
RESEARCH ARTICLE

Inculcating Authentic Pedagogy and Blended Learning at King Khalid University: A Digital Transformation Perspective

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ABSTRACT

This paper describes how to inculcate authentic pedagogy and blended learning at KKU in terms of digital transformation. The study is aimed at integrating classroom face-to-face learning experiences with online learning experiences and creating active learning entailing authenticity, which entails educational practice with respect to external reality. Besides, the construction of digital transformation, including technology, services, and security, bridges the digital gap to create collaborative, interactive, and personalized learning experiences. The study is based on quantitative and qualitative data collection instruments, including a pre-and post-test. The population of the study consists of students studying English language as an intensive course at KKU. The study sample is composed of two groups: the experimental group and the control group. The result of this study indicates that Authentic pedagogy and blended learning models improve students' English proficiency and maximize collaborative learning. Furthermore, it provides a more flexible learning environment, enjoyment, and student-centered, and the role of the teacher is a guide and facilitator.

KEYWORDS

Authentic pedagogy, blended learning, digital transformation, KKU, face-to-face learning, digital gap, collaborative learning, interactive and personalized learning.

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1. Introduction

Driving and inspiring change is a crucial issue in organizations nowadays because change is unavoidable and inevitable. Furthermore, it entails improvement of current performance and seizing new opportunities, plans, projects, and initiatives. Practically, the ongoing technological invention, creation, and innovation development impacts all aspects of human life, particularly pedagogy and teaching host generation. For instance, blended learning combines the advantages of traditional teaching with the implementation of technology to make learning more real-time, contextual, and engaging by constructing face-to-face learning and e-learning to meet the needs of modern learners (Bonk and Graham, 2006). In other words, blended learning is a term applied to the practice of providing instruction and learning experiences through some combination of both face-to-face and technology-mediated learning (Bersin, 2004). Thus, the study aims at integrating blended learning in English class at King Khalid University encompassing various blended learning models such as the distinct blended learning models: Face-to-face driver where the teacher drives the instruction and augments with digital tools; Rotation where students cycle through a schedule of independent online study and face-to-face classroom time; Flex which most of the curriculum is delivered via a digital platform and teachers are available for face-to-face consultation and support; Labs which entail all of the curriculum is delivered via a digital platform but in a consistent physical location; Self-blend where students choose to augment their physical learning with online course work; Online driver where students complete an entire course through an online platform with possible teacher check-ins and all curriculum and teaching is delivered via a digital platform and face-to-face meetings are scheduled or made

available if necessary (Siemens, Gašević and Dawson, 2015). Furthermore, the study aims to construct digital transformation, which is the process of using digital technologies to create new or modify existing business processes, culture, and customer experiences to meet changing business and market requirements entailing technology, services, and security to bridge the digital gap to create collaborative, interactive and personalized learning experiences. Digital transformations have reshaped teaching methods and techniques through digitalization, which entails using digital data to facilitate the learning and teaching process (Harasim, 2000). Hence, the study plans to inspire instructors to be innovative by generating ideas for using technology in new ways in teaching English at KKU to add value to every student's interaction. Moreover, the study encompasses authentic learning pedagogy is an instructional approach that allows students to explore, discuss, and meaningfully construct concepts and relationships in contexts that involve real-world problems and projects that are relevant to the learner and authentic teaching pedagogy is a style of learning that encourages students to create a tangible, useful, quality product/outcome to be shared with their world involving various features such as being genuine; becoming more self-aware; being defined by one's self rather than by others' expectations; bringing parts of oneself into interactions with students; and critically reflecting on self, others, relationships and context (Authentic tasks, 2000). The study incorporates authentic pedagogy and blended learning at KKU from a digital transformation aspect to inculcate a pedagogical culture of adapting to innovative updated methods that reflect modernity and maximize learning and teaching process achievement.

1.1 Statement of the Problem

King Khalid University aims to cope with the updated, innovative method of teaching English, integrating with technology to adapt to new host generation students and instill the implementation of digital pedagogy. Nonetheless, many guest digital generation English teachers at KKU hypothesize that the traditional way of teaching English is more advantageous than digitalization and implementing hybrid learning and teaching, proposing that technology is supposed to be used as teaching aids integration, not as a method.

1.2 Purpose of the Study

The study aims to inculcate the paradigm of implementing authentic, digital transformation and blended learning in English classes to maximize learning and teaching the English language's quality. It also aims to enlarge English teachers' horizons towards implementing innovative methods in teaching English, assimilating the visions and key goals of KKU, which exerts unprecedented efforts to maximise the quality of teaching and learning outcomes in terms of skills, values and knowledge benchmarking the best world-ranked universities. The study plans to answer the following questions:

- 1- Is the implementation of blended learning a maximized learning process in terms of interaction and knowledge production?
- 2- How can authentic learning pedagogy assist KKU students to use English to communicate properly in real-life contexts?
- 3- What are the most important strategies used by KKU to digitalize teaching the English language and change the traditional way of teaching among instructors?

1.3 Methodology

This study aims to reveal how blended learning and authentic learning pedagogy are coherent with digital transformation upgrades and facilitate learning the English language among students. The study is based on quantitative and qualitative data collection instruments. The quantitative model used in this study is a pre- and post-test true experimental design with a control group. It adopts a quasi-experimental method.

2. Review of Literature

2.1 Definition of Blended Learning

Zhao, Lei, Yan, Lai, and Tan (2005) identified three types of interactions—instructor and students, students and their peers, and students and content as essential elements in determining the efficacy of a course's design. They further stated that courses with synchronous and asynchronous components, for example, blended courses—report more positive outcomes than courses that are entirely synchronous or entirely asynchronous. Blended learning activates active learning strategies using a variety of pedagogical approaches. The asynchronous nature of the blended component of the courses has the salutary effect of expanding the time students spend on course material. Online and blended learning, lacking the time constraints imposed by face-to-face courses, are much more conducive to the expansion of learning time (U.S. Department of Education [2009] p. xvii). Garrison and Kanuka (2004) defined blended learning as the thoughtful integration of classroom face-to-face learning experiences with online learning experiences. Heinze and Procter (2004) define Blended Learning as: "learning that is facilitated by the effective combination of different modes of delivery, models of teaching and styles of learning, and founded on transparent communication amongst all parties involved with a course." This definition is based, in part, on the conversational framework and emphasizes communication.

