



مجلة التربوي

مجلة علمية محكمة تصدر عن كلية التربية جامعة المرقب

المجلد الثالث والعشرون
يوليو 2023م

هيئة التحرير

رئيس هيئة التحرير: د. مصطفى المهدي القط
مدير التحرير: د. عطية رمضان الكيلاني
سكرتير المجلة: أ. سالم مصطفى الديب

- المجلة ترحب بما يرد عليها من أبحاث وعلى استعداد لنشرها بعد التحكيم .
 - المجلة تحترم كل الاحترام آراء المحكمين وتعمل بمقتضاها .
 - كافة الآراء والأفكار المنشورة تعبر عن آراء أصحابها ولا تتحمل المجلة تبعاتها .
 - يتحمل الباحث مسؤولية الأمانة العلمية وهو المسؤول عما ينشر له .
 - البحوث المقدمة للنشر لا ترد لأصحابها نشرت أو لم تنشر .
- (حقوق الطبع محفوظة للكلية)



ضوابط النشر:

- يشترط في البحوث العلمية المقدمة للنشر أن يراعى فيها ما يأتي :
- أصول البحث العلمي وقواعده .
- ألا تكون المادة العلمية قد سبق نشرها أو كانت جزءا من رسالة علمية .
- يرفق بالبحث تزكية لغوية وفق أنموذج معد .
- تعدل البحوث المقبولة وتصحح وفق ما يراه المحكمون .
- التزام الباحث بالضوابط التي وضعتها المجلة من عدد الصفحات ، ونوع الخط ورقمه ، والفترات الزمنية الممنوحة للتعديل ، وما يستجد من ضوابط تضعها المجلة مستقبلا .

تنبيهات :

- للمجلة الحق في تعديل البحث أو طلب تعديله أو رفضه .
- يخضع البحث في النشر لأولويات المجلة وسياستها .
- البحوث المنشورة تعبر عن وجهة نظر أصحابها ، ولا تعبر عن وجهة نظر المجلة .

Information for authors

- 1- Authors of the articles being accepted are required to respect the regulations and the rules of the scientific research.
- 2- The research articles or manuscripts should be original and have not been published previously. Materials that are currently being considered by another journal or is a part of scientific dissertation are requested not to be submitted.
- 3- The research articles should be approved by a linguistic reviewer.
- 4- All research articles in the journal undergo rigorous peer review based on initial editor screening.
- 5- All authors are requested to follow the regulations of publication in the template paper prepared by the editorial board of the journal.

Attention

- 1- The editor reserves the right to make any necessary changes in the papers, or request the author to do so, or reject the paper submitted.
- 2- The research articles undergo to the policy of the editorial board regarding the priority of publication.
- 3- The published articles represent only the authors' viewpoints.





The effect of using electronic mind maps in learning visual programming through e-learning platforms
An experimental study of computer departments students at Elmergib University

Salem Msaoud Adrugi¹ , Tareg Abdusalam Elawaj² , Milad Mohamed Alhwat³
Department of Computer \ Faculty of Education - Elmergib University^{1,2}
Department of Data Analysis & Computer \ Faculty of Commerce- Elmergib University³
Salem.Adrugi@elmergib.edu.ly¹ , taalawag@elmergib.edu.ly² ,
malhawat@elmergib.edu.ly³

Abstract: This research basically aims to defined the effect of using electronic mind-maps in improvement the performance of the learners' who they learning visual programming courses through electronic platforms in the computer departments in five faculties at the Elmergib University. (Faculty of Science in Al-Khums, Faculty of education in Al-Khums, Faculty of Arts and Humanities in Kaser Al-Akhiar, Faculty of education in msallata, Faculty of Information Technology). The number of students was 160. The sample is divided to two groups to examine the effect of electronic mind-maps for this kinds of subjects. The results had shown the increasing in the learners scores due to using electronic mind-map compared with the case which is not using the mind-map.

Key words: Electronic mind-map, E-learning, Visual programming.

1-Introduction:

Recently majority of researches are concentrated on the new techniques in the educational sector especially e-learning (learning through online platforms) in the recent years to follow the advanced country and opening new scales for students. Many tools and strategies are developed in the educational field. For computer programming learning, many learners experience some problems and challenges in learning these courses. They find this subject is complex and require additional efforts as well as specific techniques(Gomes, 2007), there are special skills which is required to learn this course effectively such as solving the problems, good knowledge about mathematics, (Saeli,2011). (Ismail, 2010) presented the different causes of the difficulties which faced the students in learning this course. For designing e-learning materials for particular educational requirement, mind-map could be used as a method to structure learning materials. The main feature of this concept is the visually intuitive exemplification of knowledge which backing the educational procedures (Jamieson,2012). This assumption validity has been proven by different practical using cases in learning. (Mey,2010) mind-maps had been implemented successfully as a method to create interaction dictionaries. By means of the benefits of mind-maps, it is easy to join the basic idea with other sub-ideas depending on the meaning and the domain of the problem. In this paper, detailed review had presented to define the principle of mind-maps and the their major features also it concentrated the evolution stages of this concept as well as some previous works had mentioned. The second section is about an experimental study had presented about using electronic mind-map for learners studying visual programming languages on platforms in computer departments at Elmergib University. Finally the results was discussed.



2-Problem Statement:

According to the literature overview which had been mentioned above, searches which related to apply the of electronic mind-map on studiers from a Libyan University especially for programming visual courses. E-learning is the technology which used to performance evaluation of the learners. Education generally suffer some challenges related to e-learning platform such as the Lack of commitment from some learners, the lack of wireless network, lack of interactive between learners' as well as the interactive between learners' and instructors and other factors impact negatively on the performance of learners online. Programming language generally require special skills in learning process especially for beginners, these kind of sciences need instructional means to prepare the mind of student to accept the received information. Electronic mind –map is an effective tool to improve the performance of students', and increase their skills in designing codes and comprehend the principle of this courses.

3-The objectives:

This study aims to find out the impact of electronic mind-map applying on the performance of studies in the different faculties of Elmergib University in Libya. The study had been carried out for students who they studying in the computer departments in the selected faculties and using e-learning platforms for visual programming teaching.

4- Questions related to this search:

- (1) what is the basic principle of the mind-maps and what the benefits could be getting from applying this means?
- (2) what the effect of using electronic mind-map on the Libyan student performance in the visual programming courses through online platform?
- (3) Is the applying of these means solve the problems of e-learning generally or it support only the learners who they are committed and who following their courses and tasks on the platform?

