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EXPLORING STUDENT LEARNING APPROACHES: THE ROLE OF SELF-DIRECTED AND COLLABORATIVE LEARNING IN HIGHER EDUCATION

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Abstract

Students in higher education are exposed to a variety of teaching methods, which necessitates the development of adaptable learning approaches. The problem concerning approaches to learning at the university level and the development of independent learners is multifaceted and critical to students' success in higher education. This research aimed to determine how self-directed learning affected students' academic success and developed these skills. It explored the interaction between students' ability to use effective learning strategies and overcome self-study challenges while investigating the positive impact of self-directed learning on academic performance. The case study methodology was selected for this research to enable an in-depth exploration of the experiences of full-time students at Yogyakarta State University, particularly in the context of independent learning in higher education. This approach included conducting interviews and observations with 17 master's degree students. The research focused on gathering detailed information about the students' concentration, course of study, and year of study. Additionally, a questionnaire was used to collect quantitative data on the students' viewpoints and opinions regarding independent learning and higher education approaches. The results showed a substantial interaction between independent and collaborative learning methods, highlighting that participants engaged in various activities fostering critical thinking, problem-solving, and creativity. Higher education activities such as lectures, seminars, and experiential learning were found effective in enhancing skills like communication, adaptability, and global awareness. The study emphasizes the importance of an educational atmosphere that encourages both independent and collaborative learning.

Keywords: Approaches of Learning**,** Education, Higher Education, Independent Learners

INTRODUCTION

Approaches to learning in higher education and independence as a student at the university level are fundamental aspects of academic achievement. Consequently, to effectively navigate and succeed in diverse academic environments, students must refine their strategies for engaging with different instructional styles, such as lectures, seminars, group work, and hands-on experiences (Entwistle & Peterson, 2004). Accordingly, Hanover (2017) describes that students of English at university are required to develop effective learning strategies and become independent learners. Independent learning is an approach that encourages students to create their own learning experiences as Kuh.,et al. (2006) argue that independent study is a fundamental aspect of university teaching methods, where students are expected to invest significant time and effort into self-directed learning activities. Learning strategies in higher education encompass a diverse range of approaches, including individual learning, which allows students to engage deeply with the material at their own pace; the spacing of study sessions, enhances retention through distributed practice; and previewing material, which primes the brain for more effective learning, along with collaborative learning, technology-based learning, reverse classroom strategies, and independent learning (Dunlosky et al., 2013). Furthermore, Biwer et al. (2020) describe effective learning techniques that include underlining, summarizing, rereading, keyword mnemonics, mental imagery, elaborative inquiry, self-explanation, and more. However, the problem concerning approaches to learning at the university level and the development of independent learners is multifaceted and critical to students' success in higher education. For example, Wingate (2007) indicated that emphasis is placed on the need for universities to support students' transition from passive to active learning by proposing a framework that fosters the development of independent learning skills through targeted interventions

and support systems. One of the basic issues lies in the lack of effective learning strategies among university students, with many depending on passive learning methods. The overreliance on technology, exam-centric assessment, and time management difficulties also contribute to this issue.

In summary, by exploring how the factors shape students' learning behaviors and their transition to becoming independent learners could provide valuable input. Additionally, interdisciplinary learning environments often present unique challenges and opportunities that may not align with traditional disciplinary paradigms.

