الذكوات البيض

اسم مشتق من الذكوة وهي الجمرة الملتهبة والمراد بالذكوات الربوات البيض الصغيرة المحيطة بمقام أمير المؤمنين علي بن أبي طالب{عليه السلام}

شبهها لضيائها وتوهجها عند شروق الشمس عليها لما فيها

موضع قبر علي بن أبي طالب {عليه السلام}

من الدراري المضيئة

{در النجف}فكأنها جمرات ملتهبة وهي المرتفع من الأرض، وهي ثلاثة مرتفعات صغيرة نتوءات بارزة في أرض الغري وقد سميت الغري باسمها، وكلمة بيض لبروزهاعن الأرض.وفي رواية إنّها موضع خلوته أو إنّها موضع عبادته وفي رواية أخرى في رواية المفضل عن الإمام الصادق {عليه السلام}قال: قلت:يا سيدي فأين يكون دار المهدي ومجمع المؤمنين؟ قال:يكون ملكه بالكوفة، ومجلس حكمه جامعها وبيت ماله ومقسم غنائم المسلمين مسجد السهلة وموضع خلوته الذكوات البيض

Republic of Iraq
Ministry of Higher Education & Scientific Research
Research & Development Department

جمهورية العراق
وزارة التعليم العالي والبحث العلمي
دائرة البحث والتطوير

No.:
Date:

الرقم: ب ت ع/ ٥٠٤٩
التاريخ: ١٤/٨/٢٠٢٢

ديوان الوقف الشيعي / دائرة البحوث والدراسات

م/ مجلة الذكوات البيض

السلام عليكم ورحمة الله وبركاته ...

إشارة الى كتابكم المرقم ١٠٤٦ والمؤرخ ١٢/٢٨ /٢٠٢١ والحاقاً بكتابنا المرقم ب ت ٥٧٤٤/٤ في ٢٠٢١/٩/٦ ، والمتضمن أستحداث مجلتكم التي تصدر عن الوقف المذكورة أعلاه ، وبعد الحصول على الرقم المعياري الدولي المطبوع وانشاء موقع الكتروني للمجلة تعتبر الموافقة الواردة في كتابنا أعلاه موافقة نهائية على أستحداث المجلة.

... مع وافر التقدير

أ.م.د حسين صالح حسن
المدير العام لدائرة البحث والتطوير / وكالة
٢٠٢٢/١/١٢

نسخة منه الى:
- قسم الشؤون العلمية / شعبة التأليف والنشر والترجمة / مع الأوراق.
- الصادرة.

مهند ابراهيم
١٠ / تشرين الثاني

إشارة إلى كتاب وزارة التعليم العالي والبحث العلمي / دائرة البحث والتطوير
المرقم ٥٠٤٩ في ٢٠٢٢/٨/١٤ المعطوف على إعمامهم
المرقم ١٨٨٧ في ٢٠١٧/٣/٦
تُعدّ مجلة الذكوات البيض مجلة علمية رصينة ومعتمدة للترقيات العلمية.

الذكوات البيض

مجلة علمية فكرية فصلية محكمة تصدر عن
دائرة البحوث والدراسات في ديوان الوقف الشيعي

العدد (١٧) السنة الثالثة جمادى الآخرة ١٤٤٦ هـ كانون الأول ٢٠٢٥ م
رقم الإيداع في دار الكتب والو ثائق (١١٢٥)
الرقم المعياري الدولي ISSN 2786-1763

الذكوات البيض

العدد (١٧) السنة الثالثة جمادى الآخرة ١٤٤٦ هـ كانون الأول ٢٠٢٥ م

الذكوات البيض

مجلة علمية فكرية فصلية محكمة تصدر عن
دائرة البحوث والدراسات في ديوان الوقف الشيعي

العدد (١٧) السنة الثالثة جمادى الآخرة ١٤٤٦ هـ كانون الأول ٢٠٢٥ م

العنوان الموقعي
مجلة الذكوات البيض
جمهورية العراق
بغداد /باب المعظم
مقابل وزارة الصحة
دائرة البحوث والدراسات
الاتصالات
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لسنة ٢٠٢١
البريد الالكتروني
إيميل
off reserch@sed.gov.iq
hus65in@gmail.com

دليل المؤلف .....

١–أن يتسم البحث بالأصالة والجدّة والقيمة العلمية والمعرفية الكبيرة وسلامة اللغة ودقة التوثيق.

٢– أن تحتوي الصفحة الأولى من البحث على:

أ. عنوان البحث باللغة العربية .

ب . اسم الباحث باللغة العربي، ودرجته العلمية وشهادته.

ت . بريد الباحث الإلكتروني.

ث . ملخصان: أحدهما باللغةِ العربية والآخر باللغةِ الإنكليزية.

ج . تدرج مفاتيح الكلمات باللغة العربية بعد الملخص العربي.

٣–أن يكونَ مطبوعًا على الحاسوب بنظام(office Word) ٢٠٠٧ أو ٢٠١٠) وعلى قرص ليزري مدمج (CD) على شكل ملف واحد فقط (أي لا يُجزّأ البحث بأكثر من ملف على القرص) وتُزوَّد هيأة التحرير بثلاث نسخ ورقية وتوضع الرسوم أو الأشكال، إن وُجدت، في مكانِها منَ البحثِ، على أن تكونَ صالحةً مِنَ الناحيةِ الفنيَّة للطباعة.

٤–أن لا يزيدَ عدد صفحات البحث على (٢٥) خمس وعشرين صفحة من الحجم (A4).

٥. يلتزم الباحث في ترتيب وتنسيق المصادر على الصفية APA

٦–أن يلتزم الباحث بدفعِ أُجُور النشر المحدَّدة البالغة (٧٥،٠٠٠) خمسة وسبعين ألف دينار عراقيّ، أو ما يعادلها بالعملات الأجنبية.

٧–أن يكونَ البحثُ خاليًا مِنَ الأخطاءِ اللغوية والنحوية والإملائيَّة.

٨–أن يلتزم الباحث بالخطوط وأحجامِها على النحو الآتي:

أ. اللغة العربية: نوع الخط (Arabic Simplified) وحجم الخط (١٤) للمتن.

ب . اللغة الإنكليزية: نوع الخط (Times New Roman) عناوين البحث (١٦). والملخصات (١٢)

أما فقرات البحث الأخرى؛ فبحجم (١٤) .

٩–أن تكونَ هوامش البحثِ بالنظام الأكتروني(تعليقات ختامية) في نهاية البحث. بحجم ١٢.

١٠–تكون مسافة الحواشي الجانبية (٢,٥٤) سم،والمسافة بين الأسطر (١) .

١١–في حال استعمال برنامج مصحف المدينة للآيات القرآنية يتحمل الباحث ظهور هذه الآيات المباركة بالشكل الصحيح من عدمه، لذا يفضّل النسخ من المصحف الالكتروني المتوافر على شبكة الانترنيت.

١٢–يبلَّغ الباحث بقرارِ صلاحيَّة النشر أو عدمها في مدَّةٍ لا تتجاوز شهرين من تاريخ وصولهِ إلى هيأةِ التحرير.

١٣–يلتزمُ الباحث بإجراءِ تعديلات المحكّمين على بحثهِ وفق التقارير المرسلة إليهِ وموافاةِ المجلة بنسخةٍ معدَّلةٍ في مدَّةٍ لا تتجاوزُ (١٥) خمسة عشر يومًا.