Technically the word “blended” implies a mixture or combination. Blended learning entails courses that integrate online with traditional face-to-face class activities in a planned, pedagogically valuable manner where a portion of face-to-face time is replaced by online activity (Picciano, 2006). Nust Institute of Information Technology (NIIT) (Valiathan, 2002) categorizes blended learning into three models: skill-driven learning, which combines self-paced learning with an instructor or facilitator support to develop specific knowledge and skills; attitude-driven learning, which mixes various events and delivery media to develop specific behaviors and competency-driven learning, which blends performance support tools with knowledge management resources and mentoring to develop workplace competencies. Sylvestre (2004) has summarized the key features of each approach, situations in which an approach could be adopted, and appropriate ¹blended learning techniques that can be adopted to enhance learning.

Approach	When	Why Blend	How
Skills Driven	When you have self-paced learning modules that deal with the transfer of knowledge and skills.	Learners often feel isolated and require trainer/facilitator support.	<ul style="list-style-type: none"> • Creating a group-learning plan (through LMS – {Learning Management System}) that is self-paced, yet time bound. • Padding the self-paced learning material with Instructor-Led “Overview” and “Closure” sessions. • Demonstrating procedures/processes through Learning Labs (live on-the-web) or through the classroom. • Providing support to learners through email.

¹ *Blended learning environments can provide a learning advantage when compared to purely face-to-face instruction, the researchers emphasized the findings “do not demonstrate that online learning is superior as a medium. It is important for the instructor to create an interactive, supportive, and collaborative learning environment for students to reap the potential benefits afforded by online learning. As noted above, the research suggests that when facilitated effectively, online education can not only match, but also surpass traditional face-to-face learning (Means et al., 2010). Here are some of the potential benefits of online education:*

-Learner-Centered Education: Palloff and Pratt (2013) explain that an effective online instructor is someone “who is open to giving up control of the learning process” by making students active participants in their learning process (p. 24). A learner-centered approach acknowledges what students bring to the online classroom—their background, needs, and interests—and what they take away as relevant and meaningful outcomes. With the instructor serving as facilitator, students are given more control and responsibility around how they learn, including the opportunity to teach one another through collaboration and personal interactions (Palloff & Pratt, 2013).

-Collaborative & Interactive Learning: Research has found that online instruction is more effective when students collaborate rather than working independently (Means et al., 2010; Schutte, 1996). There are a variety of ways for students to collaborate online, including synchronous and asynchronous discussions and small group assignments. In addition, the relative anonymity of online discussions helps to create a “level playing field” for quieter students or those from typically marginalized groups.

-Metacognitive Awareness: Since online learners have more autonomy and responsibility for carrying out the learning process, it’s important that students understand which behaviors help them learn and apply those strategies proactively. This awareness and knowledge of one’s personal learning process involves increased metacognition—a key practice for student success (Bransford, Brown & Cocking, 2000).

-Increased Flexibility: Online learning offers more flexibility because students can control when and where they learn. By self-monitoring their time and pacing, students are able to spend more time on unfamiliar or difficult content (Aslanian & Clinefelter, 2012).

			<ul style="list-style-type: none"> • Designing assignments and project-work that help apply the concepts learned. • Designing a web-based or project-based certification program for the content.
Attitude Driven	When you have content that deals with developing attitudes and behaviors.	Such content requires peer-to-peer interactions and trying out behaviors in a risk-free environment.	<ul style="list-style-type: none"> • Creating a Learning Space and activating discussions through Discussion Forums. • Conducting Live Web conferences (Webinars) • Organizing Instructor-Led sessions after learners go through self-paced "prerequisite" knowledge modules. • Assigning projects (to be completed offline) that require the application of behaviors learned.
Competency Driven	When you need to capture and transfer tacit knowledge.	There are certain competencies with which experts work, while making decisions/solving problems --- these skills are not explicit and learners learn by simply observing how the experts work.	<ul style="list-style-type: none"> • Assigning mentors/guides to learners. • Developing, populating and maintaining a Knowledge Base.

In light of various definitions of blended learning, it is obvious that blended learning is a thoughtful integration of face-to-face and online learning, an opportunity to enhance the classroom experience and extend learning through the innovative use of internet information and communications technology. Rossett and Frazee (2006) proposed that blended learning (BL) integrates seemingly opposite approaches, such as formal and informal learning, face-to-face and online experiences, directed paths and reliance on self-direction, and digital references and collegial connections, in order to achieve individual and organizational goals.

2.1.1 Categories of Blended Learning

Bonk and Graham (2005) have suggested three categories of blends. These categories are summarized in the following table:

Enabling Blends	Enabling blends primarily focus on addressing issues of access and convenience. For example, blends that are intended to provide additional flexibility to the learners or blends that attempt to provide the same opportunities or learning experience but through a different modality.
Enhancing Blends	Enhancing blends allow for incremental changes to the pedagogy but do not radically change the way teaching and learning occurs. This can occur at both ends of the spectrum. For example, in a traditional F2F learning environment, additional resources and perhaps some supplementary materials may be included online.
Transforming blends	Transforming blends are blends that allow for a radical transformation of the pedagogy. For example, a change from a model where learners are just receivers of information to a model where learners actively construct knowledge through dynamic interactions. These types of blends enable intellectual activity that was not practically possible without the technology.

2.1.2 Dimensions of Blended Learning

Blending learning can occur on various dimensions and can be customized to meet both the learning requirements and the course content requirements. Sylvestre (2004) offers the following dimensions:

- Blended Offline and Online Learning
- Blended Self-Paced and Live, Collaborative Learning
- Blended Structured and Unstructured Learning
- Various Combinations of the Above

Sylvestre (2004) also suggests the following ingredients of the blend:

Synchronous Physical Formats

- Classroom Instruction
- On the Job Training
- Hands-on Labs and Exercises

Synchronous Online Formats

- Virtual Classrooms
- Virtual Mentoring
- Live Web Seminars

Self-Paced Asynchronous Formats

- Web/CD-ROM courseware
- Recorded Live Events and Video
- Simulations
- On Demand Searchable Knowledge Portals
- Chat/discussion tools

²Blended learning focuses on optimizing the achievement of learning objectives by applying the right learning technologies to match the right personal learning style to transfer the right skills to the right person at the right time. (Sing and Reed, 2001) In other words, by focusing on the learning objectives (rather than the delivery method), supporting many different personal learning styles to reach broad audiences, and accommodating individuals who bring different knowledge into the learning experience, the pedagogical method becomes more effective in transforming the students. Blended learning is not just a simple combination of face-to-face and online learning, but it requires thoughtful planning and design of courses. The amount of technology and technology itself are also key factors, and the resources required are not insignificant (Pooser, 2004).