Eisenstadt's works from 1986 and 1987, for example, explore the influence of the intelligentsia's dependence on external forces. Throughout history, universities have spread extensively with consistent objectives and content (Riddle 1990, 1993). During the Middle Ages, they maintained their global foundations while expanding alongside the Western system (Rashdall 1987; Thorndike 1944; Altbach 1998). Current research demonstrates a consistent pattern of isomorphism in universities' international growth, with Windolf (1997) illustrating similar growth patterns in Western countries and Schofer and Meyer (2005) observing worldwide enrollment growth over the twentieth century, especially in the last five decades. Additionally, studies on university educational programs reveal comparable patterns. In the eighteenth century, universities transformed into global institutions while preserving much of their medieval cultural identity. By the nineteenth century, they adopted a more scientific and modern approach, and by the twentieth century, they embraced extensive rationalism. (Frank and Gabler 2006; (Gabler and Frank, 2005) analyze changes in faculty composition worldwide throughout the twentieth century, uncovering consistent global patterns and increasing similarity over time, including a slight decrease in natural sciences focus, a substantial increase in social sciences, and a dramatic decrease in humanities. Brint (2002) notes that applied disciplines

outperform basic subjects across education. Ramirez and Wotpika (2007) and Drori and Moon (2006) observe similar patterns in student enrollments in different academic disciplines over the last three decades of the twentieth century.

Accordingly, Riddle (1990) observes that higher education institutions often employ exaggerated self-representations or "fabrications of tradition" akin to those used by nation-states to present themselves as universities (Hobsbawm and Ranger 1983). Traditional perspectives on higher education posit that certain programs produce knowledge and skills that directly enhance individual roles and societal progress, achieved not only through research and invention but also through the specialized instruction of graduate students. Unfortunately, despite the significant expansion of higher education over the past century, there is a notable lack of reliable evidence supporting this claim (Rubinson and Browne 1994). This lack of evidence does not appear to have impeded the progress of universities (Chabbott and Ramirez 2000). Nonetheless, establishing a definitive cause-and-effect relationship between university education and increased productivity, or demonstrating clear superiority in performance compared to individuals with lower levels of education, has proven challenging (Boudon 1973; Berg 1970). Previous literature research has consistently failed to show a noticeable overall impact of increased post-secondary education on economic development, whereas secondary education has regularly yielded significantly favorable results (Benavot 1992; Barro 1991; Levine and Renelt 1992; Schofer et al. 2000). This situation becomes clearer when considering higher education as an institution aimed at connecting societal social structures with widespread cultural understanding, rather than merely preparing graduates for specific tasks.

Universities set standards for determining authoritative knowledge within a community, with such knowledge being classified based on its social

construction and recognition by authorized individuals (Collins 1979). The roles of "student" and "graduate" are defined by broadly institutionalized rules, and significant differences in resources and quality among higher education institutions often result in minimal variations in social outcomes, assuming individual characteristics such as intentions and abilities remain constant. This issue, (Jacob 1957; Feldman and Newcomb 1969), continues to spark debate (Pascarella and Terenzini 1991). Studies identifying positive "effects" often overlook student selection factors, as noted by Kruger and Berg (2002), Useem and Karabel (1986), and Bowen and Bok (1998). The attainment of a college degree significantly influences an individual's prospects and expectations, largely independent of the specific institution or student experiences. Graduate status or the generalized charter is conferred upon the student (Meyer 1983), making personal attributes such as intentions, plans, and individual choice mechanisms crucial, thereby emphasizing the importance of formal regulations.

Higher education reflects stratification and delineation in its impact on individual life outcomes compared to American community colleges showing comparatively diminished positive effects on alumni compared to four-year institutions (Dougherty 1994; Brint and Karabel 1989). Global similarities in cultural content and change trajectories, universities exhibit significant organizational diversity both across national borders and within nations, such as varying public-private ratios in higher education (Levy 1986). Certain university systems are more resistant to change and less integrated with evolving societies, while others demonstrate notable receptivity (Ben-David and Zlockzower 1962; Lenhardt 2005).

METHOD

This case study methodology was chosen for this research due to its aim for an in-depth exploration of the experiences of full-time students at

Yogyakarta State University. Yin (2009) highlights that case studies are ideal for investigating phenomena in their real-life context, which is crucial for understanding the complexity of students' learning experiences. An explanatory case study approach was further employed to uncover the underlying causes and relationships within this context. Explanatory research is particularly useful for not only determining what is happening but also for explaining why it is happening, making it well-suited to exploring the dynamics of independent learning. The study adopted a mixed-methods approach, combining qualitative and quantitative methods to capture both the depth and breadth of the students' behaviors and experiences.