5-Literature review about e-learning and electronic map mind & related works:

The concept of map mind is presented as a technique depending on the graphics to illustrate the concepts, the terms, words, or connected matters related to specific idea or topic. It includes information in its main-structure and its nodes and the linked-objects. Building a mind map not depending on specific rules, in order to show the ability of mind to create. Furthermore, there is freedom to build and design several models also there is diversity of software supporting the mind-map implementation. It is necessary to form a model to specific exactly the components of this mind-map, the aim of this process is applying algorithms of information recovery on mind-map. Mind-map depends basically on the creativity and imaginary of human which working to extract links between studied ideas. (Nast,2012) defined the mind-map as a tool to summarize the information by using paper. However (Khoo,2014) described it as a diagram which explaining interrelation and connection between multiple concepts. A huge amount of studies had been found the good outputs by using the mind-maps based on paper in various fields such as science(Balim, 2013), music(Selcuk,2017), mathematics (Ozdemir, 2017), Language(Gomleksiz,2012). Nowadays, Students prefer to use the modern digital means. This made it is necessary to work hard to development the mind-maps to be electronic and get rid of the using paper for them. This could simplify the review and update as well as it supports store



the mind-maps additionally creating process visually more attractive mind-map(Tungparpa,2015). Rather than the relation between two concepts for example is drawn on board or paper manually, it could be drawn automatically by software based on computer (Aljaser,2017).

According to (Ayoub,2015) an advanced concept of mind-map is called electronic mind-map, this mind-maps are designed and implemented using applications of desktop or android. The output of electronic mind-map is an electronic file such as (html, image, pdf, ...), It has the ability for linking with other electronic files such as (hyperlinks, office-files,..). Briefly, electronic mind-map is a mind-map which established by computers or smartphones through specific applications. (Dipak,2020), by this way both learners and instructors could use several kinds of software to create this map.

(Akinoglu, 2007) presented the differences between traditional mind-map and electronic one, such as (a) electronic mind-map used for IT fields, (b) the quality of electronic mind-map is controllable due to the existence of various standards related to color of image, clarity, contrast..., also , (c) it was mentioned that there is no difference between traditional and electronic education using traditional and electronic mind-map, (d) additionally, traditional and electronic mind-map are similar for the main-objective, (e) tools which required for designing process are available and supported by applications on smart-phones. Another concept which could be integrated with mind-map is e-learning. e-learning represents the educational process implementation online through electronic platforms. Many countries followed this technique to improve the learning on platforms which supporting exchange information and electronic courses especially after corona pandemic. Mind-map could be a tool which structuring and formulating the educational materials. (Norman, 2012) mentioned that mind-map could serve different functions. It could be used for describing the data presented in multi forms such as presentation (informative text), organization (provide a categorizing framework for the textual information), interpretation (explain abstract thoughts by describing them), transformation(making the text more reality and meaningful to supply mnemonics which help the readers to remember this text)

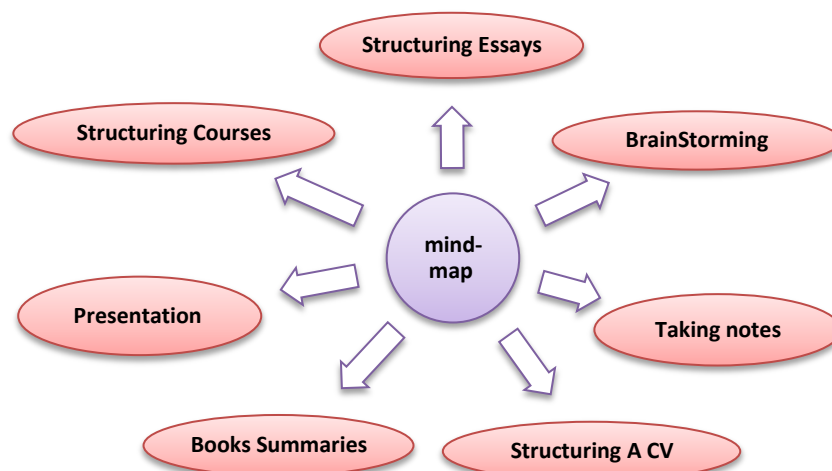
(Sarah et al. 2013) created electronic educational software for helping IT students in programming field, (Mohammad,2018) investigated the effect of using electronic mind-map on reading comprehension improvement, this study implemented in Jordan to investigate the mind-map applying effect on teaching skills related to reading. (Ibrahim, 2013) Investigated the effect of using electronic mind-map for learners of sixth-grade. The study is implemented in Saudi Arabia, the results presented that using electronic mind-map had an important impact on learners. (Nguyen,2020), Implemented mind-map for reviewing the previous knowledge depending on changing the tests methods as well as the evolution of learner awareness. Additionally, It should be concentrated on the comprehension part as well as the memory part. The study presented a method to prevent the rote-learning. (Amany,2022), Presented study about learners from Saudi Arabia universities, the courses is related to physics, the main purpose of this study is used the non-intervention principle, this study implemented to improve the e-learning technology after corona pandemic. (Murat,2020), aimed to establish digital mind-map and compared the performance with paper mind-maps. According to this study, digital



mind-map give considerable innovations in the technological domain, such as reducing the need for multiple tools, it is easy to share, visible richness, the experimental study had been implemented using coggle tool. (Zdena, 2014), presented teaching pattern of visual programming courses through an electronic platform, through presentations based on power point, the training process of data and getting the solutions had been done. The tested the possibility to use this platform to submission multiple home-works. This platform also enable to be used to do the final-tests. E-learning had been proved the affectivity in acquiring deeply extra skills related to visual programming compared to the traditional way. (Chun-Yen, 2018) discussed comprehensive improvement of the main principles of programming using visual programming language. (Yizhen et al., 2018) ,adopted a method for teaching based on designing and transforming the abstract as well as the unseen thinking into seen thinking according to the educational contents. (Fahd et al., 2021) studied enhancement the performance of students in writing English by using mind-map as a brainstorming-tool to achieve interactivity. The studied samples had been selected from Qassim University in Saudi Arabia. (Sukirman,2022), Investegated a tool for visual programming based on blocks to learn the programming principles. The result had presented that the students' scores was higher with the proposed tool.