2.1.3 Benefits of Blended Learning

Although there is not much research and data available for blended learning, some of the benefits of blended learning can be summarized (Purcell, Buchanan & Friedrich, 2013):

- Blended learning is positively related to greater retention of existing students.
- Blended learning helps reduce the duration of completing the degree. The current average is 6.8 years to complete BS/BA.
- Blended learning is more effective than F2F or ALN (Asynchronous Learning Network) by themselves
- Blended learning allows the opportunity to socialize and get to know other students (online)

²There are several kinds of research suggest abandoning traditional methods of teaching 'didactic pedagogy'. Although, authentic pedagogy could be the best and most deserving according to them. But forsaking didactic pedagogy could be harmful. Owing to this research has found that accepting both didactic and authentic pedagogy can be more appropriate to a student's performance and achievement. Henceforth, this study has been organized according to three logical questions. What is didactic and authentic pedagogy? Why didactic and authentic pedagogy? And how didactic and authentic pedagogy could be applicable? Finally, the discovery indicates that didactic pedagogy assists in generating skills, ideas, and knowledge from the structurally organized materials. While authentic pedagogy help student to unlock his potential. Also, it is didactic pedagogy that shapes the way to an authentic pedagogy.

- Blended learning positively tied to student satisfaction and faculty satisfaction
- Active classroom time reserved for activities that require active participation for F2F part of Blended learning
- Blended learning affords an opportunity to focus on learning (and learning environment) rather than on teaching (learner-centered)
- Blended learning is more than learner-centred; it is also client-centred – local communities, regions, public agencies, and private organizations.

Blended learning is very much appropriate for 1st generation college students who work while going to school. Blended learning offers (Baepler, Walker & Driessen, 2014):

- Convenience – students can do “non-classroom” activities at their convenience
- Communication/social networking – Pelz (2004) has found that online students bond earlier and ‘better’ than students sitting in the same classroom.
- Social Presence: When participants in an online course help establish a community of learning by projecting their personal characteristics into the discussion — they present themselves as “real people.”
- Some students are too shy to participate in the classroom setting but are more prone to participate online – blended learning affords such students an opportunity to communicate and form social networking
- Control (how to learn) - blended learning integrates ALN with F2F in a planned, pedagogically valuable manner and does not combine but trades-off with online activity (or vice versa) in a meaningful blending

Sloan-C’s five pillars as key principles for achieving quality are (Pérez & Riveros,2014):

1. Learning Effectiveness: The provider demonstrates that the quality of learning online is comparable to the quality of its traditional programs (interaction is key: with instructors, classmates, the interface, and via vicarious interaction)
2. Cost Effectiveness and Institutional Commitment: Institutions continuously improve services while reducing cost (Cost-effectiveness models are also tuned to institutional goals)
3. Access: All learners who wish to learn online have the opportunity and can achieve success.
4. Faculty Satisfaction: Faculty achieves success with teaching online, citing appreciation and happiness.
5. Student Satisfaction: Students are successful in learning online and are pleased with their experience.

Graham (2006) suggests that implementing blended learning³ requires considering the following characteristics:

Purpose	Scope	Nature
Predominant purposes*	Significance** of blend in overall context:	What does the blend look like pedagogically
- Improved pedagogy - improved access & convenience - improved cost effectiveness	small (relatively inconsequential) to Integral (very significant)	How is the blend taking advantage of affordances in the environment to achieve goals.
*not mutually exclusive	**rough measure is % of course impacted by the blend	

³ There are various methods of blended learning where students get trained in multiple streams. It depends on what suits the student. Let’s check out the types of blended learning: **Flipped Classroom Models**– In Flipped Classroom model, there is an option where a teacher-led classroom takes place and the rest of the video lectures can be watched at home at the student’s convenience. **The Enriched Vertical Model**– Being quite similar to Flipped Classroom model, there is a beginning of classes online, although there are requirements for offline face-to-face classes. You can say that online learning works as a supplement to this method of learning.**The Individual Rotation Model**– There are many educational settings in which the individual rotation settings can be applied. In this model, we see that teachers sort out students as per their needs or in fact software can also do this job better. **The Flex Model**- This is a flexible model where a student can choose the model of learning that he/she can follow that is something that suits him/her. This model is specially designed for those students who have not completed their course and somehow returned to their education. It is a kind of a bridge course

Ross and Gage (2005) stated that future learning systems will be differentiated not based on **whether** they blend but rather on **how** they blend. Bonk and Graham (2005) categorize it as enabling or enhancing blend and not transforming blend. Some of the questions we must ask (and answer) include:

- Have we really redesigned the FTF courses to exploit the full benefits of blended learning?
- How did we decide what activities to keep for F2F part of the FTF and what activities for the online part?
- Do we have the technology commensurate with blended learning?
- Are all our students ready, capable, and eager to accept blended learning?

⁴Blended learning courses are those in which a significant amount of seat time, that is, time spent in the classroom, is replaced with online activities that involve students in meeting course objectives. (Allen, Seaman, & Garrett, 2007). The most distinctive feature of blended learning is that it entails two portions: in person and online.

2.2 Authentic Pedagogy

Education is one of the most salient contexts in which authenticity becomes relevant to transmitting the basic ideas and ideals of culture and nurturing the development of its members⁵. Education, like authenticity, is opposed to dissimulation, ignorance, manipulation, and related states of falsehood. As a culture, we hold personal authenticity in high esteem and would understandably wish for our children both to become authentic and to be educated by those who embody such a virtue. Authentic pedagogy constitutes an ontological claim about levels of reality, as well as an epistemological attitude toward¹ learning as the construction of knowledge entailing authentic curriculum and authentic assessment practices. Authenticity is concerned with educational practice with respect to some external reality(Meyers & Nulty, 2009). Authentic pedagogy was first defined as instruction and assessment that promoted authentic student achievement, and it occurs when the teacher utilizes information about how students learn and designs learning experiences or tasks based on this knowledge. Furthermore, it is an active processing of experience entailing consolidation and internalization of information and procedures by the learner in a way that is both personally meaningful and conceptually coherent. In education, the term authentic pedagogy refers to a wide variety of educational and instructional methods focused on connecting what students are taught in school to real world matter problems and applications aiming at inculcating interest among students in what they are learning and learning innovative concepts and skills (Heywood,2000). In authentic pedagogy, students learn by doing, and they obtain the foundational skills, knowledge, and allied skills such as critical thinking, difficulty solving, formal scientific examination, message taking, research methods, writing, presentation techniques, and public speaking. Moreover, students learn abstract, theoretical, or disconnected from first-hand experience. Authentic pedagogy aims to prepare learners for real life by applying what they have learned from practical skills, applications, and habits of mind to real-life problems(Routledge, 2000). It is vital to note that authentic pedagogy includes the following: authentic learning, which is centred on authentic, valid real-world tasks of mind entailing multiple tasks and higher-order thinking skills, such as analyzing, producing, scheme and influence, students occupied in exploration starting with a question which permits the student to construct

⁴ Blended learning or hybrid learning, also known as technology-mediated instruction, web-enhanced instruction, or mixed-mode instruction, is an approach to education that combines online educational materials and opportunities for interaction online with physical place-based classroom methods. Blended learning requires the physical presence of both teacher and student, with some elements of student control over time, place, path, or pace.