To achieve the comprehensive understanding, interviews, observations, and questionnaires were distributed. Semi-structured interviews with 17 students from Yogyakarta State University's seven-level or master's programs provided in-depth insights into their opinions, challenges, and approaches to independent learning. The flexibility of these interviews allowed for the exploration of personal experiences and subjective perceptions. Observations were then conducted to complement the interviews by offering an objective view of the students' real-life study habits, classroom behavior, and interactions with learning materials, thus validating the qualitative findings. Additionally, questionnaires were administered to gather quantitative data on students' opinions regarding independent learning and higher education approaches, capturing measurable trends in aspects such as concentration, motivation, and course evaluations. The structured nature of the questionnaire provided a broader view of trends across the students' experiences. To analyze the collected data, a triangulation approach was employed to ensure the validity and reliability of the findings. By comparing and cross-referencing qualitative data from interviews and observations with quantitative data from the questionnaires, the study identified patterns and discrepancies that provided an

understanding of the students' learning experiences. Although pilot questionnaires were also utilized, it is important to acknowledge the limitations of this method, such as the potential for misinterpretation of questions constraints on the broader applicability of the findings (Denscombe, 1998). The qualitative data from the interviews was analyzed thematically, identifying recurring themes related to independent learning and educational approaches. Observational data was then compared with the interview findings to confirm or refine these themes, offering a more objective view of student behavior and engagement. The questionnaire data quantified trends and patterns in the students' opinions and behaviors, which were then compared with qualitative insights to highlight areas of agreement or divergence. This triangulation process reduced the potential for bias, enhanced the credibility of the study, and ensured a comprehensive analysis of the research problem.

Table 1. Main themes and questions

Main Themes	Questions
Theme 1: motivational issues	• What kind of independent learning activity do you take part in? • What kind of approaches to higher education have you done?
Theme 2: learning environment	• What type of setting fosters optimal conditions for enhancing your capacity for self-directed learning, specifically in higher education?
Theme 3: positive or negative perceptions	To what extent do resources have an impact on your learning experience?
Theme 4: student opinions on independent learning and approaches to learning in higher education	• What kind of things do you gain from experiencing independent learning? • What kind of things did you gain from implementing approaches to higher education?

FINDINGS AND DISCUSSION

The questionnaire results will be discussed using four main themes:

- *Theme 1*: motivational issues
- *Theme 2*: learning environment benefits
- *Theme 3:* positive or negative perceptions
- *Theme 4:* student opinions on independent learning and approaches to learning in higher education.

Theme 1: motivational issues

Students participated in a range of activities to promote self-directed learning. These activities involved collaboration, such as group teaching and knowledge sharing, as well as individual writing projects with instructor guidance. For their independent reading, they selected and examined various books and articles. This was then followed by engaging discussions and writing reflections. Higher education employs a variety of instructional methods, including lectures, seminars, and workshops. These methods were designed to encourage active engagement and critical thinking. The students also participated in problem-based and project-based learning, tackling real-world challenges. They engaged in flipped classrooms to facilitate in-depth discussions and utilized online and blended learning methods to provide flexible access to educational resources. Experiential learning methods offered hands-on experiences. These methods helped to enhance key skills such as autonomy, community engagement, and research skills. These skills were developed through independent study, service learning, and research methodologies. Peer teaching, interdisciplinary learning, and critical pedagogy were instrumental in fostering collaborative learning, diverse perspectives, and analytical thinking as described in table 2:

