



Understanding the Success of Digital Application-Based Postgraduate Student Independent Learning: A Study of Higher Education Management and Technology



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Abstract

An understanding of independent learning in universities that use technology-based learning is a critical study that must continue to be carried out. So, we have more than 100 further complications after the selection. We get 62 topics of discussion, which we then examine under a phenomenological approach to get relevant answers to problems such as successful learning in digital-based universities. In the study, we use data analysis, comprehensive data evaluation, and drawing valid conclusions in answering the final problem; after we have studied and discussed the results, we can conclude that from the books we have studied, on average, it is stated that the approach greatly assists independent learning among postgraduates with digital application-based learning. In other words, technology has made it easy for students to complete all their tasks and responsibilities while being postgraduate students, so the findings of this study are helpful in future studies of similar discussions.

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Contents

Abstract	24
1 Introduction	25
2 Materials and Methods	27
3 Results and Discussions	27
4 Conclusion	30

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Acknowledgments	31
References.....	32
Biography of Authors	36

1 Introduction

Independent learning is a learning activity with self-study initiatives without much support from other parties, such as teachers, friends, or other parties (Kenny & Eaton, 2022). Independent learning is also identified with the lecture system at universities, where, through their initiative and encouragement, students are expected to be more focused and successful in following the expectations of the academy. With a bit of help and direction from the university, students can go through and solve all college problems more independently. (Bagheri et al., 2013). So this independent learning system is indeed very suitable as is practiced in universities, especially for postgraduates where ownership and learning are almost entirely the responsibility of the students themselves but still receive guidance and direction from the coordinator or academic supervisor. The advice provided by supervisors at Tall Trees has, among other things, so that students can compete and motivate themselves in completing all tasks and responsibilities because they have to be successful (Beckers et al., 2016), to become students who start with independence when they are still in their early study time and are expected to become alumni or graduate students who can successfully adapt to the world of work that demands independence in solving problems and tasks independently (Misra & Mazelfi, 2021).

Many studies today reveal that independent learning does have a tremendous impact on student success. Because the attitudes and behavior of students who study independently will determine their success (Daar, 2020), on the other hand, students who cannot solve their problems autonomously are categorized as unsuccessful. They lack enthusiasm and strategies to adapt to carry out a series of lessons such as research and other analysis. This is the condition of students who lack motivation, which looks negative and leads to a decrease in academic achievement; many even end up dropping out (Sinaga & Pustika, 2021). Their reason is their inability to study independently, so the university with the existing authority has to terminate or postpone graduation with low competency scores and meager qualifications. This is all because students have self-motivation; in other words, they depend on others. Students like this may be less focused on their study goals, so they are easily influenced by other parties who have nothing to do with college (Gentrup et al., 2020).

The ability and willingness of students to learn independently with complete autonomy are very important because, in the future, these students will form learning personalities who can continue their learning for the rest of their lives (Benson & Voller, 2014). In other words, independent learning is one of the attitudes and characteristics that will shape human beings with the skills to manage their life learning, following the long-life education approach. Indeed, this independent learning activity is a form of learning activity that focuses on self-awareness in students. Therefore, students must be able to control themselves and be self-obsessed to continue learning and achieve success with a bit of encouragement from the outside (Kessler & Bikowski, 2010). The success of independent learning will be achieved, for example, when students can manage their time wisely so that their time together can be used to the maximum extent possible—a priority in the academic world (Tilfarlioglu & Ciftci, 2011).

Another reason is that independent student can apply their learning strategies by searching various online sources (Cheng et al., 2019). They get the ease of learning by keeping the attitude is essential. Because they believe that their attitude and behavior toward self-study is the way to success in their college career, they learn non-stop, but it does not mean they never rest. This is not the case, but this is a typical student with the initiative to involve elements of learning assisted by technology (McGrew et al., 2018). In other words, these independent students are students who can concentrate their learning on productive learning. They are more successful in solving the problems they face because of learning in higher education, especially in postgraduate where the educational system expects complete student independence, with that motivation coming from the students themselves even though the university, forming and assigning each student, must be guided and sponsored by professors and lecturers—other academic support (Findlay et al., 2012). However, independent students are more proactive with their priorities and rarely depend on others. That is what,

among other things, is meant by students in the context of independent learning in postgraduate programs whose studies prioritize the involvement of high-level scientific studies and evidence (Schinske et al., 2017).