Features of electronic mad-map:

- 1- Possibility to edit easily through drag & drop the topics according to the user's idea.
- 2-Possibility to add multi types of files such as, images, videos, links, audio files, ..
- 3- The applications which used to implement the map-mind offer several ready templates of mind-maps.
- 4-Possibility of sharing and collaborating with other learners in real-time.
- 5- After creating the mind-map online, it has been stored through cloud-stored and the user could access this maps anywhere and anytime.
- 6- Possibility to modify the colors, forms, sizes of the elements.
- 7- There are many applications on the computers or mobile-phones to achieve creating this maps and it is very easy to use.



fig(1): Some uses of Mind-Maps for various purposes



Basic Types of Mind-Map:

(a) **Circule mind-map:** It is a good tool to define and display the details related to any type of concept, it helps to format the ideas of brainstorming and linking them in a logical-flow.

(b)**Flow mind-map:** It is a powerful tool which used to formulate a suitable sequence for data groups and different procedures. It is useful to improve the learners' skills at different levels. It could be vertically or horizontally. This kind is very desired from scientific learners.

(c)**Bubble mind-map:** this type serve the basic purpose of illustration the whole idea briefly, it describe any type of phenomena by using specific adjectives, that is very important to select the required adjectives carefully. This type enable in using a perfect wordlist.

(d) **Doubly Bubble mind-map:** This type is extracted from the previous type (Bubble). It is used to characterize bigger amount of data with less words. Double Bubble enables the comparison between two things and help the learners to have a more cohesive way for analyzing different situations.

(e) **Multi-flow mind-map:** This map could take out rapidly the purposes related to concept and how it could affect surrounding.

(f) **Tree Mind-map:** This kind is powerful for big amount of data which require to settle out, but there is difficulty to categorize this data.

(g): **Bride mind-map:** This kind is useful to reduce the interference between two concepts and define two various concepts and specify the relation between them.

(h) **Brace mind-map:** It could analyze and estimate portions of information. It is used basically for the big amount data which is conceptual.

(i) **fishbond mind-map:** It shows the processes regarding to the presented concept, It enables to conceptualize the potential causes of a problem and arrange the concepts into categories.

The basic steps to build an electronic mind-map:

The basic steps to build an electronic mind-map:

The electronic mind-map is generally an activity which is described by imaginative so the way to design this map could be varying according to the personal benefits, projects as well as resources. If the user use a technology tool to construct the electronic mind-map, It should be following a systematic method:

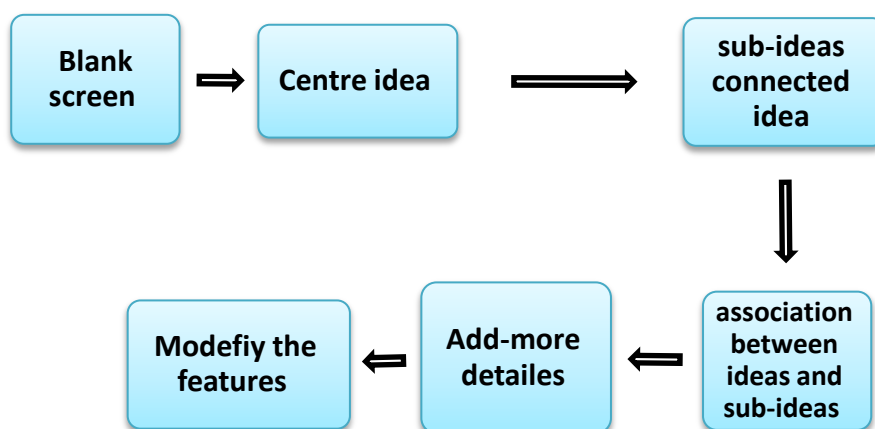
1- starting when the screen is blank.

2-It should fill the central theme or idea and write in the middle the theme of brainstorming.

3-Sub-ideas of brainstorm should add them to screen and write the reflections of brainstorm-ideas on branches which originated from the center

4- then drawing the lines for the connection between ideas and the sub-ideas through drop/drag the required elements to rearrange the thoughts. It should apply multi facts to every idea,

5-the tools of formatting should also used to modify the colors, size, forms as well as adding pictures or icons



Fig(2) The basic steps to design an electronic mind-map

Visual programming:

Visual programming include programming language which enable users to create their programs through graphical elements rather than textual way, visual programming is easier and simpler than textual one especially for beginners. The visual language program is based on graphical-editor. The graphic elements are joined by connectors with arrows in a way to present the direction of dataflow.

6-Method:

The sample studied consists of 160 undergraduate learners of (department of Computer) in the Elmergib University in these faculties: Faculty of Science in Al-Khums, Faculty of education in Al-Khums, Faculty of Arts and Humanities in Kaser Al-Akhiar, Faculty of education in msallata, Faculty of Information Technology.

The sample is selected randomly, and distributed to two groups: first group is an experimental (blocks-based group) and the second group is an electronic mind-map(blocks-based group), e-learning sessions of each group were implemented according to the requirement of experimental study. Visual programming language courses is used in the experimental study, the time period to do the experience was one week, another four day workshop on electronic mind-map was implemented for the second group. It has been developed self-tutorial program for electronic mind-map and given to learners groups. To evaluate the problem of solving-skills, It has been assigned the same problem of computing to every group as a next test.

7-Results:

A null assumption starting had been constructed which implies that there is no difference in results. This assumption was examined, The confidence-intervals had been calculated to note the statistical meaning for the true assumption. The results arranged in table 1 presented the learners scores with and without electronic mind-map.

To compare the performance improvement, it had been applied the T-test: the confidence-interval had been kept at (99%) which resulted in:

$$t = -7.382, \quad df = 59, P_{value} = 6.049e - 10$$



It could be seen that the real difference in the proposed means is not zero, while the percent value of the confidence interval ($-0.8406021 - 0.8476062$). The mean of the result differences was: -0.8490547

The null assumption with high value of confidence had been rejected due to the very low value of P_{value} as well as the confidence-interval not contain 0, the results had shown that there is a close relation between learners' scores and the instructional means. This study presented the effectiveness of using educational tools in learning programming through by e-learning platform. The skills of issue solving are the basic factors had been focused in this study Firstly, the impact of blocks-based programming on the students' ability of solving problems of the studied groups had investigated, it had found that there is no considerable difference between the studied group, Secondly, electronic mind-map had used as an interactive tool. The examined groups had been received the instructions of electronic mind-map. After the electronic mind-map had been applied, it had found some differences and the performance of group with the electronic mind-map was better than the group without this map. The weakness of the group that did not receive the electronic mind-map directives due to the starting directly in the code building. The results of this study had presented that the use of electronic mind-map before starting of code helps learners to think better. This had been emphasized the need of brainstorm tool. The performance of beginners is better when the electronic mind-map was used, this help effectively to enhance learners' abilities to solve problems.