⁵ *Learning is student-driven with tutors, student peers, friends, family and outside experts all assisting/coaching in the learning process. Learners employ scaffolding techniques and students have opportunities for social discourse. (Cronin, 1993; Donovan et al., 1999; Newman & Associates, 1996; Newman et al., 1995; Nolan & Francis, 1992). The authentic learning model uses the same authentic task as a learning vehicle and as a means to determine the students' ability to apply the knowledge. For example, when presented with a real-world problem to solve, students learn in the process of developing a solution, tutors facilitate the process, and the students' solutions to the problem become an assessment of how well the students can meaningfully apply the concepts. This can facilitate an integrative approach to assessment, yet reducing the potential for over assessment. Real assessment is an approach in which learning objectives are measure in the most direct, relevant means probable. As such, authentic evaluations are criterion-referenced measures designed to promote the integration of accurate knowledge, higher-order understanding and relevant skills. Authentic assessments are often based on performance, requiring students to use their knowledge in a meaningful circumstance. In authentic assessment, performance expectations guide learning activities and are made clear to students prior to instruction. Generally, authentic assessment is an in progress process involving both self and external evaluation as well as the gradual compilation of material into an holistic product. While there are differences between traditional and authentic assessment, it is important to remember that traditional and authentic assessments are complementary models.*

response and inquiry and inquiry and learning embodying experience. Furthermore, learners employ instructional scaffolding methods at critical times, social discourse, collaboration, and reflection. Authentic pedagogy provides students with the chance to examine the problem from a special view, which allows for challenging solutions and a diversity of outcomes instead of one single correct answer reflecting real world assessments (Splitter,2009).

2.2.1 Benefits of Authentic Learning

Thompson (2015) contended that educational research shows that authentic learning is an effective learning approach to preparing students for work in the 21st century. By situating knowledge within relevant contexts, learning is enhanced in all four domains of learning: cognitive (knowledge), affective (attitudes), psychomotor (skills), and psychosocial (social skills). Some of the benefits of authentic learning include the following:

- Students are more forced and more likely to be attracted to what they are learning when it is relevant and applicable to their lives outside of school. • Students are better ready to succeed in college, careers, and maturity.
- Students learn to assimilate and affix knowledge that is unfamiliar.
- Students are bare to different settings, activities, and perspectives.
- ⁶Transfer and application of theoretical information to the world outside of the classroom is enhanced.
- Students have a chance to collaborate, create products, and practice problem solving and professional skills.
- Students have a chance to exercise professional judgment in a safe environment.

Learning activities may include integrating students' experiences outside the classroom into the curriculum or involving students in new activities beyond their educational environment. The concept of value beyond the classroom involves transferring/applying knowledge to an area that has personal significance for the students, relevance to the real world, and value to society (Yoon & Lee,2012).

Newman and Associates (cited in Elmore & Rothman, 1999: 75) restructured these three criteria into four standards associated with authentic pedagogy:¹ Upper -Order Thinking - students are involved in manipulating information and ideas by synthesizing, generalizing, explaining, hypothesizing, or arriving at conclusions that produce new meaning and understandings for them.

³Inwards Knowledge – students consider the central idea of a topic or discipline with enough thoroughness to explain connections and relations and to produce relatively complex understandings. ²Substantive Conversation - students engage in extended conversational exchanges with the tutor or their peers about the subject matter in a way that builds an improved and shared understanding of ideas or topics. Varga (2012) stated that by linking to the world beyond the classroom, students make connections between substantive knowledge and either public problems or personal experiences.

These four standards provide a useful template for focusing consideration of the curriculum and its assessment. Moreover, the practice of authentic pedagogy entails the conversation, exploration and tackling of real-world problems and projects, and the core elements of authentic pedagogy are that it should be learner-centered, engage active learning, use genuine tasks, and authentic tasks which have real-world significance. Authentic a pedagogical approach allows students to explore, discuss, and meaningfully construct concepts and relationships in contexts that involve real world problems and projects that are relevant to the learner (Snape & Fox-Turnbull, 2013). For learning to be authentic, students should be engaged in genuine learning problems that foster the opportunity for them to make direct connections between the new material that is being learned and their prior knowledge. These kinds of experiences have the potential to increase student motivation. In the process of supporting students' learning, we recognize that they bring with them experiences, knowledge, beliefs, values and curiosities. Authentic pedagogy is based centered on ¹authentic tasks that are of interest to the learners and engaged in exploration and inquiry. In addition, learning is closely connected to the world beyond the classroom, and students become engaged in complex tasks and higher-order thinking

⁶ *Transfer learning reuses knowledge from past related tasks to ease the process of learning to perform a new task. The goal of transfer learning is to leverage previous learning and experience to more efficiently learn novel, but related, concepts, compared to what would be possible without this prior experience. The utility of transfer learning is typically measured by a reduction in the number of training examples required to achieve a target performance on a sequence of related learning problems, compared to the number required for unrelated problems: i.e., reduced sample complexity. In many real-life scenarios, just a few training examples of a new concept or process is often sufficient for a human learner to grasp the new concept given knowledge of related ones. For example, learning to drive a van becomes much easier a task if we have already learned how to drive a car.*

skills, such as analyzing, synthesizing, designing, manipulating and evaluating information. Students produce a product that can be shared with an audience outside the classroom⁷ (Parker, Maor& Herrington, 2013).

2.3 Digital Transformation

In the postmodern era, education must be collaborative and interactive, and teachers must use technology in the classroom because technology is playing a major role in this generation's life. Digital transformation positively impacts student learning by opening a world of endless possibilities and collaboration. Digital transformation is not a basic hardware or software upgrade, although that can play a part. Digital transformation is a physical and philosophical change designed to meet the ever-growing demands of your students, faculty and campus to create a learning environment where everything connects. This is an ecosystem that combines technology, services, and security to bridge the digital gap and create collaborative, interactive, and personalized learning experiences (Jiang& Ting, 2000).