١٤–لا يحق للباحث المطالبة بمتطلبات البحث كافة بعد مرور سنة من تاريخ النشر.

١٥–لاتعاد البحوث الى أصحابها سواء قُبلت أم لم تُقبل.

١٦–تكون مصادر البحث وهوامشه في نهاية البحث، مع كتابة معلومات المصدر عندما يرد لأول مرة.

١٧–يخضع البحث للتقويم السري من ثلاثة خبراء لبيان صلاحيته للنشر.

١٨–يشترط على طلبة الدراسات العليا فضلاً عن الشروط السابقة جلب ما يثبت موافقة الأستاذ المشرف على البحث وفق النموذج المعتمد في المجلة.

١٩–يحصل الباحث على مستل واحد لبحثه، ونسخة من المجلة، واذا رغب في الحصول على نسخة أخرى فعليه شراؤها بسعر (١٥) ألف دينار.

٢٠–تعبر الأبحاث المنشورة في المجلة عن آراء أصحابها لا عن رأي المجلة.

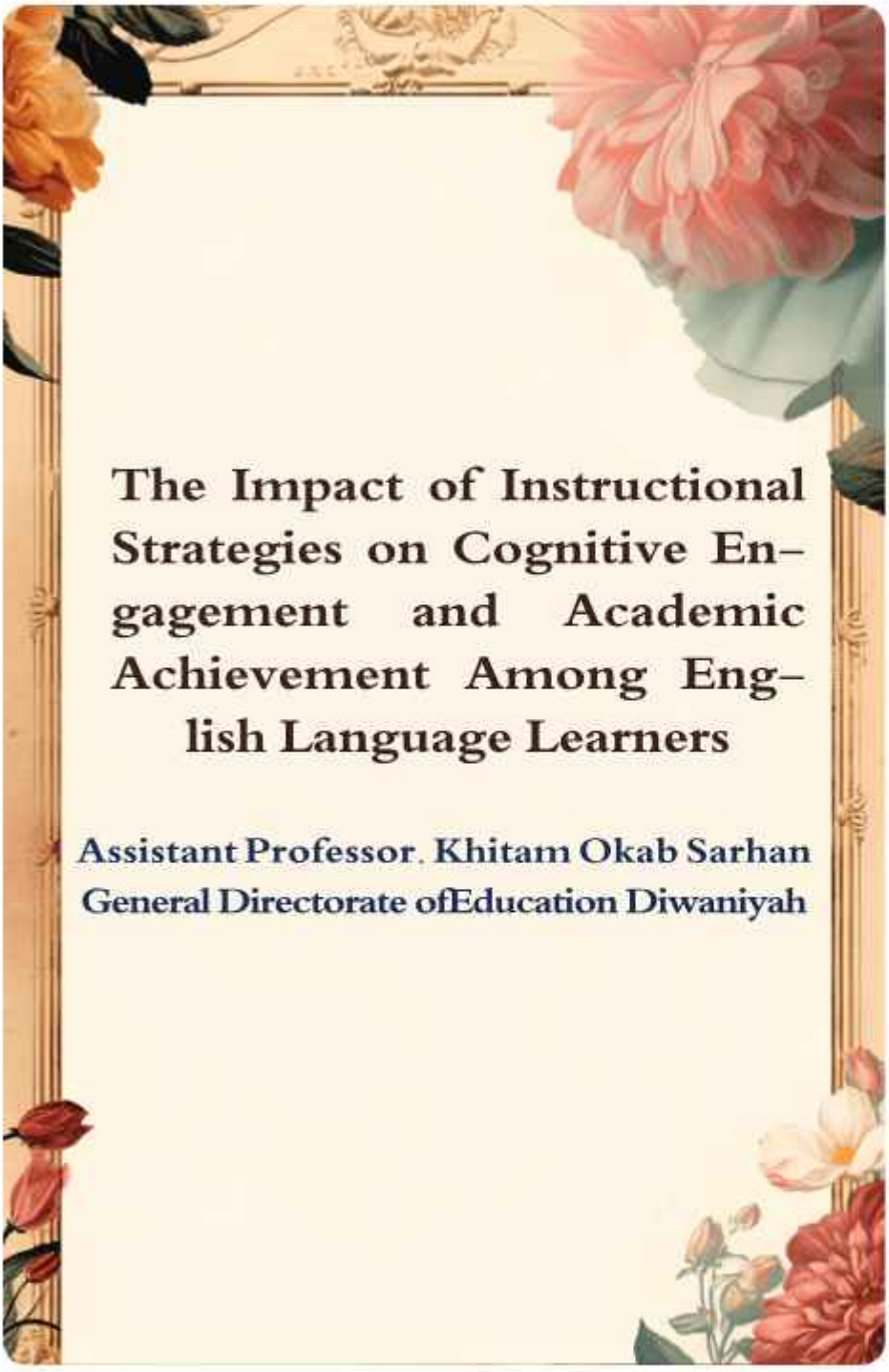
٢١–ترسل البحوث إلى مقر المجلة – دائرة البحوث والدراسات في ديوان الوقف الشيعي بغداد – باب المعظم)

أو البريد الإلكتروني:(hus65in@Gmail.com) (off reserch@sed.gov.iq) بعد دفع الأجور في مقر المجلة

٢٢–لا تلتزمُ المجلة بنشر البحوث التي تُخلُّ بشرطٍ من هذهِ الشروط .

مجلة علمية فكرية فصلية محكمة تصدر عن دائرة البحوث والدراسات في ديوان الوقف الشيعي

محتوى العدد (١٧) المجلد الثاني



The Impact of Instructional Strategies on Cognitive Engagement and Academic Achievement Among English Language Learners

Assistant Professor. Khitam Okab Sarhan
General Directorate ofEducation Diwaniyah

Abstract:

This study elucidates how information processing and self–questioning strategies are strategically employed within the pedagogical framework of online flipped teaching. Against the backdrop of increasing adoption of blended learning models in higher education, this research addresses a critical gap by empirically comparing the efficacy of two distinct learning strategies: annotation–summarizing–questioning (ASQ) and concept mapping–questioning (CMQ). A 6–week quasi–experimental study was conducted to investigate these strategies, with the primary goal of exploring their impacts on college students' online learning motivation, learning engagement (behavioral, emotional, and cognitive), and academic achievement. A total of 36 third–year undergraduate students enrolled in a educational technology course were purposively sampled and randomly assigned to either the ASQ or CMQ intervention group.The findings of this research indicated that while these two strategies did not have statistically significant effects on students' intrinsic learning motivation or overall performance across all dimensions of learning engagement, they yielded specific, valuable benefits. Both strategies were found to significantly improve students' emotional engagement, fostering a more positive and invested attitude toward the online learning process. A key differential outcome emerged in cognitive engagement; students who used the ASQ strategy exhibited significantly higher levels of critical thinking and deeper information processing. Consequently, their academic performance, as measured by final course grades, was significantly better than that of students who used the CMQ strategy. In conclusion, while both CMQ and ASQ strategies can enhance specific aspects of student engagement in online flipped learning environments, the ASQ strategy is demonstrably more effective in promoting higher–order cognitive engagement and academic performance. This study, therefore, holds considerable significance for instructional designers and educators, as it highlights evidence–based learning strategies that directly influence crucial educational outcomes and provides a replicable operational model for implementing effective online flipped teaching.