Table(1)

	E-Mind-Map	Scores	Variance
1 st group	0	1.03	0.86
2 nd group	1	1.72	0.29

8-Conclusion :

Despite beginner programmers experience many challenges when they starting to learn programming but the lack of Skills related to problem solving is one of the basic reasons of the low level of their performance. The results extracted from the experimental study had shown that the using of various strategies to solve the problems related to programming languages especially visual type which depending on blocks could be more powerful in teaching this subject, electronic mind-map had been proved its powerful as a solving and thinking of problems tool to perform the activates related to programming. Electronic mind-map improve the performance of the learners especially in learning programming materials. The results had proved the enhancement in improving the skills related to study this programming languages online.

9-Future work:

Visual programming language teaching online proved its affectivity in increasing the comprehensive of these materials. However this method probably experience some difficulties like the lake of Lack of commitment of some student as well as the lack of wireless and other factors which impact on the efficiency of e-learning, so future work should be concentrated on study the effects of these challenges on the performance of learners through platforms and using electronic mind-maps.



References:

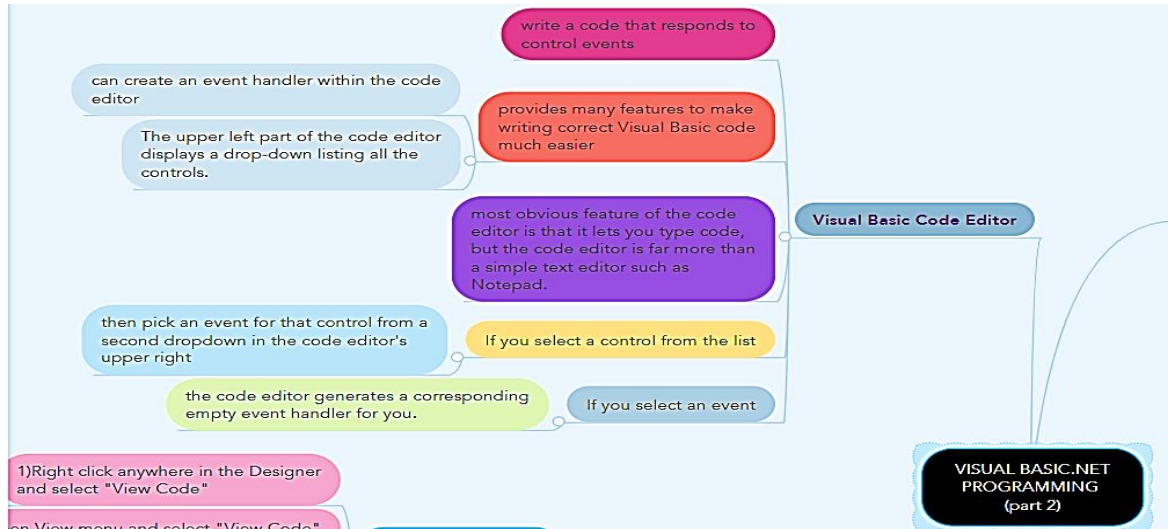
- [1] Ayoub, A. (2015), Using E-Mind Mapping in Learning at IBR I College of Applied Sciences, Global Journal of Computer Science and Technology: H Information & Technology, Vol.15.
- [2] Dipak, B. , Ramakanta, M., (2020), Digital Mind Mapping Software: A New Horizon in the Modern Teaching Learning Strategy, Journal of Advances in Education and Philosophy, 400-406.
- [3] Akinoglu, O., & Yasar, Z. (2007). The effects of note taking in science education through the mind mapping technique on students' attitudes, academic achievement and concept learning. Journal of Baltic Science Education.
- [4] Sarah A., Arlene B., Danny C., Joanna L., Erlinda S., Mary R., (2013), E-Learning For Programming Languages On Android Devices, International Journal of Scientific & Technology Research. Vol 2. 253-258.
- [5] Mohammad M., (2018), The Impact of Electronic Mind Maps on Students' Reading Comprehension, Canadian Center of Science and Education, Vol. 11, 32-42.
- [6] Nguyen L., Mai.,(2020), Using Mind Map In Teaching Mathematics: An Experimental Study, International Journal of Scientific & Technology Research Vol 9, 1149-1155.
- [7] Amany A., (2022) The effect of implementing mind maps for online learning and assessment on students during COVID-19 pandemic: a cross sectional study, Alsuraihi BMC Medical Education. 1-16
- [8] Murat D., Baris C., Mustafa F., (2021), Use of Digital Mind Maps in Technology Education: A Pilot Study with Pre-Service Science Teachers, Informatics in Education. Vol.20,47-68.
- [9] Nast, J. (2012), Idea Mapping: How to Access Your Hidden Brain Power, Learn Faster, Remember More, and Achieve Success in Business. New Jersey: John Wiley & Sons, Inc.
- [10] Khoo, A. (2014). I am gifted, so are you. Singapore: Marshall Cevendish Editions.
- [11] Balim, A. G. (2013). Use of technology-assisted techniques of mind mapping and concept mapping in science education: a constructivist study. Irish Educational Studies, 32(4), 437–456.
- [12] Gomleksiz, M. N., Yetkiner, A. (2012). The effects of using mind mapping in English language teaching on students' academic achievement, retention, views and attitudes towards English. Electronic Journal of Social Sciences, 11(40), 129–160.
- [13] Ozdemir, A., Alaybeyoglu, A., Balbal, K. F. (2017). Teaching quadrangle subjects through mind mapping technique. Science, Education, Art and Technology Journal (SEAT Journal), 1(2), 45–51.
- [14] Coban, S., Selcuk Tokatli, E. (2017). The effect of mind mapping technique on students' achievements in music lesson and on their attitudes towards the mind mapping technique. Education and Science, 42(190), 423–435.
- [15] Tungprapa, T. (2015). Effect of using the electronic mind map in the educational research methodology course for master-degree students in the faculty of education. International Journal of Information and Education, 5(11), s. 803–807.
- [16] Aljaser, A. M. (2017). The effectiveness of electronic mind maps in developing academic achievement and the attitude towards learning English among primary school students. International Education Studies, 10(12), 80–95.