Digital transformation is driven by many reasons, such as campus security, information security, student success, IT strategy, data enablement, student-centric services, affordability, digital integration and artificial intelligence (Mayer, 2001). Constructing digital transformation involves building an IT foundation, fostering successful students, creating a safe campus, delivering state-of-the-art cybersecurity, and deploying operational efficiencies(Palloff& Pratt, 2013). ¹Digital transformation is the process by which companies embed technologies across their businesses to drive fundamental change to increase efficiency, greater business agility, and, ultimately, the unlocking of new value for employees, customers and shareholders; a digital transformation journey requires a new mindset, and it is a chance to reimagine how companies do things, often from the ground up. Additionally, digital transformation requires a shift away from traditional thinking and toward a more collaborative, experimental approach. These new ways of approaching work reveal new solutions which, in turn, can improve customer experience, drive employee innovation and spur company growth at the fundamental level ⁸(Caulfield, 2011).

⁷ 1-The five standards are higher-order thinking, depth of knowledge, connectedness to the world beyond the classroom, substantive conversation, and social support for student achievement involve superior order thinking skills let the students to go beyond simple recall of facts to the more complex raise of manipulating information and ideas in ways that convert their meaning and implications, such as when students synthesize, generalize, explain, hypothesize, or appear at some conclusion or interpretation. Deepness of Knowledge: This scale assesses students' deepness of knowledge and understanding. Knowledge is considered deep when students are able to make clear distinctions, increase arguments, work out problems, construct explanations, and otherwise work with relatively complex understandings. Connectedness to the world: this scale measures the extent to which the instruction has value and meaning beyond the instructional context. Instruction can exhibit connectedness when students address real-world public problems or when they use personal experiences as a context for applying knowledge.

2-Substantive discussion: This scale assesses the extent of communication to learn and understand the substance of a subject. High levels of substantive discussion are point out by three facial appearances: significant interaction about the subject matter which includes proof of higher-order thinking, sharing of ideas that are not scripted or controlled, and chat that builds on participants' ideas to promote superior collective understanding of a theme or topic

3-Knowledge focused on the excellence of organization of information construction. However, direction of it is inward, outward, both, and closed. According to Vastu, the best direction to study is by sitting in a North-East room while facing North or East. Which direction should you face while studying? You must always face the East or West direction while studying. If that's not possible, then you can face North as well. There are five different types of following directions. These include basic directions, sequential directions, quantitative and spatial directions, temporal directions, and conditional directions. Knowledge construction is a process by which learners actively build their understanding of a topic or concept through exploration, reflection, and interaction. It involves constructing meaning from the information and experiences gained through learning activities and projects.

⁸ According to Norton et al. (2020), digital transformation consists of a change in the

organization of work motivated by emerging digital technologies and innovative business models. It involves more than the implementation of a technological solution, it is an alignment between digital technologies, human and organizational factors. According to Mahlow and Hediger (2019), digital transformation builds new skills and models through digital technologies in a deep and strategic way. Moreover, Digital transformation is the process by which companies embed technologies across their businesses to drive fundamental change. The benefits? Increased efficiency, greater business agility and, ultimately, the unlocking of new value for employees, customers and shareholders. Two concepts related to digital transformation are digitization and digitalization. Digitization is the process of translating analog information and data into digital form—for example, scanning a photo or document and storing it on a computer. Digitalization is the use of digital technologies to change business processes and projects—such as skilling employees to use new software platforms designed to help launch products faster. While digital transformation might include digitalization efforts, it goes beyond the project level and affects the entire organization. digital transformation requires a shift away from traditional thinking and toward a more collaborative, experimental approach. These new ways of approaching work reveal new solutions which, in turn, can improve customer experience, drive employee innovation and spur company growth at the fundamental level.

Two concepts related to digital transformation are digitization and digitalization. Digitization is the process of translating analog information and data into digital form—for example, scanning a photo or document and storing it on a computer.

Digitalization is the use of digital technologies to change business processes and projects—such as skilled employees to use new software platforms designed to help launch products faster. While digital transformation might include digitalization efforts, it goes beyond the project level and affects the entire organization (Garrison & Vaughan, 2008). Digital transformation in¹ education means digitalizing processes and products to improve the teaching and learning experience for everyone involved (Woo, Herrington, Agopstinho and Reeves, 2007):

-Accessibility:³ Digital technologies enable learners to access learning resources more easily and less expensively than traditional education. People across the world, of all ages and different socioeconomic statuses have access to classes and resources through the internet. Technologies such as text-to-speech remove the barriers for students with disabilities.

-Increased engagement:

-Interactive learning⁹: Micro lessons, videos, interactive tests, gamification, etc., are all different learning formats that are transforming education with a more interactive learning environment. For example, interactive language teaching apps like Duolingo [claim](#) to reach more US learners interested in foreign languages than the school system.

⁹ *Successful digital transformation requires a variety of coordinated actions. Rewired lays out six capabilities critical for successful digital transformation:*

-The ability to craft a clear strategy focused on business value. Companies should focus their transformations on specific domains (customer journeys, processes, or functions) that generate significant value for the business. The transformation should be guided by a road map, which details the solutions and resources needed to deliver change to prioritized domains.

-A strong talent bench with in-house engineers. No company can outsource its way to digital excellence. Being digital means having your own bench of digital talent working side by side with your business colleagues. The best digital talent programs go way beyond hiring: they should include employee value propositions that attract and retain the best talent; agile and digital HR processes to find, manage, and train talent; and a healthy environment where the best talent thrives.

-An operating model that can scale. Digital transformations depend on cross-functional teams that bring together people from across the company. Most companies already have a handful of these teams, but scaling to support hundreds or thousands of them requires a new operating model. There are three primary operating models to consider: the digital factory, the product and platform model, and the enterprise-wide agility model. - Distributed technology that allows teams to innovate independently. Technology in an organization should make it easier for teams to continually develop and release digital innovations to users. To make this happen, organizations should foster a distributed technology environment where every team can access the data, applications, and software development tools they need. Recent technology advances can help create this distributed environment—these include the thoughtful use of APIs to disengage applications, the availability of developer tooling, the selective migration of high-value workloads to the cloud, and the automation of infrastructure provisioning.