The paradigm shift in postgraduate education programs in Indonesia, from the past, where teacher-centered learning has become student-centered learning, has impacted methods, activities, and learning outcomes (Emaliana, 2017). In today's learning, there are known aspects that must balance cognitive, affective, and psychomotor to encourage students to prepare for lifelong learning skills, integrate basic knowledge, improve relationships between students and educators and increase student motivation in learning. In student-centered learning, students should be responsible for building their knowledge. The basic principle that must be possessed at this time is that students must be more active and independent in the learning process. With this principle, students can determine what will be studied, how and why it should be studied, and the topics to be studied (Rosenshine, 2012). To approach student-centered learning, several strategies can be used: Encouraging students' activeness in gaining knowledge and skills. Interact with other postgraduate students by discussing mutually beneficial matters in their respective programs (Hew & Cheung, 2014).

Encouraging students always to prioritize learning needs and strategies to be more independent both in life and in other academics, then determine and implement the learning process to achieve learning goals. This can be applied by self-study (Hénard & Roseveare, 2012). The ability to learn independently is one of the characteristics that play a role in forming individuals who can learn for life. This can be obtained by applying the principle of independent learning in learning. Independent learning or independent learning is a person's readiness or willingness to learn independently, which consists of an attitude component that takes the initiative to learn with or without the help of others who can formulate learning objectives, identify learning resources, select and implement appropriate learning strategies and evaluate learning objectives (Day et al., 2016). Independent learning is explained from two perspectives: independent learning is a learning process that makes students fully responsible for planning, implementing, and having complete freedom to master essential learning materials and evaluate them. From another perspective, independent learning is a personal characteristic of students who are responsible and active in the learning process. Both interact with each other and are also influenced by the social environment in the form of the roles and policies of the organizing agency (Mulyadi et al., 2021; Loderer et al., 2020; Mahini et al., 2012). In addition to being responsible and active in learning, students must have characteristics that are open to learning opportunities, take the initiative in learning, have clear goals, and have good study and problem-solving skills (Bereiter & Scardamalia, 2018).

Individual credits are planned as inspiration to learn and self-limit regarding liability regarding their learning (Boström & Bostedt, 2020). It additionally incorporates the capacity to utilize learning assets and the capacity to consider techniques for learning. Individual credits should be joined by previously having earlier information. Simultaneously, the interaction shows how understudies advance autonomously. This appears in the arranging stage. At this stage, understudies plan exercises at a spot and time when understudies feel happy with learning. Understudies additionally plan the ideal learning parts and decide the learning targets. The subsequent stage is the checking stage; understudies notice their learning at this stage. Understudies can find many learning difficulties. When they screen, they realize the goal that it will make the growing experience more significant (Park & Jo, 2015).

Step by step must be passed in an independent learning evaluation where participants evaluate their learning and knowledge at each stage of the course. Postgraduate parties such as supervisors provide feedback and collaborate on knowledge between students to achieve a proper understanding according to the level of the learning course (Rashidov & Rasulov, 2020). The learning context factor shows that the environment influences independent learning. The environmental factors that affect independent learning are the design of teaching, the form, and the type of teaching to the place where the learning will take place. The learning context referred to here is the social context which includes norms, culture, and the culture of the social environment. The concept of independent learning at the postgraduate level described above means that independent learning is collaborative learning between friends to get feedback. It can also interact and communicate with teachers and supervisors who are given guidance and provide constructive and informative feedback (Snead & Freiberg, 2019).

Self-study at the postgraduate level is ordinary in the academic culture of modern universities. Because learning this model is to train a candidate for higher education so that later he becomes an independent

expert and expert in work (Pithouse-Morgan, 2012). Also, to achieve self-study skills, students should be taught before or at the beginning of the postgraduate program some supporting skills, namely the skills to choose accurate learning resources, the skills to read journals and textbooks in foreign languages, to make summaries, and mind mapping. Lack of skills in choosing the right learning resources during the independent learning process in postgraduate tutorials is one of the stress causes for students (Kenny & Eaton, 2022). To carry out independent learning, supporting facilities are needed, such as library facilities and internet connections, access to complete and up-to-date learning resources, and the availability of facilitators with a good understanding of each step of the tutorial so as not to hinder learning achievement. In implementing postgraduate learning in the curriculum, there are sometimes obstacles, among others, to integrating various disciplines at postgraduate; each discipline still wants to provide material separately, which could interfere with the independent learning process of students in the country (Phillips & Johnson, 2022).