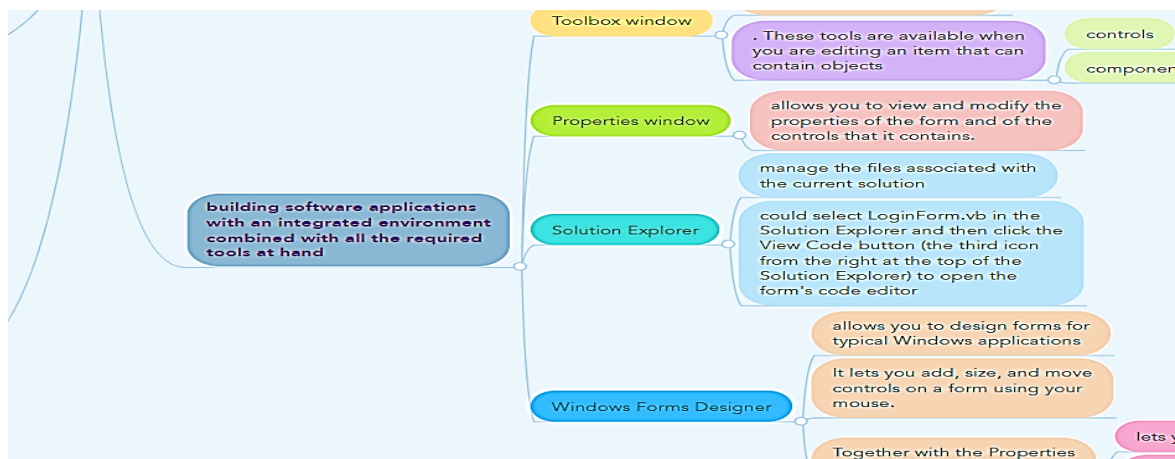
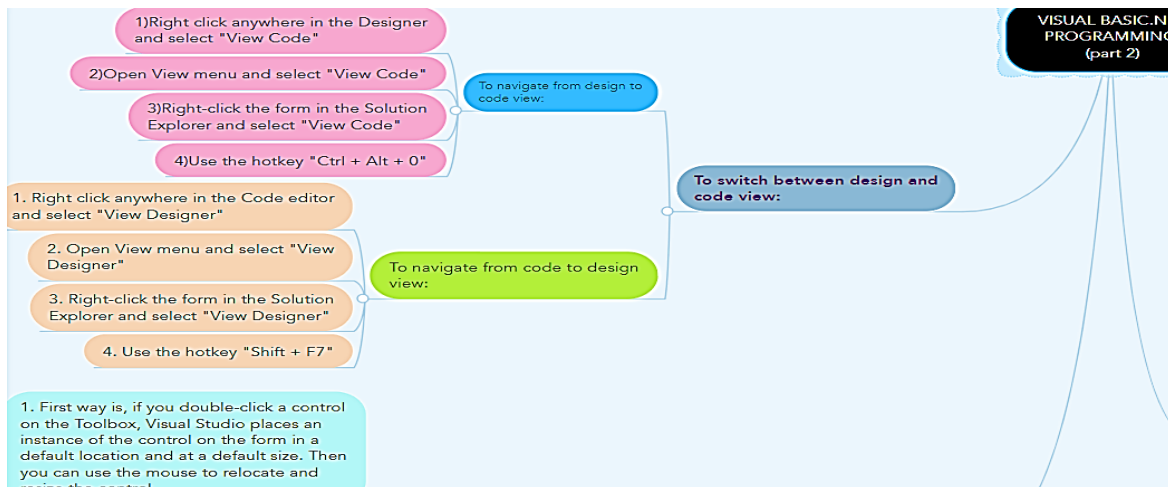
- [17] Zdena, D., (2014), E-learning for Visual Programming Language, International Conference on Emerging eLearning Technologies and Applications, 103-108.
- [18] Chun-Yen, T., (2018), Improving students' understanding of basic programming concepts through visual programming language: The role of self-efficacy, Accepted Manuscript.
- [19] Yizhen, L., Yingxin, T., Yuqi, Y., (2017), The Application of Mind Mapping into College Computer Programming Teaching, International Conference on Identification, Information and Knowledge in the Internet of Things.66-70.
- [20] Gomes, A., Mendes, A, J., (2007), Learning to program - difficulties and solutions, International Conference on Engineering Education – ICEE.
- [21] Sukirman, Dias,P., Aziz,A., Utaminingsih, (2022), Block-Based Visual Programming as a Tool for Learning the Concepts of Programming for Novices, International Journal of Information and Education Technology, Vol. 12. 365-371.
- [22] Norman, R. R. (2012). Reading the graphics: What is the relationship between graphical reading processes and student comprehension?. Reading and Writing, 25(3), 739– 774. <https://doi.org/10.1007/s11145-011-9298-7>
- [23] Saeli, M., Perrenet, J. , Jochems, W. M. ,and Zwaneveld, B. (2011),Teaching programming in secondary school: a pedagogical content knowledge perspective, Informatics in Education-An International Journal, vol 10, no. 1, pp. 73-88.
- [24] Ismail, M.N., Ngah, N.A. , and Umar, I.N. , (2010), Instructional strategy in the teaching of computer programming: A need assessment analyses, The Turkish Online Journal of Educational Technology, vol. 9, pp. 125-131.
- [25] Jamieson, P. (2012). Using modern graph analysis techniques on mind maps to help quantify learning. In Frontiers in Education Conference (FIE)
- [26] Mei, L., Yang, K., Chen, H. (2010). Using Mind Maps as a Strategy for Vocabulary Acquisition in Chinese Universities. In International Conference on Computational Intelligence and Software Engineering (CiSE).
- [27]<https://www.edrawmind.com/article/9-popular-types-of-mind-map.html>
- [28]<https://www.mindomo.com/c/what-is-a-mind-map/>

