis aims to extract the psychometric properties of the items, including their difficulty, ability, and capacity to measure discrimination and its magnitude. Invalid items are then eliminated by calculating the difficulty index, discriminatory power, and effectiveness of the incorrect alternatives for each test item, as well as its reliability. The researcher administered the Educational Concepts Acquisition Test to a second pilot sample of (30) male and female students from the University of Dhi Qar, College of Education for Humanities, Al-Tahrir Campus. After agreeing with the History Department to administer the test, Sunday and Monday, May 1, 2025, were set as the test

dates. The researcher ensured that all topics were completed before this date, and all students were notified one week prior to the test.

- After calculating the difficulty index of each item in the grammar skills test, it was found that it ranges between (0.47 - 0.57). This is considered a good index, as Bloom believes that a test is considered good and valid if its item difficulty index ranges between (0.20 - 0.80) (Bloom, 1971, p. 215).

- Statistical Analysis

- B - Item Discriminatory Power:

- Item discrimination refers to its ability to distinguish between students of higher and lower levels with regard to the characteristic or phenomenon that the test measures (Al-Azzawi, 2007: 78). Ebel indicates that a test item is considered good and valid if its discrimination index reaches (0.30) or higher (Ebel, 1972, p. 406).

- After calculating the discrimination index of each item in the grammar skills test, it was found that it ranges between (0.70 - 0.90) for the objective items. Thus, the test items are considered All of them are good and applicable.

C. Effectiveness of Incorrect Alternatives: The effectiveness of incorrect alternatives for a test item is defined as the ability of these alternatives to elicit responses from the test-takers (Samara, 1989: 108). This means that an incorrect alternative is effective when it attracts a higher number of individuals in the lower group who chose it than the number of individuals in the upper group (Al-Baghdadi, 1980: 229). Its effectiveness increases as its value becomes more negative (Awda, 2005: 125). After calculating the effectiveness of incorrect alternatives, I found that its value ranges between -0.14 and 0.44 (see Table (1), which illustrates this). Thus, all incorrect alternatives are considered effective.

- Psychometric Properties of the Concept Acquisition Test:

- Significant and discriminating when the value of (T) is below the significance level (0.05) at a degree of freedom of (98).

From the table above, the results and value of the validity coefficient of discrimination show the two extreme groups (upper and lower) in the concept acquisition test. It is evident that the arithmetic mean for the (highest) group reached (42.755) points, with a standard deviation of (2.880), while the arithmetic mean for the (lowest) group reached (24.229) points, with a standard deviation of (2.187).

Using the t-test for independent samples, the calculated t-value was (10.445) below the significance level of (0.000), indicating its significance at a significance level of (0.05) with (98)

degrees of freedom. This demonstrates the validity of the concept acquisition test for history students.

Secondly: Reliability of the Concept Acquisition Test for History Students:

Firstly: Cronbach's Alpha Method: This method was used because it is applicable to any type of objective and essay question. Reliability was calculated using this method by applying Cronbach's alpha to the test-construction sample using the SPSS statistical package. The value of the coefficient was found to be... The test has a high reliability coefficient of (0.753), which can be relied upon to estimate the test's reliability. Table (6) shows the results.

Final Description of the Concept Acquisition Test: The final version of the Concept Acquisition Test consists of (54) questions. The test includes a scoring key and a two-point scale (1, 0). The total score for the Concept Acquisition Test is calculated as follows: the highest score is (54), the lowest score is (0), and the hypothetical mean is (27).

Presentation, Analysis, and Interpretation of Results:

Presenting and analyzing the post-test results for the experimental and control groups in the Concept Acquisition test:

1- Presenting the results related to the Concept Acquisition test and pertaining to the first null hypothesis:

2- To verify the first hypothesis, which states that there is no statistically significant difference at the 0.05 level between the mean scores of the experimental group students, who studied using a teaching strategy based on the Wilen & Phillips (MLCS) strategy, and the mean scores of the control group students, who studied using the traditional method, in the post-test for Concept Acquisition.