Based on the explanation of the above problems related to the success of independent learning in postgraduate with the help of learning applications, we try to answer these problems in this study. The point is to get as many opinions and perspectives as possible from experts so that this glass will get additional information to deepen understanding of the successful independent learning in the question above (Bahadir, 2016). We hope to express our understanding of the success of independent talks in the undergraduate market with the support of digital technology applications.

2 Materials and Methods

To answer the problem of this study, namely, the understanding of independent learning towards success in an era where digital applications have made learning easy, especially in postgraduate universities (Susanty et al., 2021). Our data searches are conducted electronically on publications related to independent learning and technology applications in the form of books and scientific journals. The data we have collected will then be studied under a phenomenological system approach, namely, looking for data that can answer the research problem after the data has been analyzed. The process or stages of data analysis, among others, involve a data coding system, comprehensive data evaluation, organizing data, and drawing conclusions that we believe are relevant to answer problems with high validity (Sudarmo, 2021). This study relies entirely on secondary data published between 2010 and 2022. In designing this royal response, we followed the capital of writing scientific study reports, such as reviewing literature review findings in higher education and technology. This study chose to formulate data retrieval and final reporting problem under a qualitative descriptive design approach (Nguyen et al., 2020).

3 Results and Discussions

Understanding of independent learning

The free learning procedure is a learning technique that expects to construct individual drive, autonomy, and personal growth. A complimentary review should be possible with companions or as a feature of a little gathering, with seniors, and so on (Nurmala et al., 2022; Sarrab et al., 2018; Feild et al., 2015). The change in outlook in the educational experience urges understudies to be effectively associated with the growing experience. One more methodology underlines the improvement of metacognition, particularly the capacity to control parts of information comprising the phases of recalling, grasping, application, examination, blending, and assessment. The execution of free learning benefits understudies, including students who can master as per their desires, assumptions, and inspirations, which is essential. Understudies can investigate fundamental points better; it will further develop the educational experience. Understudies can design and evaluate learning results (Chau & Cheng, 2010).

Understudies will be more dynamic in figuring out how to create further learning. Now, understudies are urged to think, not simply remember what they have figured out and how to foster strong reasoning abilities. Expanding understudies' awareness of others' expectations for the educational experience can assess their learning accomplishment (Papernot et al., 2016). The sooner somebody can advance autonomously, the

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simpler it is for understudies to complete their learning. Self-study can increment interest, strong reasoning abilities, direction, development, and fearlessness. This perspective is something fundamental that a specialist should claim. Can further develop connections among understudies and produce reliant connections among instructors and understudies, can make shared endlessly regard among speakers and understudies.

The phases of free learning are separated into six stages, including pre-arranging, the underlying movement completed for the educational experience. They established a positive learning climate so understudies could advance freely well. Foster an example plan and distinguish fitting learning exercises (Bakar & Ismail, 2020). Do learning and observing exercises. They assess individual learning results so understudies can track down weaknesses and things that need improvement. Factors influencing the course of accomplishment of autonomous learning and the execution of free learning are affected by a few variables, including Characteristics of understudies, which remember insight for past free realizing, so earlier information is framed, mental elements, the consciousness of the significance of a climate that supports learning and realizing the right learning style for himself (Schoonenboom, 2014; Astra & Artanayasa, 2017; Maba, 2017).

Self-monitoring ability, self-management, and learners' motivation in independent learning are essential. Skills factors also need to be possessed by students, including skills in using information sources, for example, looking for the latest material and looking for the proper literature, being able to combine new information and the information can be used to solve problems (Zhu et al., 2020). Factors that support independent learning include parental support among students' friends and seniors from students. Factors that hinder independent learning for example the unstable mood of students, lack of motivation will be necessary for independent study, inadequate campus facilities so that students find it difficult to do independent study; students feel bored because it is done continuously, and difficulty adapting to the adjustment process In participating in learning, it is difficult to manage time properly due to the many schedules of friendly academic activities and to pile up tasks so that students experience fatigue (García Botero et al., 2019).

Impact of independent learning and success in higher education

Our first search related to independent learning among postgraduates related to technology-based learning. Sari & Zamroni (2019), mention that the student ministry has recently been inseparable from the convenience found, namely the existence of technological applications that have been able to provide what students need related to how to develop themselves through research skills and also solutions to academic problems so that with a bit of help and support from other parties such as professors and academics, they can continue their learning even though at first it was challenging. So the independence of students is proven through testing by asking questions with existing analysis. Finally, their study concluded that the independent learning factor is inseparable from the influence of technology. The ministry of learning has a tremendous impact on completing postgraduate programs at many universities based on the recognition and processing of statistical data. The exact search is also confirmed by studies (Lee et al., 2014; Delen et al., 2014).