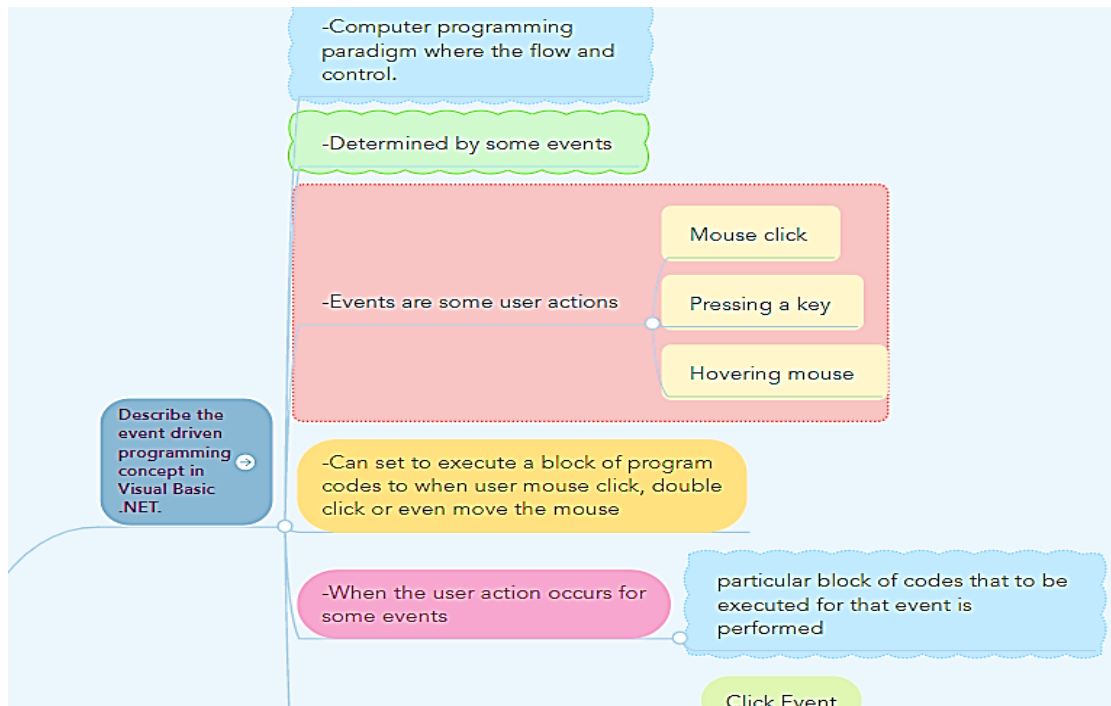


Appendix: The electronic mind-map designed to teach the visual programming course



Fig(3-a) :Parts of basic electronic mind-map used for Visual programming





Fig(3-b) :Parts of basic electronic mind-map used for Visual programming

From fig(3) in the Appendix, it could be seen the components of the electronic mind-map, this map is flow mind-map flow it explain obviously these main cores:

(1) Visual programming language code editor and this includes:

- write a code responding to the control event.
- provide features to make writing correct code much easier.
- most obvious feature of the code editor that lets you type code,
- If you select control from a list then pick up an event for that control from a second dropdown in the code editor's upper right.
- if you select an event: the code editor generate a corresponding empty event handler for you.

(2) Describe the event driven programming concept:

- events are some user action
- Can set to execute a block of program codes to when user mouse click, double click or even move the mouse.
- when the user action occurs for some events .

(3)building software applications with an integrated environment combined with all the required tools at hand

- toolbox window.
- Properties of window
- solution explorer
- windows forms designer

(4) To switch between design and code view

- to navigate from design to cod view.
- to navigate from code to design view.



(5) How to add controls to a form:

Windows forms designer allows you to add controls to a form in as several different ways.

Mind-map using software could be designed in several ways. There is no particular form. It is only necessary to define to center of the map and the branches. It is also necessary to connect between the center and its branches. This require the deep understanding the relation between the main idea as a center and the branches.



الفهرس

الصفحة	اسم الباحث	عنوان البحث	رت
1-10	Manal Mohammed bilkour	An optimal fuzzy zero point method for solving fuzzy transportation problem	1
11-24	Mohamed Bashir M. Ismail	Assessing the Adaptability of Students and Teachers in the Faculty of Arts at Alasmarya Islamic University to the Sudden Transition to Online Teaching and Learning Processes during the COVID- 19 Pandemic	2
25-34	Dawi Muftah Ageel	Environmental study for Cyanobacteria Blooms using Envisat data at the western coastal of Libya	3
35-53	Nuria Mohamed Hider	Possible solutions to ensure data protection in cloud computing to avoid security problems	4
54-60	Gharsa Ali Elmarash Najla Mokhtar	A printed book or an e-book? Student Preferences & Reasons	5
61-75	هدية سليمان هويدي نادية عطية القدار دعاء عبد الباسط باكير	التشهير الإلكتروني عبر مواقع التواصل الاجتماعي من وجهة نظر طلبة كلية طب الأسنان بمدينة زليتن	6
76-89	Hamza A. Juma Saif Allah M. Abgenah Mustafa Almahdi Algaet Munayr Mohammed Amir	Designing an Autonomous Embedded System for Temperature Monitoring and Warning in Medical Warehouses	7
90-101	Salem Msaoud Adrugi Tareg Abdusalam Elawaj Milad Mohamed Alhwat	The effect of using electronic mind maps in learning visual programming through e-learning platforms An experimental study of computer departments students at Elmergib University	8
102-110	Suad Mohamed Ramadan Zainab Ahmed Dali Ahlam Mohammad Aljarray Zenoba Saleh Shubar	Performance analysis of different anode materials of double chamber Microbial Fuel Cell technology using different types of wastewater	9
111-116	Faiza Farag Aljaray Saad Belaid Ghidhan	Evaluation of Hardness for Electroless Ni-P Coatings	10
117-128	Saleh Meftah Albouri Hadya S Hawedi Mansur Ali Jaba	Using Smartphone in Education: How Smartphone has impacted in Education, A Review Paper	11
129-139	Ibrahim O, Sabri	The Concept of Illegal Immigration and Its Causes in North Africa Region	12
140-151	A.S. Deeb I.A.S. Gjam	Solution of a problem of linear plane elasticity in region between a circular boundary with slot by boundary integrals	13