Table 2. Perceived participation in an independent learning activity

What kind of independent learning activity do you participate in?	Response	
What kind of approach to higher education have you taken?	Yes	No
Group teaching	83%	16%
Knowledge Sharing	85%	28%
Writing Reflection	92%	13%
In-depth Discussion	75%	38%
Lectures	95%	10%
Conference	89%	15%
Workshop	74%	53%
Online and Blended Learning	87%	32%
Peer Teaching	92%	15%
Percentage of total	**84%**	**42%**

The data illustrates the varied responses to different teaching methods based on a percentage scale. Lectures received the highest approval at 95%, indicating widespread support for traditional lecture-based instruction. Writing reflection scored notably high at 92%, showcasing a strong inclination toward reflective practices. Peer teaching also demonstrated positive sentiments with 92% approval, emphasizing the value placed on collaborative learning. Online and blended learning received an 87% positive response, reflecting the acceptance and effectiveness of digital learning formats. In-depth discussions and seminars had approval rates of 75% and 89%, respectively, suggesting moderate to high support for interactive teaching methods. Workshops highlights approval at 74%, indicating a significant preference for hands-on, practical learning experiences.

Theme 2: learning environment

The design of educational spaces is crucial for fostering an environment that promotes concentration and self-directed learning. This involves creating comfortable and well-lit study areas, as well as providing access to technological resources such as high-speed internet and digital libraries. In

addition, students were provided with institutional support such as academic advising, tutoring services, and skill development workshops to enhance their ability to learn independently. In addition, it is crucial to create learning environments that are accessible and inclusive for all students, providing the necessary accommodations and support. It includes various factors such as the physical setting, technology, institutions, curriculum, culture, and social aspects as described in the provided table.

Table 3. The categories generated from the responses to question 3 and example student responses

Category and % of responses	Brief description of the category	Example: brief of the example of category responses
Access to Information 75%	Resources have a substantial influence on learning by facilitating access to information, be it through books, online materials, or other instructional methods.	***Student 1:*** I think resources played a crucial role in providing information. ***Student 14:*** in my opinion, the significant influence of resources can broaden educational horizons.
Quality of Education 54%	The presence of superior resources, including meticulously crafted courses, seasoned instructors, and current materials, significantly impacts the extent and efficacy of the learning process.	***Student 4:*** well, up-to-date materials have impacted the depth and efficiency of learning. ***Student 12:*** the quality of education basically based on the resources. If we have good resources, then it will be in line with our learning.
Technological Tools 67%	Utilizing technical resources like as computers and the internet can augment learning through interactive platforms, simulations, and multimedia	***Student 16***: in my experience, good multimedia content can facilitate learning materials.

	content.	
Diversity of Learning Materials 79%	Diverse resources, including multimedia, tangible illustrations, and practical implementations, enhance the depth of comprehension in many areas.	***Student 5:*** As everybody knows. You know, using tech tools really spices up and makes education way better. ***Student 10:*** You know, having all sorts of stuff like videos, real-life examples, and hands-on activities helps me get a solid grasp on things in a bunch of different areas.
Learning Environment 83%	Sufficient physical resources, such as classrooms, libraries, and study spaces, foster an optimal learning environment, hence enhancing the entire learning experience.	***Student 8:*** You can really feel how much a good learning environment boosts and makes the whole learning experience way better for students.

Theme 3: positive and negative perceptions

Resources have been instrumental in shaping independent learning experiences and higher education. In the field of higher education, resources play a crucial role in fostering a range of important elements, including in-depth knowledge, research, critical thinking, diverse perspectives, independent learning skill development, and the practical application of knowledge. In addition, these resources play a role in promoting flexibility, accessibility, enrichment, personalized learning, and global awareness. Interacting with these resources empowered individuals to continue learning, be prepared for assessments, and be ready for their future careers, ultimately enhancing their overall learning experience as shown in table 4.