The following finding about self-directed learning comes from Hocking et al. (2018), all of which are the cornerstone of education in the UK undergraduate market in that academics see students as those who must prioritize independent learning to death with little support from others. They should be able to become their learners as the main task is to prioritize independent efforts in research and academic matters so that this self-paying experience can be applied at the postgraduate level (Tan, 2021). Students as researchers with various daily academic tasks must be carried out independently as they should be independent scholars to carry out tasks in their fields independently with skills, knowledge, and experience in their field of study. So this study illustrates that the skill to expand and apply various skills and understandings in the intended field is part of the task he must do to improve and achieve his learning targets (Bender & Koller, 2020, July). However, as the party that must support, the university provides support and invites them to collaborate so that their learning scenario in the undergraduate market can have implications for students' success in various environments so that they will later become potential graduates. A study (Milligan et al., 2020), says that the future of excellent undergraduate candidates comes from those who are active and learn independently (Kholmuratovich et al., 2020).

The Success of Independent Learning with Digital Application

Furthermore, [Bartel & Hagel \(2014\)](#), studied mobile game-based student learning in higher education, where they found that the contribution made from the concept of game-based learning on smartphone devices provided fun knowledge of how students use our game approach and the game mechanism system that has rules and consequences in the form of losing and winning. This study has a positive impact on how the motivation of students to play games to get a win can then be adopted in the context of learning, where when learning is based on fun, it will produce motivation and enthusiasm in navigating the twists and turns and problems when dealing with learning in college, especially in the undergraduate market. So the authors believe that game-based learning with existing regulations and punishments is implemented in high-level learning where hard work but with fun methods will provide a solution and motivation to complete their learning ([Shafi et al., 2020](#)).

Next, the success of independent learning with digital applications is also proven by [Saraswati et al. \(2021\)](#), who say success is in the hands of students because now learning is based on all-digital technology, which gives students the broadest possible autonomy both in class and outside. So what is expected by the university has been around for a long time, but because new technology is present now, the reality of being an independent student can only be found recently. The desire to learn has indeed occurred in the past, but because the readiness of learning facilities does not support the independence possessed by previous learning, independent learning does not produce maximum results. Now, of course, when asked about the relationship between mastery of digital literacy technology and the ability of the Almighty to get independent learning, it will be achievable so that the role of a visor or other academics does not provide very significant results. It is crazy that the presence of technology has not been able to support student learning, especially in postgraduate programs where ministry and technology support absolutely must exist ([Widjaja & Aslan, 2022](#)).

The findings of [Yot-Domínguez & Marcelo \(2017\)](#), promote independent learning by graduate students using digital application technology. Motion is related to research work that requires fast and easy data support. Learning in higher education has indeed been categorized as learning that is full of strategies supported by technology so that what students need is related to data analysis and others related to research, obtaining and obtaining information so that they can analyze quickly it must be done technologically. So with the availability of technology, it makes it easier for postgraduate students to analyze getting information online, and they can communicate quickly so that they get a response from a phase or another party so that synergistic and productive learning occurs. There require proficiency in technology and independence in research skills, and academic-style communication skills ([Abdurrahman et al., 2017](#), November).

It was still related to market learning for undergraduates who are successful in relying on digital application technology, the subsequent finding that we examine is [Proskura & Lytvynova \(2018\)](#), where it is said that the college that encourages scholars to study independently is a high school that does have the ministry's vision and the success of the undergraduate process which benefits students. Indeed, to be successful in independent learning, supported by technology, the main requirement is that students have competence in operating technology applications and have a high understanding and application in digesting how to navigate the learning journey that combines independence in their mind and the support of the existing infrastructure in his environment ([Quinn, 2014](#)). Thus, the success of learning in the undergraduate market, which is now in the information age, is very fast when it is supported by student work skills independently and the willingness and ability to become independent students so that the challenges The students who were faced with their girlfriend's college for a while we can pass them off successfully. So it can be concluded that with an understanding of learning governance in the market, the plan followed by the ability to operate computer applications well is the primary capital so that 21st-century learning is said to be sourced from data. The internet and informatics can be applied so that learning objectives in the market plan that rely on an independent and successful approach can be developed and, of course, supported by students who have a vision and mission to succeed in the undergraduate market in an era of all-technology ([Suart, 2010](#)).