-Access to data that teams can use as needed. Reliable, current data are crucial to successful digital transformations. Data architecture should produce data that are easily accessible by teams across an organization, and should be continually assessed and updated. Strong governance is required to enable this capability. The core element is the data product, which structures various pieces of data into a coherent unit that can be easily consumed by a range of teams and applications.

-Strong adoption and change management. In the past, the technology adoption cycle was a linear process of gathering requirements, developing solutions, testing, and then training the end user. This process often resulted in low adoption rates and ultimately low business value. Digital transformations follow a far more iterative process of designing, prototyping, collecting feedback, and improving the solution so it can capture the full value potential. As a rule of thumb, for every dollar you spend on developing a digital solution, plan to spend at least another dollar on implementing process changes, user training, and change-management initiatives. Companies should think about adoption and scaling at the beginning of their transformation so they can build in the resources needed to deliver the change. 4-Consider these eight key digital transformation trends that business and IT leaders should be aware of in 2022:Focusing on resiliency and sustainability, an emphasis on using cloud to enable innovation ,ai-fueled automation of business processes, continued acceptance of remote work, increased attention to managing data for its entire life cycle, security as a business imperative, not an after thought, prioritizing AI ethics and governance and increased use of maturing machine learning technologies

-Regarding digital transformation metrics:

-Set initial metrics in advance

-Develop micro-metrics for agile experiments: The goal is to learn and adjust.

-Customized learning: Computer technology and AI enable educational methods such as adaptive learning where each learner can learn in a way appropriate to them.

2.3.1 Key Technologies Enabling Digital Transformation in Education

Allen & Seaman (2013) listed various technologies and techniques that enable digital transformation in education:

1- Artificial Intelligence

[Artificial intelligence applications](#) can undertake simple but time-consuming tasks in education to ease the workload of educators or school staff. They can also be used to deliver an improved and custom learning experience to students. The applications improving students' performance include:

-Voice-to-text technologies transforming classes to notes are helpful to students with hearing impairment

-Text-to-voice technologies help dyslexic students learn more effectively by listening instead of reading.

-Personalized learning can involve a diverse set of technologies, including AI, to elicit how a student learns best and tailor the education accordingly. Blended and adaptive learning are examples of methods that combine face-to-face instruction with digital learning tools that encourage students to learn by discovery.

To increase the effectiveness of staff:

-Intelligent FAQ chatbots to answer questions about class, homework, campus, etc. [Chatbots](#) can act as virtual advisors for college students, which can free up professors' time.

-Domain specific chatbots: College admission is a complex and stressful process for high school students. College counsellors have limited time to support hundreds of students. Chatbots focused on the admission process can support students in this challenging and important process

-Educational businesses also have back office functions like finance. Process mining can help identify inefficiencies in the back office functions. Read our article on educational process mining to learn more about the applications of process mining in education.

-Individual automation technologies like RPA or combining multiple automation technologies (also called hyper-automation) can help save support staff time.

-Sponsored

IBM Cloud Pak for Business Automation integrates Process Mining, Task Mining, the digital twin of an organization (DTO), and RPA to capture, analyze and simulate process data. This helps identify and automate inefficient or error prone processes.

2- Analytics

⁴Digital technologies enable schools to collect and analyze a wealth of data about their students to monitor and enhance their performance. Using traditional and advanced analytics, they can determine where students struggle and succeed, develop new methods, and test whether these methods yield expected results.

3- Augmented reality/Virtual reality

Augmented reality and virtual reality (AR/VR) technologies can create interactive and virtual environments for students and help them better engage with the subject. These technologies can enable virtual field trips to historical locations or facilitate learning-by-doing for applied sciences and medicine. The distance learning experience can also be improved with AR/VR technologies.

4- Internet of Things (IoT)

The increasing use of smartphones and other edge devices improves the connectivity between students and their educational institutions by enabling real-time communication and data transfer. IoT devices can also be used to track young children's absence or presence in class and alert teachers and parents for their security.

-Incorporate business outcomes: Look at strategic impact (e.g., revenue growth, lifetime customer value, time to market), operational impact (e.g., productivity improvements, scale, operational efficiencies), and cost impact.

5- Online learning

Distance learning (or remote learning) through Zoom or Skype was an emergency response from schools and colleges to the pandemic.¹ Educational institutions can also build their own online class systems, commonly called learning management systems (LMS), and integrate them into their websites or platforms. This will allow them to customize the online learning experience according to the needs of learners or the subject of the course.

6- Smart classes

⁵Digital technologies have also improved face-to-face learning. Smart classes equipped with smart boards, computers, internet connections, projectors, etc. unlock the ways of delivering learning resources to students that were impossible with a blackboard and chalks.

3. Method of the Study

This study is based on quantitative and qualitative data collection instruments. The quantitative model used in this study is a pre- and post-test true experimental design with a control group. As for the qualitative model used in this study, the researcher makes use of semi-structured interviews to obtain necessary data about the efficiency of blended learning.

3.1 Participants

The population of the study consists of students studying the English language as an intensive course and studying the Unlock textbook at KKU in the first semester of the 2022 – 2024 academic year. The sample of the study is composed of two groups studying English language as an intensive course. One of these classes is randomly assigned to the experimental group, and the other one constitutes the control group. The average level of the students is B1 (intermediate) in accordance with the descriptions of the Common European Framework of References for Languages (CEFR). The experimental group consists of 43 female students, splitting into 23 and 20 in each group. The control group is composed of 20 students, and the experimental group is composed of 23 students.

3.2 Data Collection Process

As data collection instruments, responses on the semi-structured interview were used in the study, and blended class adapted to the rubric consists of six dimensions: technology application, a combination of face-to-face and online material, student-centeredness, implementation of digital transformation in terms of learning style change and authenticity. Cronbach's Alpha of the rubric in the pre-test was calculated as 863 ($N: 43$) and 954 ($N: 43$) in the post-test, which were acceptable values for implementation. To ensure the reliability and *face validity* of the rubric employed, two experts, who were PhD candidates teaching English as an intensive course at KKU, were consulted, and the components and items in the rubric were revised over time in accordance with the feedback obtained. As the pre-test of the study, subjects in the experimental and control groups were taught by researchers implementing blended pedagogy and authenticity for fourteen weeks of treatment through the Blended Class Model. Then, a post-test was conducted for the study. The interview type used in the study was a semi-structured format, and interviewees were encouraged to comment on open-ended pre-prepared guiding questions. Within this context, seven pre-prepared guiding questions were posed to the students in the experimental group after the treatment of the Blended Model Class. The responses were recorded and transcribed by the researcher.