152-173	Musbah Ramadan Elkut	Transforming TESOL Pedagogy: Navigation Emerging Technology and Innovative Process	14
174-192	سالم علي سالم شخطور	آراء أبي محمد القيسي في خزانة الأدب "دراسة وتحليل"	15
193-217	نورية صالح إفريج	اعتراضات النحاة على حجية الشواهد في مسألة إعادة حرف الجر مع حتى العاطفة	16
218-238	نجاه صالح اليسير	الازدواجية اللغوية وأثرها في تعليم اللغة العربية الصفوف الأولى من المرحلة الابتدائية (أنموذجاً)	17
239-256	محمود محمد رحومة الهوش	الرضا الوظيفي وأثره على الاداء المهني لدى معلمي ومعلمات التربية البدنية ببلدية العجيلات	18
257-272	إبراهيم رمضان هدية	السرد الروائي عند إبراهيم الكوني في رواية الدنيا أيام ثلاثة	19
273-279	ابراهيم علي احمدودة ابراهيم علي ارحومة	التحليل الاستراتيجي لشركة الخطوط الجوية الليبية دراسة تطبيقية على الشركة باستخدام النماذج	20
280-294	Ismail F. Shushan Emad Eldin A. Dagdag Salah Eldin M. Elgarmadi	Petrography of Abushyba Formation columnar-jointed sandstones (Triassic-Jurassic) from Jabal Nafusa- Gharian, NW-Libya	21
295-307	Samera Albghil	Multimodal discourse analysis of variations in Islamic dress code in Bo-Kaap, Cape Town	22
308-317	عبداللطيف بشير المكي الديب رجب فرج سالم اقنيير	(استخدام نظم المعلومات الجغرافية والاستشعار عن بعد في تقدير النمو العمراني وأثره على البيئة المحلية بمنطقة سوق الخميس - الخمس / ليبيا)	23
318-331	حنان عبد السلام سليم عائشة حسن حويل	تطوير الخدمات العقارية باستخدام تقنية المعلومات (تطبيق أندرويد للخدمات العقارية أنموذجاً)	24
332-338	Mahmoud Mohamed Howas	Hepatoprotective Potential of Propolis on Carbontetrachloride-Induced Hepatic Damages in Rats	25
339-352	نورية محمد النائب الشريف	البناء العشوائي في مدينة الخمس (مفهومه - أسبابه - تأثيره على المخطط)	26
353-371	إسماعيل حامد الشعاب معمر فرج الطاهر سالم العامري	اختلاف القراء السبعة في البناء للفاعل وغير الفاعل وأثره في توجيه المعنى "نماذج مختارة"	27
372-376	عبد السلام صالح أبوسديل عطية رمضان الكيلاني	دراسة على مدى انتشار Gnathia sp. في بعض الأسماك البحرية المصطادة من شواطئ الخمس- ليبيا	28
377-392	الصغير محمد المجري	(بيان فعل الخير إذا دخل مكة من حج عن الغير) للملا علي القاري المتوفي سنة 1014هـ دراسة وتحقيق	29
393-421	نجيب منصور ساسي	فضل المواهب في شرح عيون المذاهب لعبد الرؤوف الأنطاكي (1009هـ) (الاستنجا ونواقض الوضوء من كتاب الطهارة) دراسة وتحقيقا	30
422-439	حنان ميلاد عطية	برنامج ارشادي معرفي سلوكي في خفض مستوى الوحدة النفسية لأبناء النازحين الليبيين	31
440-457	Hanan A. Algrbaa,	Speaker recognition from speech using Gaussian mixture model (GMM) and (MFCC)	32
458-467	هشام علي مرعي	علاقة المنطق بالعلوم الشرعية عند الغزالي	33



468-476	خالد الهادي الفيتوري زينب أحمد زوليه	الحلول العددية للمعادلات التفاضلية الملزمة باستخدام ب-سبلين التكعيبية	34
478-500	خميس ميلاد الدزيري	تأثير نظم معلومات التسويقية على توزيع السلعة " دراسة تطبيقية على إدارة مصنع إسمنت المرقب "	35
501-517	منصور عمر سالم فرعون	إدارة الوقت في الإدارة المدرسية في ضوء مهامهم الإدارية	36
518-533	فائزة محمد الكوت	أراء العلامة الدماميني النحوية في باب الظروف في كتاب خزانة الأدب ولب لباب لسان العرب	37
534-547	محمد محمد مولود الأنصاري حمزة مسعود محمد مكاري	"فوائد الفرائد في الاستعارة " عبد الجواد بن إبراهيم بن شعيب الأنصاري (1073هـ)	38
548-559	عبدالرحمن بشير الصابري إبراهيم عبد الرحمن الصغير أبوبكر أحمد الصغير	حروف الجر بين التناوب والتضمن دراسة تطبيقية على آيات من القرآن الكريم "دراسة وصفية تحليلية"	39
560-565	Ayda Saad Elagili Abdualah Ibrahim Sultan	An Application of "Kushare Transform" to Partial Differential Equations	40
566-598	أمل إجمد إقميع فاطمة محمد ابوراس	الأداء الوظيفي للمعلم وأثره على العملية التربوية دراسة سوسولوجية على عينة من معلمين ومعلمات مرحلة التعليم الأساسي	41
599-623	خيري عبدالسلام كليب عبدالسلام بشير اشتوي طارق أبوفارس العجيلي محمد عبدالسلام الأسطي فتحية خليل طحيشات	مدى التزام المصارف التجارية بتطبيق مبادئ إدارة الجودة الشاملة (دراسة ميدانية على مصرف الجمهورية فرع المرقب)	42
624-633	Abdulrhman Iqneebir Khaled Muftah Elsherif	Determination of Some Physical and Chemical Parameters of Groundwater in Ashafyeen-Masallata Area	43
634-650	أحمد على معتوق الزائدي	أحكام الأهلية وعوارضها عند الإنسان	44
651-671	عمر مصطفى النعاس السيد مصطفى السنباطي	الثقة بالنفس وعلاقته بالتوجه نحو الحياة لدى طالبات كلية الآداب	45
672-700	فاطمة جمعة الناكوع	معايير جودة آليات التدريب الميداني	46
701-718	إيمان عمر بن سعد بثينة علي أبو حليقة عمر محمد بشينه وليد حسين الفقيه	أثر المخاطر المالية في الأداء المالي للمصارف التجارية الليبية للفترة من (2011-2017)	47
719-730	هدي الهادي عويطي	دور مداخل ادارة المعرفة في تحسين ادارة الموارد البشرية في المؤسسات الحديثة	48
731-739	Khaled Abdusalam B. A Eman Mohammed Alshadhli Tasnim Adel Betro Amera Lutfi Kara Mawada Almashloukh	Antimicrobial Activities of Methanol Extract of Peganum harmala Leaves and Seeds against Urinary Tract Infection Bacteria	49
740-750	فتحية زايد شنييه نجاة بشير الصابري	الصور البيانية في سورة الواقعة	50