Keywords:(Explanatory summary and questioning strategy, conceptual planning strategy).

المستخلص:
تسلط هذه الدراسة الضوء على الكيفية التي تُستخدم بها استراتيجيات معالجة المعلومات والتساؤل الذاتي بشكل استراتيجي في الإطار التربوي للتعليم المعكوس عبر الإنترنت. على خلفية الاعتماد المتزايد لنماذج التعلم المدمج في التعليم العالي، يهدف هذا البحث إلى سد فجوة حرجة من خلال المقارنة التجريبية لفعالية استراتيجيتين تعليميتين متميزتين: استراتيجية التلخيص الشرحي والتساؤل واستراتيجية التخطيط المفاهيمي والتساؤل . تم إجراء دراسة شبه تجريبية على مدى ٦ أسابيع للتحقق في هذه الاستراتيجيات، بهدف رئيسي هو استكشاف تأثيراتها على الدافع التعليمي عبر الإنترنت، والمشاركة التعليمية (السلوكية والعاطفية والمعرفية)، والتحصيل الأكاديمي لدى طلاب الجامعات. تم أخذ عينة قصدية مكونة من ٣٦ طالبًا وطالبة من المستوى الثالث الجامعي المسجلين في مقرر تكنولوجيا التعليم، وتم توزيعهم عشوائيًا على مجموعة التدخل الخاصة باستراتيجية (ASQ) أو مجموعة استراتيجية (CMQ)كشفت نتائج هذا البحث أنه على الرغم من أن هاتين الاستراتيجيتين لم يكن لهما تأثير ذو دلالة إحصائية على الدافع التعليمي الجوهري للطلاب أو على أدائهم العام عبر جميع أبعاد المشاركة التعليمية، إلا أنهما حققتا فوائد محددة وقيمة. فقد وجد أن كلا الاستراتيجيتين حسنتا بشكل ملحوظ المشاركة العاطفية للطلاب، مما عزز اتجاهًا أكثر إيجابية واستمرارًا تجاه عملية التعلم عبر الإنترنت. وبرزت نتيجة تفاضلية رئيسية في المشاركة المعرفية؛ حيث أظهر الطلاب الذين استخدموا استراتيجية (ASQ) مستويات أعلى بشكل ملحوظ من التفكير النقدي ومعالجة أعمق للمعلومات. ونتيجة لذلك، كان أداؤهم الأكاديمي، وفقًا لدرجات المقرر النهائية، أفضل بشكل ملحوظ من أداء الطلاب الذين استخدموا استراتيجية (CMQ) . وفي الختام، بينما يمكن لكل من استراتيجيتي CMQ و ASQ تعزيز جوانب محددة من مشاركة الطلاب في بيئات التعلم المعكوس عبر الإنترنت، فإن استراتيجية ASQ أثبتت فعاليتها بشكل واضح في تعزيز المشاركة المعرفية ذات المستوى الأعلى (التفكير العالي) والأداء الأكاديمي. تحمل هذه الدراسة أهمية كبيرة لمصممي التعليم والتعلم ، حيث تسلط الضوء على استراتيجيات تعلم قائمة على الأدلة تؤثر بشكل مباشر على النتائج التعليمية الحرجة وتوفر نموذجًا تشغيليًا يمكن تكراره لتنفيذ تعليم معكوس عبر الإنترنت فعال.

الكلمات المفتاحية: استراتيجية التلخيص الشرحي والتساؤل , استراتيجية التخطيط المفاهيمي.

1 INTRODUCTION

One of the key concepts used to comprehend how students behave during the teaching–learning process is student involvement. Knowing how students behave in educational settings will give you an idea of how the teaching and learning processes are carried out at the university. As a result, it could be a useful tool for academic supervisors and teachers to create a pedagogical strategy that maximizes students' learning experiences. One benefit of the student engagement data is that it shows what the students are really doing. The information is more broadly relevant to the administration of educational programs, students, and institutions.

Institutions can base their decisions on more objective data rather than conjecture or incomplete anecdotal accounts regarding student activity. Information on student activities will assist institutions better un–

derstand the learning demands of their students and give them useful information for marketing and recruitment. Institutions cannot stop taking student activities for granted until they have precise and trustworthy data on what students are actually doing. Coates (2005).

Meaningful participation in the classroom is referred to as student engagement. According to Martin and Torres, it is best defined as a relationship between the student and the curriculum, teaching, peers, teachers, and school. The phrase, which has its origins in a corpus of work pertaining to student involvement, is widely used, especially in North America and Australasia, where it has become well-established through yearly, extensive national surveys (Trowler, 2010). The three aspects of student engagement are cognitive, emotional, and behavioral. Students' involvement in extracurricular and academic activities is referred to as behavioral engagement. Students' positive and negative responses to classmates, teachers, and school are referred to as emotional involvement.

Conversely, cognitive engagement discusses students' consideration and readiness to learn challenging material (Fredericks et al., 2004). The idea of student involvement emphasized that the more involved a student is in college, the more they will learn and grow as individuals (Astin, 1984). In addition to providing abundant chances for learning and growth, productive involvement is a crucial way for students to form opinions about their instructors, fellow students, and organizations that make them feel connected, affiliated, and like they belong (Bensimon, 2009).

The best indicator of students' learning and professional growth is the amount of time and effort they invest in activities that have an educational objective. When compared to other colleges and universities where students are less involved, those that more completely engage their students in the range of activities that contribute to the valued outcomes of college might claim to be of greater quality (Kuh, 2001). According to Jimerson et al. (2009), it is a key factor in understanding dropout, especially as a gradual process that affects a student's decision to leave school. It is also thought to be one of the solutions to issues like low achievement, boredom and alienation, and high dropout rates (Frederick et al., 2004).

Additionally, it has been connected to better academic achievement and has been shown time and time again to be a reliable indicator of behavior and success in the classroom (Appleton, Christenson, & Furlong, 2008). Student involvement benefits the school's financial situation in addition to its academic standing.

According to Markwell (2007), it is becoming increasingly clear that how involved students are and feel during their time as students will have a significant impact on how connected and supportive they are likely to be towards the institution in later years. This is because colleges and universities are focusing more on the significance of reaching out to alumni and other potential friends of the institution in order to significantly increase philanthropic support for higher education.

Without qualified instructors who possess subject-matter expertise, pedagogical understanding, and strong interpersonal skills, the aforementioned gains would never materialize. Faculty do matter, as noted by Umbach and Wawrzynski (2005). Student learning and engagement are significantly impacted by the educational environment that faculty members' actions and attitudes generate.

Students who attend universities where the faculty fosters an atmosphere that prioritizes good teaching methods are more engaged in their study and believe they have gained more from their undergraduate studies. The most significant factor influencing student involvement was determined to be the strength of the students' relationships with their teachers (Groves et al., 2015).

In a similar vein, Umbach and Wawryznski (2005) contended that interactions between teachers and students are the most crucial element in promoting student learning and appeared to push educators and educational institutions to give this specific function more importance. The institutional resources that are essential in motivating the student to participate actively are equally significant. Institutions must give students the right tools and chances to enable and encourage particular types of interactions, as emphasized by Coates (2005).