3.2.1 Treatment Process and Data Analysis

The students in the experimental group were introduced to the course requirements through interactive blackboard and orientation. The experimental group consisting of 23 students were instructed for fourteen weeks (one semester) through the Blended Class Model in which the typical lecture of a course was blended by technology and online activity. The control group, consisting of 20 students, were instructed through a traditional lecture. The same syllabus, Unlock textbook, was taught to the two groups. At the end of the fourteen weeks of instruction, both groups were given the same post-test to determine the difference between and within the groups. The scores given by raters were calculated by averaging the points entered in Microsoft Excel and then transferred to the SPSS 20.0 software. To determine the significance level of pre-tests and post-tests between the experimental and control groups, an *independent samples t-test* was employed (between-groups statistics). *Paired samples t-tests* were also utilized to analyze within-group data (within-group statistics). As Dornyei (2007) points out, an *independent samples t-test* is used to compare the results of two independent groups, whereas a Paired samples t-test is used to compare two sets of results from the same group. As for the qualitative data analysis, strategies like categorizing, coding, and interpreting were used. Qualitative data, which were gathered through semi-structured interviews, were first recorded and transcribed by the researchers. The transcribed data were categorized in accordance with the content of the interviewees' responses.

3.3 Results and Discussion

In the beginning, researchers must ensure that the experimental and control groups did not differ significantly in terms of proficiency. In order to ensure this, the same pre-test was administered to both groups in the first week of the semester. The scores were analyzed through independent samples t-test in SPSS 20.0 software. The table below presents the statistical analysis of the pre-test:

Table 3. Comparison of the Experimental and Control Groups' Pre-test Results

Group	N	Mean	SD	df	t	p
Experimental	23	42,02	6,57	41	-,680	,500
Control	20	43,40	6,61			

*p>,05

The analysis of the results of the pre-test indicates that the significance level is 0,500 ($p > 0,05$). This result means there is not a statistically significant difference between the experimental and control groups with regard to proficiency in English. It is noted that the mean score of the control group is slightly higher compared to the score of the experimental group. After the treatment process, which lasted for fourteen weeks, the same questions in the pre-test were addressed to the students in the experimental and control groups as the post-test of the study, and they were evaluated through exam scores by five raters. The average post-test scores were analyzed through independent samples t-test. The following table presents the results of the post-test:

Table 4. Comparison of the Experimental and Control Groups' Post-Test Results

Group	N	Mean	SD	df	t	p
Experimental	23	71,49	6,39	41	6,01	,000
Control	20	58,30	7,99			

*p<,05

As shown in the above table, the significance level is 000 ($p < 0,05$), which means that there is a statistically significant difference between the post-test scores of the students in the experimental and control groups. It means that students exposed to the blended learning environment outperformed the students in the traditional writing class in terms of proficiency.

Pre- and post-test scores of the experimental group were statistically analyzed through paired samples t-test to ensure the efficacy of the blended learning class model on writing proficiency. The relevant table is presented below:

Table 5. Comparison of the Experimental Group's Pre-Test and Post-Test Results

Experimental	N	Mean	SD	df	t	p
Pre-Test	23	42,02	6,57	22	-21,083	,000
Post-Test	23	71,49	6,46			

*p<,05

As the table above makes it clear, the significance level is 000 ($p < 0,05$), which means that there is a statistically significant difference between the pre-and post-tests of the experimental group. This indicates remarkable progress in the writing proficiencies of the experimental group's students.

It was required to analyze the control group's pre-and post-test scores in order to determine their achievement in the traditional lecture-based class. With this aim, within-group analysis of pre-and post-test scores of the control group was carried out through paired samples t-test. The related table is given below:

Table 6. Comparison of the Control Group's Pre-Test and Post-Test Results

Control	N	Mean	SD	df	t	p
Pre-Test	20	43,40	6,61		-8,126	,000
Post-Test	20	58,30	7,99			

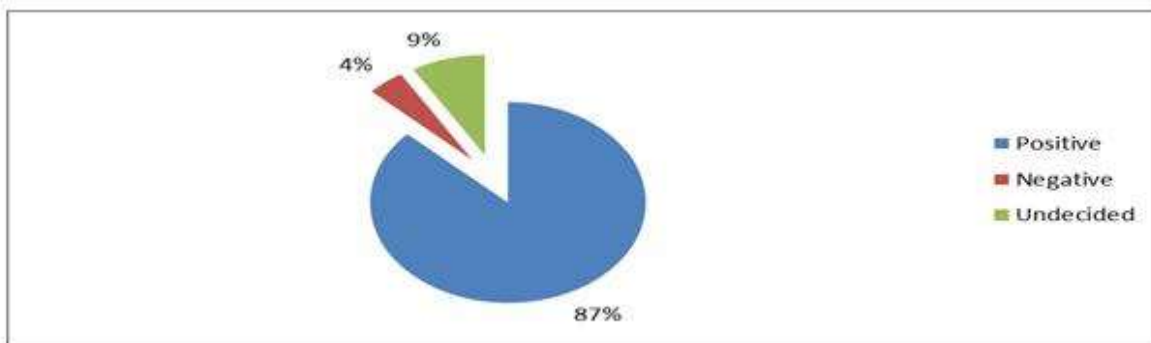
*p<,05

As indicated in the table above, there is a statistically significant difference between the pre- and post-test scores of the students in the control group. The significance level is 000 ($p < 0,05$). This means that the traditional class also has a considerable effect on students' proficiency. This progress verifies the fact that traditional class had an influence on students' performances; however, this influence was not as strong as in the experimental group's scores.

3.4 Findings and Discussion about the Semi-structured Interview

In the semi-structured interview, the students were asked the question, 'Did you like implemented blending learning? The responses were categorized as positive, negative, and undecided after the content analysis. The relevant graph is presented below:

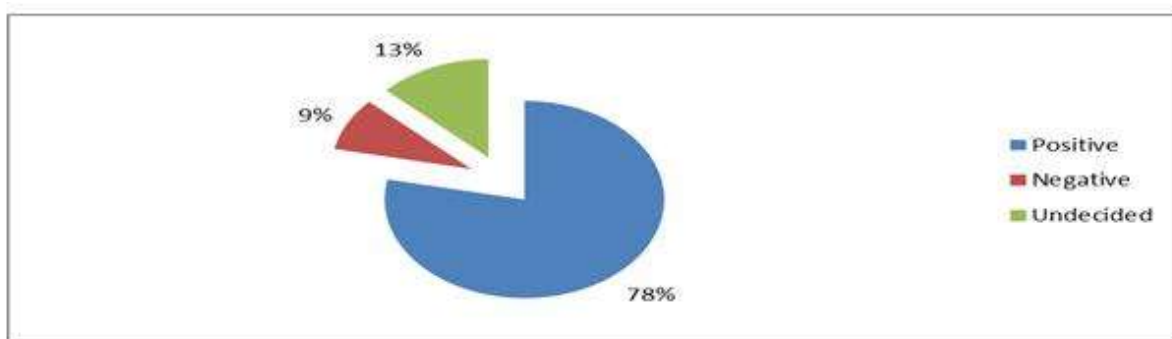
Graph 1. Students Responses about their Satisfaction with blended pedagogy



As the above graph indicates, the great majority (87%) of the students stated that they enjoyed blended classes. Only 4% of the students were unsatisfied with the blended class.