Learning autonomy in higher education success

Independent learning in discussing the success of studying in the undergraduate market is closely related to the strategy and achievement of accreditation in universities that run the undergraduate (Broadbent & Poon, 2015). This indicates that the existence of technology to provide opportunities for the Almighty to practice gaining knowledge, elaborating, and related organizations with obtaining data and work strategies is also supported by learning files which are prioritized in the context of distance learning and understanding learning in a different technological era with the system payments in the past (Davies et al., 2013). This study focuses on the success of online course learning and the ability of students to solve their problems independently in order to achieve academic success in line with expectations in the undergraduate market, where students must use existing infrastructure to make them graduates who have entrepreneurs in academics who have critical thinking skills and can produce every academic work through collaboration and collaboration with fellow students. So in a minimal era during the pandemic, a collaboration supported by application technology is very supportive, and it is proven that with technology, independent learning by students in higher education finds an optimal maintenance result (Johnson et al., 2016).

Likewise, the study of Barclay et al. (2018), raised a critical success factor in online learning, namely the higher education system in the Caribbean country. This country develops information-based technology for academic development through online learning by managing postgraduate education; this year, they have succeeded. So the result obtained is that when technology is used for learning purposes and is supported by independent learning, it is easy to achieve success. At the same time, the problems and signatures faced by university administrators are related to many structures requiring technological capacity adjustment (Guri-Rosenbli & Gros, 2011). However, with the adoption of technology by using e-learning effectively, the goal of student success in the market for a moment can be increased so that their salary results are convincing that the use of technology infrastructure by students in this undergraduate program has proven that learning can be achieved on time because it is supported by computer facilities and online learning climate systems which they generally have applied because of the usefulness and ease of using technology so that this increases the independence of the campus and also students through policies that are considered for success and profit in carrying out high-level learning paths (Azziz et al., 2019).

Pham & Dau's (2022), study on online learning and the readiness of students to succeed in learning in the tall tree was essential. Their study says how readiness to integrate technology and its acceptance improve the achievement of learning outcomes with online learning systems. So they found that the university's readiness to organize online learning improved student learning outcomes and satisfaction related to work performance and the influence of the availability of learning tools so that students were more successful in completing all tasks and obligations given by the university (Bao, 2020). In other words, the readiness of universities is very decisive in achieving success of the point to whom is meant is the availability of learning infrastructure, which is now provided with technology and communication infrastructure. So that this readiness can be good, it will produce postgraduate learning outputs by prioritizing technology-based learning and independence (Divayana et al., 2021; Cavus & Kanbul, 2010; Fernández-López et al., 2013).

Likewise, a study by Alraheedi et al. (2015), was given high with a systematic review study on the factors that are considered critical to the success of learning. What is studied here is where the use of various digital application platforms or mobile learning in high-quality institutions has given a particular nuance and attraction where every student can access what they want through the use of smartphones, laptops, and others so that learning success is achieved. The postgraduate can be active and independent. This is technology-based learning with a highly motivated student learning framework that has provided an innovation where the adoption of technology and other determinants for student success is in line with the expectations of universities and other educational communities (Qenani et al., 2014).

4 Conclusion

In this concluding section, the author will summarize the study's results that aim to gain an in-depth understanding of technology application-based learning to support the independence of essential science learning. We believe that the search for answers by reviewing many 50 scientific publications in the form of

books and articles has answered this problem with high validity. The results we have obtained include that the understanding of technology-based independent learning is the university's effort to motivate students to become campus people full of initiative and increase learning independently to achieve their learning goals at the university level at the postgraduate level. Furthermore, we found that the impact of independent learning on the success of studying at the graduate level has been supported by several experts. On average, they say that if they want to be successful in college in the undergraduate market, independent learning is supported by adequate means such as technology and support. For other academics, then this will be a success.

On the other hand, we also find that the success of independent learning in the era of all digital applications can be identified as learning using various applications such as laptops and smartphones and some learning applications that have been commonly used in various sizes, including game-based learning and other applications so that learning autonomy in this undergraduate market can be realized. In other words, when universities provide sufficient expectations and provide adequate facilities, independent learning can be carried out in order to achieve success in higher education, especially in the undergraduate market, which demands independence in completing all tasks and responsibilities by involving various skills and applications, among others, for example, the ability to do research and analyze skills as well as other ministries. Thus, among other things, the summary that we can present is that we realize that this finding certainly has weaknesses and limitations because of perhaps the method we chose and other ways of writing data; therefore, we welcome constructive input and criticism so that later in the next writing session we can make improvements and invest in many places.

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