This could be campus libraries that offer enough room for students to collaborate, curricula and assessments that enforce particular performance requirements, or campus events that encourage students to consider the morals and methods of their education. Coates (2007) em-

phasized that the significance of comprehending student involvement and the issue of disengagement in postsecondary institutions is becoming increasingly apparent. Examining the variables that influence engagement and disengagement can reveal information about student performance, development, and retention. When deciding on resource allocation, course content, and delivery, as well as when assessing the caliber of student learning experiences, engagement assessment may be helpful.

Without a continuous evaluation of its academic procedures, the university's commitment to providing academic quality would rarely be appreciated. With input from the university's key stakeholders, the review should be carried out thoroughly and cooperatively. One of the finest resources for gathering the information required is a student engagement survey, which offers a way to look at the entire student experience. Second, involvement has significant intrinsic benefit for both instructors and university students. Finally, research on student engagement offers a way to gain insight into what students are actually doing rather than what is assumed or assumed. Data on real-world activities is crucial since it aids in controlling the caliber and effectiveness of college instruction (Coates, 2006).

This study is necessary due to the increasing significance of comprehending students' learning behaviors and the necessity of reviewing university academic procedures in order to make instruction more responsive to students' demands. This study examined the relationship between Partido State University students' academic achievement and their level of participation throughout the 2017–2018 academic year. In particular, the study assessed Partido State University students' academic achievement and degree of student participation. Additionally, it determined and examined the elements influencing students' involvement. Additionally, study found a strong correlation between Partido State University students' academic achievement and their level of participation.

2 LITERATURE REVIEW

Teacher-centred instructional strategy refers to teaching techniques in which learning activities

are centred on the teacher (Baeten, Dochy, Struyven, Parmentier, & Vanderbruggen, 2016). In this strategy, the teacher is the ultimate authority figure and students viewed as without knowledge of the instructional content and are expected to passively absorb knowledge. The teacher, in front of the students, profess knowledge through direct instruction with an aim that upon assessment, students will post good results based on what the teacher instructed them on.

In this strategy, objectively scored tests and assessments are indicators of learning (van de Kuilen, Altinyelken, Voogt, & Nzabalirwa, 2019). Examples of teacher-centred instructional strategies include teacher talks commonly known as lecturing, class demonstrations, giving assignments and homework, memorising, and reviewing (Baeten et al., 2016). Other methods include reviewing, questioning, class discussions, and class discussions. In such methods, learning follows certain curricula, and the success of the process is based on the completion of the set curricula. Students are often expected to take notes based on the knowledge professed in class. Similarly, tests and examinations are based on the set curricula and success in the examinations based on a set scheme. Since teachers are the ultimate source of information in this strategy, questions raised by students are expected to be answered directly by the teachers and students are not, in most cases, given a chance for involvement. The teacher controls every learning experience by subjectively designing class activities (Di Biase, 2019).

Advantages of the teacher-centred instructional strategies are that it is suitable for large classes

where it is practically impossible to cater to the learning needs of individual students. The strategy also draws its advantage from the fact that it allows a shorter time for class activities. It also allows teachers to adequately prepare learning materials since a single learning material caters for all students. The strategy also provides for teacher inadequacies, including a feeling of nervousness, embarrassments, or getting tongue–tied. Also, the strategy promotes a logical arrangement of content or subject matter of the instructional process such that irrelevant material or subject is avoided. Since the teacher designs the curriculum in the case of the teacher–centred instructional strategy, desired learning goals can easily be achieved (Baeten et al., 2016). Historically, teacher–centred instructional strategies have been applied for its main advantages in cases where the main aim of education has been the transfer of knowledge. Teacher–centred instructional strategies are the most common instructional strategies and especially in resource–limited environments (Starkey, 2019). However, teacher–centred instructional strategies have been criticised for an inability to spur learner attitude change, which in part, is one of the objectives of learning. The other major dilemma of the strategy is the lack of sources and resources. This is especially true, given the fact that all knowledge is expected from one source (Di Biase, 2019). In applying teacher–centred instructional methods, rigid administration, planning and management hinder innovativeness and knowledge exploration. Critics of the strategies also argue that common standards in various learning institutions cannot be maintained given

the subjective knowledge
sourcing applied in the strategy. The strategy also presents a dilemma on the appropriate
Teacher-centred instructional strategy refers to teaching techniques in which learning activities
are centred on the teacher (Baeten, Dochy, Struyven, Parmentier, & Vanderbruggen, 2016). In
this strategy, the teacher is the ultimate authority figure and students viewed as without
knowledge of the instructional content and are expected to passively absorb knowledge. The
teacher, in front of the students, profess knowledge through direct instruction with an aim that
upon assessment, students will post good results based on what the teacher instructed them on.
In this strategy, objectively scored tests and assessments are indicators of learning (van de
Kuilen, Altinyelken, Voogt, & Nzabalirwa, 2019). Examples of teacher-centred instructional
strategies include teacher talks commonly known as lecturing, class demonstrations, giving
assignments and homework, memorising, and reviewing (Baeten et al., 2016). Other methods
include reviewing, questioning, class discussions, and class discussions.
The foundation of learner-centered instructional tactics is the teacher's facilitative style and learning responsibilities (Olayinka, 2016). Under these tactics, the teacher makes sure that the learning process is aided, while the student is in charge of learning. The methods are founded on the idea that pupils should be trained according to their nature rather than what "others" desire. As a result, learning is organized according to a model that takes into account the needs, interests, and knowledge of the pupils. In order to enable students to understand how to learn, the techniques' primary goal is to enable them to develop the abilities necessary to investigate their learning characteristics (Sakata, 2019). Collaborative learning, critical thinking, and making connec-

tions between new material and prior knowledge are key components of learner–centered teaching approaches.

Because of this, the techniques have been called interactive learning. Facilitating the presenting of questions for small group work is part of the learning process. Additionally, it can offer a chance for students to participate in fieldwork and use the media. The tactics are categorized under general approaches such as just–in–time teaching, inquiry–based learning, case–based learning, problem–based learning, project–based learning, and discovery learning (Sakata, 2019).

The strategies have a variety of benefits. The techniques' proponents praise them for allowing for a variety of learning styles while also encouraging all students to participate actively and helping them to address their areas of weakness on their own (Starkey, 2019). Students are given the chance to describe problems, conduct discussions, and pose questions thanks to the techniques. The techniques help students make the connection between their personal lives and their academic endeavors in this way. It has also been suggested that the application of learned knowledge and skills is improved when students are given the opportunity to share their experiences through group discussions (Starkey, 2019).

All students participate democratically in the learning process through learner–centered instructional practices, which promote critical thinking and improve learning outcomes. Additionally, the strategies address the communication demands of the students. However, the tactics are not blameless. The techniques' detractors contend that they create a chaotic classroom because they promote student participation, which leads to student conversations and chatting.

Another drawback of being a student–centered instructor is that they have to oversee every student's activity at once, which is actually rather difficult when students are working on various phases of the same project. Furthermore, research has hinted that because the tactics do not enable teachers to teach all pupils at once, some students can overlook crucial information. Lastly, group work is most improper when pupils' desire for working alone is evident (Starkey, 2019).