Concerning the students' attitudes towards authenticity, the researchers included the question, 'Did you enjoy relating course topics with real-life Saudi context?' in the semi-structured interview. The answers in the interview were categorized as positive, negative, and undecided. The following graph indicates the results:

Graph 2. Students Responses about their Satisfaction with authenticity

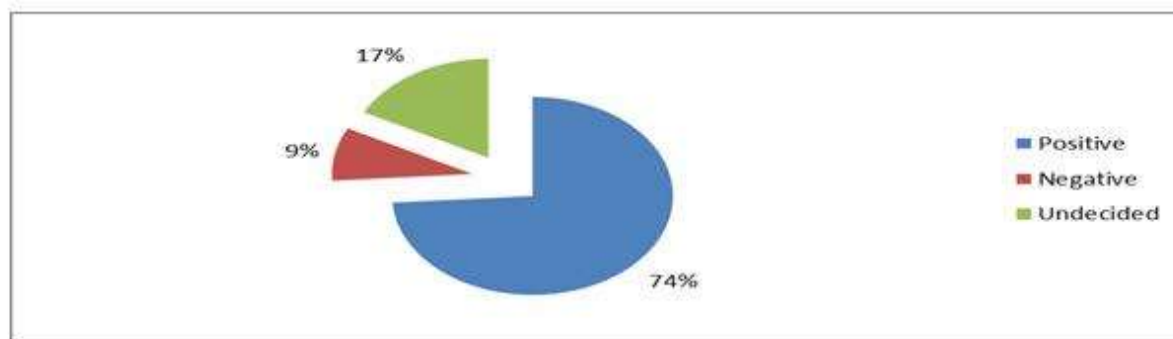


As is clearly seen in the graph above, 78% of the students reported that they enjoyed authenticity, while 9% of them stated that they did not enjoy it. Furthermore, 13% of the students reported that they were not sure about it.

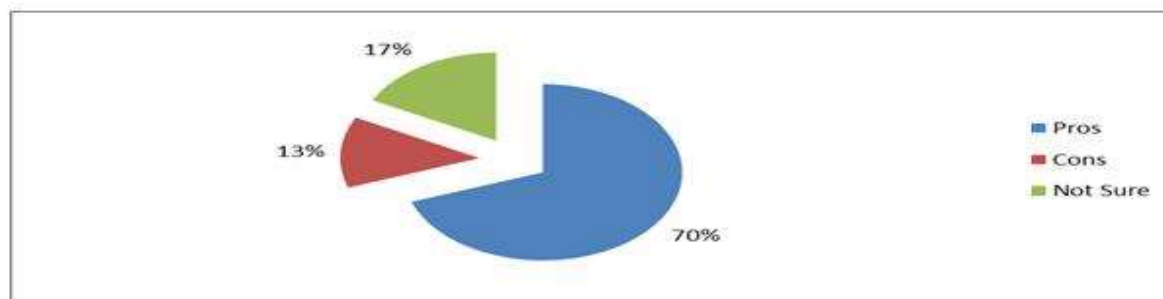
In the semi-structured interview, the researcher addressed the questions, "Do you think you have learned with digital transformation in terms of changing learning styles and digitalization? For the first question, the responses of the students were categorized as positive, negative, and undecided. The relevant graph is presented below:

Graph 3. Students Responses to the Efficiency of learning with digital transformation

As demonstrated in the above graph, 74% of the students reported that students were satisfied with digital transformation in terms of changing learning styles and digitalization.



Graph 4. Students Responses on the basis of Pros and Cons of Blended Learning



The above graph makes it evident that 70% of the students' responses were pro-dominant while 13% were cons-dominant. Furthermore, 17% were not sure about it. These results reveal that blended learning has more advantages than disadvantages, according to the students' views.

4. Conclusion

In the context of this study, the analyses of the findings prove that authentic pedagogy and blended learning model improves students' English proficiency more than traditional lecture-based instruction. First, it can be concluded that employing authentic pedagogy and blended learning classes is an effective way of instruction for improving English level. Both quantitative and qualitative data confirm that authentic pedagogy and blended learning model improve students' English proficiency; when both groups' mean post-test scores are compared, it can be inferred that the contribution of authentic pedagogy and blended learning model to English performances is greater than that of the traditional lecture-based model. Another conclusion that can be drawn from the study is that authentic pedagogy and blended learning models encourage independent and collaborative learning. Furthermore, implementing authentic pedagogy and a blended learning model maximizes collaborative learning in which students learn from their peers and teachers. As in the case in the context of this research, in-class time is completely devoted to student-to-student and student-to-teacher interaction. This study has also proved that learning is customized through authentic pedagogy and a blended learning model. During the treatment process, it was observed that almost every student has their own pace of learning, and this new model has provided them the opportunity to explore their needs and styles. Moreover, the study confirms that authentic pedagogy and blended learning models provide a more flexible learning environment, anytime or anywhere, for learners' needs. The study indicates that the students in the authentic pedagogy and blended learning model are more enjoyable than in the traditional lecture. Authentic pedagogy and

blended learning models inculcate a sense of autonomous learning and are attributed to students taking on responsibilities for their own learning and the students learning from each other cooperatively. Implementation of authentic pedagogy and blended learning model reflects real-life situations from an interpersonal communication perspective and social transaction, and they provide students with relevant, constructive feedback such as peer feedback, individual feedback or teacher feedback. Authentic pedagogy and blended learning models are student-centred, and the role of the teacher is as a guide and facilitator. The role of the student is to be active during the class activities and synchronous interaction. The study is limited to two groups of students studying an intensive English course in the first semester at King Khalid University. Further research can be conducted to determine the efficacy of the implementation of reversed classes in teaching English as an intensive course.

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