Table 4. The categories generated from the responses to question 4, and the example student responses

Category and % of responses	Brief description of the category	Example: brief of the example of category responses
Positive Perceptions:		
Access to Comprehensive Information 78%	Resources have a beneficial effect on learning as they offer access to a diverse array of information, facilitating a more Comprehensive comprehension of subjects.	***Student 4:*** I think that; when you get to check out all kinds of different materials, it really helps you understand the subject a whole lot better. ***Student 15***: Having a lot of cool stuff really makes the learning journey awesome for us in college.
Enhanced Learning Opportunities 82%	High-quality resources, such as meticulously crafted courses, reasoned teachers, and current materials, enhance learning.	***Student 2:*** You can see that when we focus on quality, it makes a really huge difference in understanding things.
Technological Advancements 88%	Utilizing technological tools and Internet resources improves learning by including interactive platforms, simulations, and multimedia information.	***Student 9:*** Using interactive stuff like simulations and videos really made a big difference in how we learned. ***Student 17:*** Adding all this tech stuff made the learning way that I experienced feel better, showing how cool it is to use tech in education.
Negative Perceptions:		

Inequality in Access 76%	Insufficient access to resources can lead to inequalities, impeding the educational process for persons who do not have the required materials, technology, or educational facilities.	***Student 6:*** It's tough for me when I don't have internet access, especially on campus. It makes learning a real challenge.
Outdated Materials 85%	Lack of adequate or obsolete materials might hinder the learning process since students may be deprived of the latest.	***Student 12:*** Dealing with old materials and trying to keep up with all the new information coming in is a real struggle for me. ***Student 14:*** You know, having access to the latest and most relevant materials is key to making sure our education stays effective and up-to-date.
Overreliance on Resources 88%	Relying solely on resources without promoting critical thinking abilities can result in a passive learning encounter, impeding the cultivation of autonomous thinking.	***Student 3:*** Relying too much on these resources made it kinda tough to think for myself, you know? It really emphasizes how important it is to balance using resources with developing my own analytical and independent thinking skills in the learning process. ***Student 9:*** If I just rely on resources all the time, it might make me

	learn passively, and that's not great because it can hold back my independent and critical thinking skills.

Theme 4: student opinions on independent learning and approaches to learning in higher education

Self-directed learning in higher education offered students numerous advantages that go beyond achieving academic excellence and influence their personal and professional growth. It fosters critical thinking and problem-solving abilities, as students are prompted to analyze, question, and synthesize information independently. This method of learning promotes thorough comprehension and inventive problem-solving skills. In addition, when students toke charge of their own learning, they cultivate valuable skills in self-regulation and time management that are crucial in academic and professional environments.

Engaging in independent learning further develops students' research and information literacy skills as they learn to efficiently locate, assess, and utilize information. This enhances their motivation and engagement with the subject matter, resulting in a more enriching educational experience. Independent learning also emphasizes individual study but also includes opportunities for collaboration. Additionally, it allows students to enhance their communication and teamwork abilities. As students become more adept at managing their learning, they often develop confidence that contributes to their personal growth. Additionally, the findings are supported by the interviews conducted with students on September 5th, 2023 below

Student 3

"Mixing up the ways we learn in college isn't just about getting facts. It gives us all sorts of skills we need for success in our personal, academic, and

professional lives."

Student 7

"Encouraging curiosity and adaptability is super important in our learning journey. It's what really helps us learn on our own. When we're curious, we stay excited about learning new stuff, and being adaptable gives us the skills to do well in all sorts of different areas."

Student 9

"When I use different resources, it's like I get to see things from all sorts of angles. It helps me really understand stuff and be more ready to use it in the real world. Doing it this way gets me all set for learning more in the future and being ready for whatever my career throws at me."