Around the world, interest in student–centered educational practices has grown. The majority of research has shown that learner–centered

instructional practices improve student outcomes. Researchers like Li, Flowerdew, and Cargill (2018), Kang and Keinonen (2018), and Day, Gu, and Sammoris (2016) have reported positive effects of the strategies, stating that they improve learning achievement more than traditional teacher–centered instructional strategies. Additionally, learner–centered instructional methodologies result in higher effect holistic learning performance, according to Day et al. (2016).

Other researchers have also shown that learner–centered instructional approaches can help teachers achieve social learning and interpersonal relationships, and they are most appropriate for teaching complicated academic content (McKnight et al., 2016).

Along with the benefits of both teacher–centered and learner–centered instructional techniques, the idea of integrated instructional strategies is modeled (Chick & Hassel, 2009). The technique can be implemented through an integrated curriculum that emphasizes unifying themes and cuts over subject–matter boundaries to connect the many learning areas. The objective is to build connections for students and thus allowing them to engage in important, meaningful activities that may be tied to real–life (Riordan, Hine, & Smith, 2019).

Without the limitations of conventional barriers, the method promotes investigation, information collection and processing, presentation, and improvement of information regarding learning domains. To accomplish learning objectives, an integrated instructional strategy teacher uses lecture tactics, PowerPoints, performance–oriented approaches, journaling, map–making, audio–visuals, group discussions, and demonstrations. Students are encouraged by the approach to recognize the connections and links among the many subject areas. Furthermore, the approach is centered on skill development around a fundamental subject that is pertinent to learners rather than learning in discrete curriculum areas (Day et al., 2016).

The inquiry approach is a key component of the strategy. The method is based on the idea that pupils must become active learners. As engaged learners, they carry out investigations, analyze their results, share them with others, and eventually process what they have learned. With this method, students can create meaning by combining new information they discover during the learning process with what they

already know about a subject (Riordan et al., 2019). The primary benefit of the integrated learning approach is that it takes intelligence and a variety of learning style theories into account. Additionally, the technique facilitates connections between many fields.

The technique advocates using relevant real-life experiences to infer the benefits of active learner participation. The groundwork for a deeper comprehension of the material is also laid by the integrated curricula. The approach has also received praise for its emphasis on fundamental knowledge, substance, and the encouragement of higher order thinking. The argument that there would not be enough time in the ideal teaching environment to cover everything separately has been used to support the use of this technique. Thus, the approach is perfect for establishing cooperative and upbeat learning settings (Day et al., 2016).

The method's shortcomings stem from the fact that it does not provide enough time for efficient learning area planning. The need to combine many forms of knowledge creates a high cognitive load and overwhelms students, which is another barrier to the use of integrated strategies (Riordan et al., 2019). In order for learners to employ concurrently obtained information in a productive manner during the learning process, the technique also requires that learners appropriately allocate and manage their cognitive resources during learning (Drinkwater et al., 2014).

Thus, this suggests that when subjects are presented in a complicated, integrated manner, the student needs to alternate between viewpoints in order to create a cohesive mental image. The other drawback is that students with some prior knowledge are more likely to feel overburdened when they are given the identical task assignments as students with varying levels of experience. The challenge of differentiated learning outcomes can also be explained by the possibility that students in an integrated-learning strategy classroom may have varying general attentional control skills, making it difficult to keep necessary information active and readily retrievable (Riordan et al., 2019).

3 METHODOLOGY

3.1 Research Design

This study employed a quasi-experimental research design utilizing

a non–equivalent groups pretest–posttest setup. This design was selected as it is robust for examining cause–and–effect relationships in real–world educational settings where random assignment of intact classes is often logistically impossible, thereby enhancing the ecological validity of the findings. The independent variable was the type of learning strategy intervention, with two levels: the annotation–summarizing–questioning {ASQ} strategy and the concept mapping–questioning {CMQ} strategy. The dependent variables were academic achievement, learning engagement [with its three sub–dimensions: behavioral, emotional, and cognitive], and intrinsic learning motivation. The study was conducted over a full 6–week instructional period within a single academic course. This extended duration was critical to move beyond measuring short–term recall and to instead capture the sustained impact of the strategies on deeper learning processes and outcomes. The non–equivalent aspect of the design acknowledges that while participants were randomly assigned to groups, they were not drawn from a fully randomized population, necessitating the use of pretests to establish baseline equivalence and to statistically control for any initial differences.

3.1.1 Research Questions and Hypotheses

Based on the abstract's goals, the study was designed to answer three primary research questions, each with corresponding null {H_0} and alternative {H_1} hypotheses:

1–Academic Achievement:

* Is there a significant difference in the academic achievement of students taught using the ASQ strategy compared to those using the CMQ strategy in an online flipped classroom?

– H_0\ There is no significant difference in the mean academic achievement scores between students who use the ASQ strategy and those who use the CMQ strategy.

–H_1\ There is a significant difference in the mean academic achievement scores between students who use the ASQ strategy and those who use the CMQ strategy.

2–Learning Engagement:

*Is there a significant difference in the levels of learning engagement [behavioral, emotional, cognitive] between students using the ASQ

strategy and those using the CMQ strategy?

–H_0\ There is no significant difference in the mean behavioral, emotional, and cognitive engagement scores between students who use the ASQ strategy and those who use the CMQ strategy.

– H_1\ There is a significant difference in the mean behavioral, emotional, and cognitive engagement scores between students who use the ASQ strategy and those who use the CMQ strategy.

3–Intrinsic Motivation:

* Is there a significant difference in intrinsic learning motivation between students using the ASQ strategy and those using the CMQ strategy?

– H_0\ There is no significant difference in the mean intrinsic motivation scores between students who use the ASQ strategy and those who use the CMQ strategy.

–H_1\ There is a significant difference in the mean intrinsic motivation scores between students who use the ASQ strategy and those who use the CMQ strategy.

3.2 Participants and Sampling

The participant pool consisted of 36 third–year undergraduate students [N=36] enrolled in a mandatory 'Educational Technology and Digital Literacy' course within a College of Education. A purposive sampling technique was used to select this cohort. This method was chosen because these students possessed the necessary foundational knowledge in pedagogy and were simultaneously undergoing training in digital learning tools, making them an ideal population to investigate the integration of advanced learning strategies within an online flipped model. Furthermore, their curriculum emphasized critical thinking and self–regulated learning, which are directly activated by both the ASQ and CMQ strategies.

Following consent procedures, the {36} participants were randomly assigned to one of the two intervention conditions using a computer–based random number generator to ensure an equal distribution. This resulted in 18 students in the annotation–summarizing–questioning {ASQ} group and {18} students in the concept mapping–questioning {CMQ} group. To check for initial equivalence and the success of the random assignment, preliminary analyses were run on demographic

variables [age, gender] and pretest scores for prior academic achievement, engagement, and motivation. No statistically significant differences were found between the groups at the outset of the study [$p > .05$ for all comparisons], confirming that the groups were equivalent before the intervention began.

3.3 Interventions and Procedure

The entire study was embedded within a rigorously implemented online flipped classroom model. The general flow of each weekly module was consistent for both groups:

(1) access pre-class digital learning materials [e.g., video lectures, curated articles, multimedia resources] via the university's learning management system (LMS).

(2) complete a pre-class activity using their assigned strategy.

(3) attend a synchronous online session for collaborative [discussion, problem-solving, and clarification] facilitated by the instructor.