3- The results of the post-test for the experimental and control groups are shown in the table below. The mean score for the experimental group was 44.526, with a standard deviation of 4.439 and a variance of 19.708. The mean score for the control group was 31.895, with a standard deviation of 1.895. (2.706) and a variance of (7.322).

4- When using the t-test for independent samples, the calculated t-value was (10.591), which is greater than the critical t-value (2.02) at a significance level of (0.05) and with (36) degrees of freedom. Therefore, the difference is statistically significant in favor of the experimental group. This indicates the superiority of the students in the experimental group who studied according to the Wilen & Phillips strategy and the M.L.C.S. strategy. Thus, we reject the null hypothesis and accept the alternative hypothesis, as shown in Table (2).

Table (2) shows the arithmetic mean, standard deviation, variance, and calculated and critical t-values for the scores of the experimental and control groups in the post-test for concept acquisition.

Statistical significance	Level of significance	The value of T		Degree of free	Contrast	standard deviation	arithmetic mean	No.	Group
		schedules	calculated						
sign	0.000	2.02	10.591	36	19.708	4.439	44.526	19	Experimental.
					7.322	2.706	31.895	19	Controlled.

Degrees of freedom ($n_1 + n_2 - 2$) ($19 + 19 - 2 = 36$) and significance level (0.05), critical t-value = (2.02)

1-1-2- Presenting the results related to the concept acquisition test and the second null hypothesis:

- To verify the second hypothesis, which states that there is no statistically significant difference at the significance level of (0.05) between the mean scores of males and the mean scores of females in the experimental group in the post-test of concept acquisition after applying the program based on the (Wilcoxon & Phillips) and (MLCS) strategies.

- By presenting the results of the post-test between the mean scores of males and the mean scores of females in the experimental group, it is clear that the arithmetic mean for the male group reached (43.000) points, with a standard deviation of (4.375) and a variance of (19.143), while the arithmetic mean for the female group reached (45.636) points, with a standard deviation of (4.342) and a variance of (18.855).

Using the t-test for independent samples, the calculated t-value was (1.303), which is less than the critical t-value (2.11) and greater than the significance level (0.05) with (17) degrees of freedom. Therefore, the difference is neither significant nor statistically significant, indicating a similarity in the level of male and female students in the experimental group on the concept acquisition test studied according to the Wilcoxon & Phillips strategy and the M.L.C.S. strategy. Thus, we accept the null hypothesis. As shown in Table (3), the mean, standard deviation, variance, and calculated and critical t-values of the experimental group's scores for males and females on the post-test for concept acquisition are as follows:

Statistical significance	Level of significance	The value of T		Degree of free	Contrast	standard deviation	arithmetic mean	No.	Group
		schedules	calculated						
Not sign	0.210	2.11	1.303	17	19.143	4.375	43.000	8	male
					18.855	4.342	45.636	11	female

Degrees of freedom ($n_1 + n_2 - 2$) ($8 + 11 - 2 = 17$) and significance level (0.05), critical t-value = (2.11)

Conclusions

- 1- The educational program developed based on the Wilen & Phillips strategies (S, M.L.C.)
- 2- It made the student the focus of the educational process, enabling them to think more deeply by verifying information independently when faced with new learning situations.
- 3- The educational program contributed to providing solutions to many problems that students encountered in the History Teaching Methods course through their practice of reflective thinking and the application of educational concepts.

Recommendations: In light of the research procedures and results, the researcher recommends the following:

- 1- Adopting the proposed program as a supplementary textbook for teaching Methods topics to third-year students in the History Department at Iraqi universities.
- 2- Curriculum planners and textbook authors, especially those writing history teaching methodologies books, should pay attention to using the Wilen & Phillips strategy and the MLCS (Meaning, Learning, Teaching, and Skill) to organize and guide the concepts and skills included, and to demonstrate the relationships between them.

Recommendations: To complement this research, the researcher suggests the following:

A study similar to the current research, to determine the effectiveness of an educational program based on the Wilen & Phillips strategy and the MLCS in other variables such as attitude development, achievement, and critical thinking. This would be an experimental study similar to the current study in other educational stages.

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