751-757	Afifa Milad Omeman	Phytochemical, Heavy Metals and Antimicrobial Study of the Leaves of Amaranthus viridis	51
758-765	أسماء جمعة القلعي	قواعد المنهج عند ديكرت	52
766-777	فرج مجد صالح الدريع	النفط والاقتصاد الليبي 1963م - 1969م	53
778-789	عمر عبدالسلام الصغير رضا القدافي الأسمر	تقويم دية القتل الخطأ بغير الأصل	54
790-804	أبو عجيلة رمضان عويلي أحمد عبد الجليل إبراهيم	مناقشة المسألة الأربعين من كتاب المسائل المشكلة للفارسي	55
805-823	فتحية أبو عجيلة جبران صالحة عمر الخرارزة	في منطقة سوق الخميس التلوث البيئي الناتج عن محطات الوقود (بحث مقدم للحصول على ترقية عضو هيئة تدريس)	56
824-856	هنية عبدالسلام البالوص	بعض المشكلات الضغط النفسي وعلاقتها بالصحة النفسية	57
857-871	احمد علي عزيز علي مفتاح بن عروس	تطبيقات البرمجة الخطية ونماذج صفوف الانتظار في مراقبة وتحسين الأداء دراسة إحصائية تطبيقية على القطاع الصحي بمدينة الخمس	58
872-879	Mona A. Sauf Fathi Shakurfow Sana Ali Soof Abdel-kareem El-Basheer	Isolation of Staphylococcus Aureus From Different Clinical Samples And Detects on Its Antibiotic Resistance	59
880-885	Wafa Mohamed Alabeid Omar Alamari Alshbaili	Combined Method of Wavelet Regression with Local Linear Quantile Regression in enhancing the performance of stock ending-prices in Financial Time Series	60
886-901	خالد مجد بالنور خالد أحمد قناو	حجم الدولة الليبية وأثره عليها طبيعياً وبشرياً	61
902-918	Amna Ali Almashrgy Hawa Faraj Al-Burrki Khadija Ali AlHebshi	EFL Instructors' and Students' Attitudes towards Using PowerPoint Presentation in EFL Classrooms	62
919-934	سالمة عبد العالی السيليني	اضطرابات الشخصية الحدية وعلاقتها بالجمود المعرفي	63
935-952	Samah Taleb	Common English Pronunciation Difficulties Encountered by Third Year Students at the Faculty of Education- English Department- Elmergib University	64
953-958	Hassan M. Krifa	A Study on Bacterial Contamination of Libyan Currency in Al-Khoms, Libya	65
959-964	Jamal Hassn Frjani	A New Application of Kushare Transform for Solving Systems of Volterra Integral Equations and Systems of Volterra Integro-differential Equations	66
965-978	Ismail Elforjani Shushan Saddik Bashir Kamyra Hitham A. Minas	Study of chemical and biological weathering effects on building stones of the Ancient City of Sabratha, NW-Libya	67
979-991	مجد عبد السلام دخيل	الآثار الاجتماعية والثقافية المصاحبة للتغير الاجتماعي في المجتمعات النامية	68



992-998	Ismael Abd-Elaziz Fatma Kahel	Molecularly imprinted polymer (poly-pyrrole) modified glassy carbon electrode on based electrochemical sensor for the Sensitive Detection of Pharmaceutical Drug Naproxen	69
999-1008	خالد رمضان الجربوع علي إبراهيم بن محسن صلاح الدين أبوغالية	علي الجمل وقصيدته (اليوم الأربعاء في رثاء النورس الكبير)	70
1009-1014	نادية مجد الدالي ايمان احمد اخميرة	Comparing Review between Wireless Communication Technologies	71
1015-1024	Khairi Alarbi Zaglom Foad Ashur Elbakay	The importance of Using Classroom Language in Teaching English language as a Foreign Language	72
1025-1042	حمزة بن ربيع لقرون	الأدلة المختلف فيها التي نُسب الاختصاص بها إلى مذهب مُعَيَّن (دراسة تحليلية مقارنة)	73
1043-1052	أسماء السنوسي لحيو	معدل انتشار بعض الأوليات المعوية الطفيلية في مدينة الخمس، ليبيا	74
1053-1067	برنية صالح إمام صالح	استعمالات (ما) النافية في سورة البقرة	75
1068-1085	اسماعيل عبدالكريم اعطية	عوامل نجاح وفشل نظام المعلومات دراسة تطبيقية على شركة الأشغال العامة بني وليد	76
1086-1098	نجوى الغويلي	"الرعاية الاجتماعية والدعم الاجتماعي والتربية الإيجابية للطفل"	77
1099-1105	Seham Ibrahim abosoria Fatheia Masood Alsharif Abdussalam Ali Mousa Hamzah Ali Zagloun	The Error Correction in second language writing	78
1106-1128	ميسون خيري عقيلة	أساليب المعاملة الوالدية وعلاقتها بالتحصيل الدراسي لدى عينة من طلبة كليات جامعة المرقب بمدينة (الخمس)	79
1129-1135	Majdi Ibrahim Alashhb Mohammed Alsunousi Salem Mustafa Aldeep	Quality of E-Learning Learning Based on Student Perception Al Asmarya University	80
1136-1150	Ekram Gebрил Khalil	The Importance of Corrective Feedback in leaning a Foreign Language	81
1151-1164	سكينة الهادي الحوات فوزي مجد الحوات سلمية رمضان الكوت	شكل العلاقات الاجتماعية في ظل انتشار الأوبئة والأمراض السارية (جائحة كوفيد 19 نموذجاً)	82
1165-1175	Salma Mohammad Abad	A comparative study of the effects of Rhazya stricta plant residue on Raphanus sativus plant at the age of 15 and 30 days	83
1176-1191	مجد عمر مجد الفقيه الشريف	توظيف الاعتزال عند الزمخشري وانتصاره له من خلال تفسيره	84
1192	الفهرس		