The specific interventions for each group were as follows:

A-Group 1: Annotation-Summarizing-Questioning (ASQ) Strategy: This group was trained to use a three-step process for engaging with the pre-class materials.

*First, Annotation: They used digital annotation tools [e.g., Hypothes.is, or built-in PDF editors] to actively highlight key points, add marginal comments, and define terms directly on the digital text or video transcripts.

*Second, Summarizing: Based on their annotations, they were required to write a concise paragraph summarizing the core ideas of the material in their own words.

*Third, Questioning: They had to generate at least two higher-order questions [e.g., 'How does this concept explain...?', 'What would happen if...?'] that probed the material's deeper meaning or application. These questions were often used as discussion starters in the synchronous session.

B-Group 2: Concept Mapping-Questioning (CMQ) Strategy: This group was trained to use a visual-spatial approach.

First, Concept Mapping: Using digital concept mapping software

[e.g., CmapTools , MindMeister], they were required to create a hierarchical diagram that represented the key concepts from the pre-class materials and the propositions {linking phrases} that defined the relationships between them. This forced them to identify the structure of the knowledge.

Second, Questioning: After constructing the map, they were instructed to review it and generate at least two questions that emerged from examining the relationships within the map or from identifying gaps in their own understanding [e.g., 'Why is this concept connected to this one?', 'What is the evidence for this relationship?'].

"Both groups received identical initial training sessions at the start of the 6-week period, which included modeled examples, guided practice, and a rubric outlining the expectations for high-quality output.

"The instructor provided feedback on the first two submissions to ensure fidelity to the strategies. The volume and difficulty of the pre-class materials were kept consistent across both groups throughout the intervention.

3.4 Instruments and Data Collection

Data were collected at two time points: a pre-test administered in the first week before any intervention, and a post-test administered in the final week after the 6-week intervention.

1-Academic Achievement: This was measured objectively using the students' final course grade percentage. This grade was a standardized summative assessment composed of a final exam [50%], a culminating project [30%], and cumulative quiz scores [20%].

"This composite measure provided a robust and multi-faceted indicator of overall learning and mastery of the course objectives. The final exam was designed by the course instructor and vetted by another subject matter expert to ensure content validity, covering all key topics addressed during the 6-week period.

2. Learning Engagement: This was measured using the Utrecht Work Engagement Scale-Student [UWES-S], a validated self-report instrument that has been widely adapted for educational contexts. The scale uses a 5-point Likert format [from 1 = 'Never' to 5 = 'Always'] and consists of 17 items divided into three sub-scales:

–Behavioral Engagement [5 items]: Assesses participation and effort [e.g., 'When I'm studying, I forget everything else around me'].

–Emotional Engagement [6 items]: Assesses sense of belonging, interest, and enthusiasm [e.g., 'I am enthusiastic about my studies'].

–Cognitive Engagement [6 items]: Assesses investment in deep learning and self–regulation [e.g., 'I try to understand the underlying concepts of what I study rather than just memorizing'].

* The instrument demonstrated high internal consistency in this study, with Cronbach's alpha values exceeding .85 for all sub–scales at both pre– and post–test.

3. Intrinsic Learning Motivation: This was measured using the Intrinsic Motivation subscale of the motivated strategies for learning questionnaire (MSLQ). This validated subscale also uses a 5–point Likert format and contains 6 items that measure learning driven by interest, enjoyment, and inherent satisfaction [e.g., 'I think the course material in this class is interesting,' 'I enjoy understanding the subject matter of this course']. The reliability analysis for this study yielded a Cronbach's alpha of .89.

*All questionnaires were administered electronically through the LMS to ensure standardized delivery and automatic data collection.

3.5 Data Analysis

The collected data were screened for missing values, outliers, and tested for adherence to the assumptions of parametric tests [normality, homogeneity of variance, and independence]. The statistical analyses were conducted using SPSS software [Version 28.0], with an alpha level of .05 set for determining statistical significance. The primary analysis involved comparing the post–intervention outcomes between the two independent groups [ASQ vs. CMQ]. Since pretest scores were available

and the groups were initially equivalent, Analysis of Covariance [ANCOVA] was the main statistical test employed.

For each dependent variable [academic achievement, each engagement sub-scale, and intrinsic motivation], the post-test score was treated as the dependent variable, the group [ASQ-CMQ] as the fixed factor, and the corresponding pre-test score was entered as a covariate. This allowed for a more precise comparison of the post-test results by statistically controlling for any minor initial differences and reducing the error variance, thereby increasing the power of the test. In cases where the assumption of homogeneity of regression slopes was violated, Independent Samples t-tests were used instead to compare the raw post-test scores between the groups. Effect sizes were calculated using Cohen's 'd' to provide a measure of the practical significance of the findings, with values of 0.2, 0.5, and 0.8 interpreted as small, medium, and large effects, respectively.

4. FINDINGS

This section presents the results of the statistical analyses conducted to answer the three research questions concerning the differential effects of the annotation-summarizing-questioning [ASQ] and concept mapping-questioning [CMQ] strategies on academic achievement, learning engagement, and intrinsic motivation.

4.1 Preliminary Analyses

Prior to testing the main hypotheses, preliminary checks were performed. Data screening confirmed that all variables met the assumptions of normality and homogeneity of variances for parametric testing, as assessed by Shapiro-Wilk tests and Levene's tests, respectively [$p > .05$ for all]. As noted in the methodology, independent samples t-tests confirmed that there were no statistically significant differences between the ASQ and CMQ groups on any of the pre-test measures [academic pre-test, engagement sub-scales, motivation], ensuring that any post-intervention differences could be more confidently attributed to the effects of the assigned strategies.

4.2 Research Question 1\ Academic Achievement

The first research question asked whether there was a significant difference in academic achievement (as measured by final course grade) between the two groups. An ANCOVA was conducted with the post-intervention final grade as the dependent variable, the group as the fixed factor, and the pre-test academic score as the covariate.

The ANCOVA revealed that after adjusting for pre-test scores, there was a statistically significant difference in final course grades between the two strategy groups, F [1, 33] = 8.75, p = .006. The covariate [pre-test score] was not significantly related to the final grade [p = .12], suggesting that prior achievement was effectively controlled for by the random assignment. The adjusted mean final grade for the ASQ group [87.2%] was significantly higher than that of the CMQ group [78.4%]. The effect size, calculated using Cohen's d , was 1.42, which is considered a very large effect. This result leads to the rejection of the null hypothesis [H_0]. Therefore, we conclude that students who used the [ASQ] strategy demonstrated significantly higher academic achievement than those who used the [CMQ] strategy.

Table 1: ANCOVA Results for Academic Achievement (Final Grade)

source	Type ,Sum of Squares	DF	Mean square	F	Sig. [p]	Partial eta squared[η^2]	
Pre-test[covariate]	43.21	1	45.21	2.54	.120	071	
Group[ASQ vs. CMQ]	155.89	1	155.89	8.75	.006	.209	
Error	588.11	33	17.83				

-Note\ Adjusted Means: ASQ Group = 87.2%, CMQ Group = 78.4%, Cohen's d = 1.42.

4.3 Research Question 2\ Learning Engagement

The second research question concerned differences in the three dimensions of learning engagement: behavioral, emotional, and cognitive. Separate [ANCOVAs] were run for each post-test engagement sub-scale score, using the corresponding pre-test sub-scale score as a covariate.

A-Behavioral Engagement:

*The ANCOVA for behavioral engagement showed no statistically significant effect of the learning strategy group on post-test scores after controlling for pre-test scores, F (1, 33) = 0.32,

p = .576. Both groups showed high levels of behavioral engagement, with adjusted means of 4.1 [ASQ] and 4.0 [CMQ]. The null hypothesis for behavioral engagement is retained.

B-Emotional Engagement:

"The analysis for emotional engagement also yielded a non-significant result, F (1, 33) = 0.95, p = .337. The adjusted means were very similar [ASQ = 4.4, CMQ = 4.3], indicating that both strategies were equally effective in fostering a positive emotional response to the learning environment. The null hypothesis for emotional engagement is retained.

C-Cognitive Engagement:

"In contrast, the [ANCOVA] for cognitive engagement revealed a statistically significant effect of group, F (1, 33) = 12.88, p = .001. After adjusting for pre-test scores, the ASQ group reported a significantly higher level of cognitive engagement [Adjusted M = 4.5, SD = 0.3] compared to the CMQ group [Adjusted M = 3.9, SD = 0.6]. The effect size was large [Cohen's d = 1.18]. This result leads to the rejection of the null hypothesis for cognitive engagement. This finding indicates that the ASQ strategy was more effective in promoting students' investment in deep learning, their effort to understand complex ideas, and their use of self-regulation strategies.

Table 2: ANCOVA Results for Learning Engagement Sub-scales

Engagement dimension	group	Adjusted mean	Std. error	F	Sig.[p]	Cohen'sd
behavioral	ASQ	4.10	0.11	0.32	.576	0.15
	CMQ	4.00	0.11	0.95	337	0.21
emotional	ASQ	4.35	0.10			
	CMQ	4.25	0.10			
cognitive	ASQ	4.45	0.08	12.88	.001	1.18
	CMQ	3.90	0.08			

4.4 Research Question 3: Intrinsic Learning Motivation

"The third research question examined differences in intrinsic motivation. An ANCOVA was conducted with the post-test intrinsic motivation score as the dependent variable and the pre-test motivation score as the covariate. The analysis found no statistically significant difference between the two groups, [F (1, 33) = 1.22, p = .278] . The adjusted mean for the ASQ group was { 3.8,} and for the CMQ group, it was 3.6. This difference was not statistically significant, and the effect size was small {Cohen's d = 0.25}. Therefore, the null hypothesis for

intrinsic motivation is retained. This suggests that while both strategies supported motivation, neither was superior to the other in significantly enhancing students' intrinsic interest and enjoyment in the subject matter beyond the level achieved by the other.

Table 3: ANCOVA Results for Intrinsic Motivation

group	Adjusted mean	Std. error	F	Sig.[p]	Cohen's d
ASQ	3.80	0.15	1.22	.278	0.25
CMQ	3.60	0.15			

The results indicate a nuanced impact of the two learning strategies:

1. The ASQ strategy proved to be significantly more effective than the CMQ strategy in boosting academic achievement (final grades).
2. Both strategies were equally effective in promoting behavioral engagement (participation) and emotional engagement (enthusiasm).
3. The ASQ strategy was significantly more effective at fostering cognitive engagement (deep, strategic learning).
4. There was no significant difference between the two strategies in their impact on students' intrinsic motivation.

"These findings suggest that the act of annotating, summarizing, and generating questions may impose a more rigorous processing of the textual and video-based materials used in this online flipped setting, leading to deeper cognitive processing which, in turn, translated into superior academic performance. The CMQ strategy, while valuable for visualizing relationships, may not have compelled the same depth of linguistic and conceptual processing for this specific type of content and learning context.

5 DISCUSSION

A convincing argument for the transition from traditional, teacher-centered instruction to more dynamic, learner-centered, and integrated instructional methodologies is presented in the literature review that is supplied. The structure of knowledge, the responsibilities of both teachers and students, and the whole goal of education are all fundamentally reimagined by this change. The discussion that follows summarizes the main ideas of the review in order to examine the potential, real-world difficulties, and future paths of this educational development.

The argument between learner–centered and teacher–centered techniques is fundamentally philosophical. Efficiency, standardization, and the direct dissemination of a predetermined body of knowledge are given priority in teacher–centered approaches, which are frequently accused for being "the sage on the stage." On the other hand, learner–centered solutions place a higher priority on empowerment, as suggested by Olayinka (2016) and Sakata (2019). The objective is to "learn how to learn," which includes developing abilities like critical thinking, teamwork, and metacognition—skills necessary for lifelong learning in a world that is changing quickly. It is not only about acquiring facts. The classroom is redefined by this philosophical change. It shifts from being a lecture hall to more of a workshop or laboratory where students pose questions, describe issues, and relate what they are learning to their own lives as active researchers [as in the inquiry approach]. Starkey (2019), who emphasizes the strategy's capacity to accommodate a variety of learning styles and promote democratic participation, supports the idea that the teacher's function shifts from one of information dissemination to one of facilitator and guide.

The idea of integrated instructional techniques is judiciously introduced in the literature study as a model that combines the advantages of both paradigms. This is possibly the most sensible and long–term course of action. According to Chick & Hassel (2009), the goal is to intentionally include direct instruction into a learner–centered framework rather than completely do away with it.

Before beginning a problem–based learning exercise where students apply what they have learned, a teacher may give a brief, teacher–centered lecture or utilize a PowerPoint [efficient information transfer] to lay out the fundamental ideas. The inefficiency of pure, uncontrolled discovery learning is acknowledged by this hybrid methodology. As noted by Riordan et al. (2019), a large cognitive load may result from integrated learning. The scaffolding required to keep students from feeling overburdened when asked to draw connections across different disciplines or solve challenging, real–world problems can be provided by a core layer of explicitly taught knowledge.

– Classroom Organization and Distinction: The perception of a "chaotic classroom" is based on a genuine difficulty. According to Starkey (2019), overseeing several teams working on several project phases is a "big order." This calls for advanced classroom management techniques as well as a shift to a differentiated classroom, in which the instructor serves as a mobile mentor offering focused assistance. Delivering a single lesson to everyone at once is significantly less challenging than this.

– The Danger of Surface-Level Learning: It's critical to address the complaint that "some students may miss vital data." Projects may put the final product before the process, and group work may allow some students to hide if it is not carefully planned and continuously assessed. In order to ensure that all students, not just the most outspoken or driven ones, meet the fundamental learning objectives, the facilitator must deliberately incorporate checks for understanding.

– Cognitive Burden and Past Information: According to Drinkwater et al. (2014) and Riordan et al. (2019), the integrated strategy's biggest cognitive problem is arguably its weakness. It is extremely hard to ask students to acquire new material, apply it across disciplinary boundaries, and integrate it with existing knowledge all at once. According to the review, children who have little prior knowledge or poor self-regulation skills are likely to suffer far more than their prepared counterparts, which can worsen educational disparities.

* Notwithstanding the difficulties, the overwhelming body of research [Kang & Keinonen, 2018; Li, Flowerdew, & Cargill, 2018; Day, Gu, & Sammons, 2016] supports the effectiveness of learner-centered and integrated approaches, especially when it comes to teaching complicated content and achieving "holistic learning." The main conclusion is that these approaches are better at fostering deep, applied comprehension and higher-order thinking abilities, both of which are professed objectives of contemporary education.

This accomplishment is qualified, though. It is totally dependent on successful execution. These tactics are a collection of advanced tools rather than a panacea. Their success depends on:

1. Professional Growth To get from being instructors to facilitators and creators of intricate learning experiences, teachers require a great deal of training.

2. Careful Instructional Design: To prevent confusion, make sure important facts are covered, and support cognitive load, activities need to be carefully organized.

3. Cultural Transition Moving beyond standardized examinations that incentivize rote memorization, schools and evaluation systems must recognize and quantify the deep, interrelated learning that these tactics foster.

" In the classroom, instructional tactics are crucial. Teachers would be haphazardly projecting knowledge that doesn't engage or connect with students if they didn't have a technique. Techniques encourage participation, foster connections, and liven up the presented material. Some pupils are even able to use the different tactics teachers employ on their own when they are learning new content.

Each student that enters your classroom is different. Their ideas, interests, and past experiences vary when they first arrive. Therefore, it should not be surprising that pupils learn new material in diverse ways. Differentiation is crucial for this reason. Each learner receives individualized learning tactics through differentiation. It allows pupils to study material in the way that works best for their brains.When it comes to reading, this may entail pairing pupils with others who share their proficiency. It may also entail giving pupils the exercises that best fit their preferred methods of learning. To illustrate what they have learnt, some students could opt to create a picture, while others might write a summary or engage on a word hunt.

Another effective teaching method that many kids can use and really connect with is cooperative learning. It entails organizing your coursework so that each small group, rather than just individual students, succeeds as a whole. This style is valued by many students since it supports shortcomings and balances strengths.

Some students might have an artistic attitude, while others might be more gregarious and others more academically oriented. When mul-

tiple students' strengths are combined, the final output is frequently better than what could have been produced separately.

The review does a great job of outlining the critics' worries, which are important practical obstacles that need to be overcome for these tactics to be successful rather than just being objections.

6 CONCLUSION

The social process of teaching is carried out with the intention of creating learning. By using specific tactics in accordance with the demands and specifications of the teaching, this learning becomes efficient and fruitful. According to the literature study, integrated instructional techniques are a sophisticated and comprehensive educational strategy that purposefully combines the best features of learner-centered and teacher-centered approaches. By overcoming the artificial limitations of conventional subject-specific learning, this synthesis aims to produce an educational model that is more dynamic and genuine. This approach goes beyond rote memorizing to give students a more relevant, interesting, and meaningful experience by focusing on authentic real-world connections and integrating knowledge around major, captivating themes.

Its use of an inquiry-based approach, which positions students as active architects of their own knowledge and is consistent with constructivist theories of learning, is its primary strength. Learners are forced to participate in higher-order thinking (as defined by Bloom's Taxonomy), deeper content understanding, and the development of critical analysis, teamwork, and problem-solving skills—all of which are critical for the twenty-first century—through research, interpretation, and communication processes. A wide range of learning styles and multiple intelligences can also be accommodated by the integrated approach's inherent flexibility, which uses a variety of techniques from direct instruction to group projects. This makes it an effective tool for creating inclusive, upbeat, and cooperative learning environments where students can genuinely understand how all knowledge is interconnected. Nevertheless, there are substantial and real-world obstacles to overcome in order to put this theoretically sound strategy into practice.

According to the review, one significant disadvantage is the significant cognitive strain it may place on students. This difficulty, which has its roots in cognitive load theory, results from pupils having to analyze, synthesize, and integrate complex material from multiple fields at the same time. Working memory can be readily overloaded by this complex demand, especially for beginners or people with little prior knowledge and weak self–control and metacognitive abilities.

Therefore, in the absence of sufficient assistance, this may result in glaringly unequal learning outcomes because the approach requires students to efficiently use limited cognitive resources and quickly transition between viewpoints—a requirement that may exacerbate already–existing educational inequalities in a mixed–ability class–room. This leads to a fundamental conundrum: a strategy intended to foster comprehension may unintentionally erect obstacles for the very students it seeks to engage the most deeply.

Consequently, the success of the integrated strategy depends totally on careful instructional design and intentional scaffolding to handle these intrinsic cognitive demands, even though it is a perfect paradigm for promoting deep, connected learning. By carefully integrating tools like graphic organizers, worked examples, and defined group roles, educators can lessen unnecessary burden and take on the role of build–ers of learning rather than merely facilitators. This calls for a change in professional development, from merely advocating for the integra–tion ideology to providing educators with evidence–based resources for its real–world implementation.

In the end, integrated learning is extremely valuable since it equips stu–dents for a world where complex, multidisciplinary difficulties rather than isolated problems are encountered. Finding particular scaffold–ing strategies that best help different learners in this setting should be the main goal of future study. Teachers may now guarantee that all children receive the desired, transforming advantages of this potent instructional technique by fusing the lofty goal of integration with the practical science of cognition.

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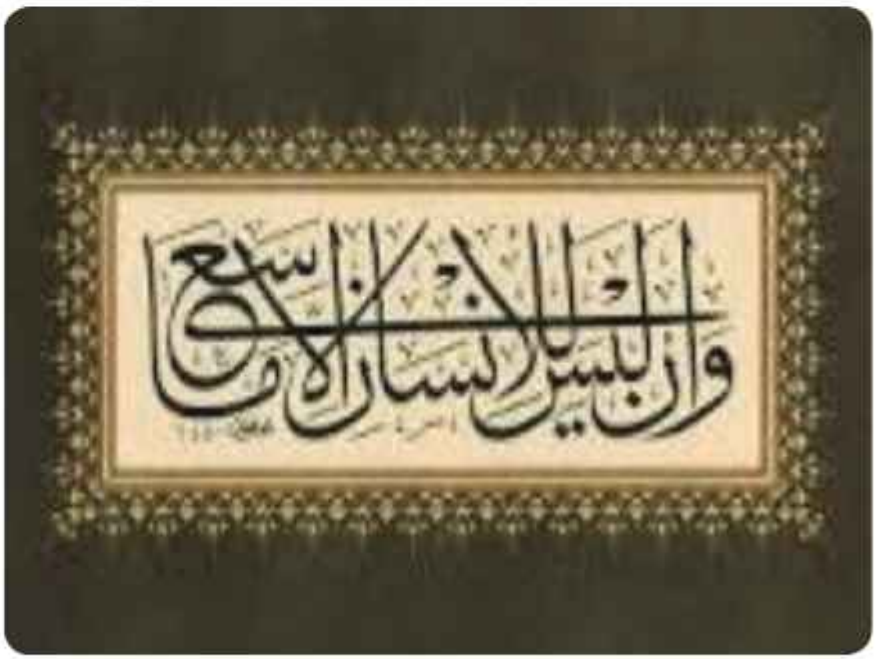

فصلية مُحكمة تُعنى بالبحوث والدراسات العلمية والإنسانية والفكرية
العدد (١٧) السنة الثالثة جمادى الآخرة ١٤٤٦ هـ كانون الأول ٢٠٢٥م

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العدد (١٧) السنة الثالثة جمادى الآخرة ١٤٤٦ هـ كانون الأول ٢٠٢٥م