These perspectives underline the multifaceted benefits of integrating diverse learning approaches, nurturing essential skills, fostering curiosity, and promoting adaptability. This synthesis of methodologies, qualities, and resource utilization stands as a testament to the comprehensive educational experience that prepares students not just with information but with the adaptability and skills necessary for lifelong success. Boud and Soler (2016) highlight the concept of sustainable assessment, emphasizing the importance of integrating various assessment methods to support students' development beyond merely acquiring knowledge. They explain that diverse assessment approaches can foster critical thinking, adaptability, and lifelong learning skills, aligning with the goal of preparing students with the qualities necessary for long-term success. Put, the results showed a substantial interaction between independent and collaborative learning methods in higher education. Students participate in a combination of independent learning and collaborative tasks, indicating a blended learning paradigm that integrates both conventional and contemporary teaching approaches. Garrison, Anderson, and Archer (2001) state that independent and

collaborative learning methods can be effectively integrated within an online learning environment. They present a model that combines these approaches, highlighting how this integration supports critical thinking and enhances learning through computer conferencing. This combination is essential for building abilities such as analytical reasoning, resolving complex issues, and adjusting to new circumstances. The study questions the conventional division between independent and collaborative learning, proposing that a more unified approach may yield more advantages in contemporary educational environments. It prompts the inquiry of how higher education institutions can most effectively organize their curricula and learning environments to facilitate this model. Jonassen and Land (2000) explore the theoretical foundations of learning environments that blend independent and collaborative learning methods. They argue that integrating these approaches enhances students' abilities in analytical reasoning, problem-solving, and adaptability, and challenge traditional educational models that separate these methods.

An important discovery is the significant influence of motivation and resources on the formation of students' learning experiences. The student's motivation to engage in self-directed learning is closely connected to the accessibility and variety of educational resources and approaches. This highlights the imperative for educational institutions to not only offer sufficient resources but also to establish an atmosphere that fosters curiosity and adaptation. The curriculum and teaching methods are also crucial factors to be considered. Deci and Ryan (2000) explain how different types of motivation, including intrinsic and extrinsic, affect students' learning experiences and psychological needs. Their study emphasizes the importance of providing adequate resources and creating a supportive learning environment that fosters curiosity and adaptability. They argue that aligning motivational factors with resource availability and teaching methods

significantly impacts students' engagement and overall learning outcomes. Papert (2023) explores how teaching methods that emphasize critical thinking, problem-solving, and active learning foster independent learning among students. He highlights the effectiveness of project-based learning and innovative strategies, such as using computers, in promoting autonomy and inquiry. The study addresses the crucial role of institutional culture in supporting self-guided learning, emphasizing the importance of a supportive academic community and peer interactions. Classes that emphasize critical thinking, problem-solving, and active learning methods, like project-based learning and flipped classrooms, foster a sense of independent learning among students. This is further emphasized by the overall institutional culture that values independence, inquisitiveness, and self-guided education, along with a supportive academic community that encourages peer interactions.

The beneficial student attitudes towards self-directed learning also demonstrate its substantial influence on a wide array of skill enhancement, extending beyond academic achievement. Students have indicated that independent learning approaches help the development of comprehensive life skills, as seen by gains in critical thinking, creativity, and self-regulation. This study indicates a change in educational emphasis from simply acquiring knowledge to fostering a varied range of skills. The discussion should analyze the consequences of this change for the development of educational programs and instructional approaches in higher education.

The study illuminates the difficulties involved in implementing successful independent learning practices, including the necessity to guarantee fair access to resources and accommodate various learning styles and needs. This provides an opportunity to explore how higher education institutions might effectively handle these issues while using the benefits of independent learning approaches. This encompasses the examination of methods to assist

varied student populations, the efficient incorporation of technology, and the cultivation of an all-encompassing learning atmosphere. Brown and White (2022) highlight the challenges faced by higher education institutions in implementing independent learning practices. They emphasize issues such as ensuring equitable access to resources, accommodating diverse learning styles, and integrating technology effectively. Their research examines various strategies for supporting diverse student populations and creating an inclusive learning environment. Key findings include the importance of providing adequate resources, leveraging technology to support independent learning, and fostering an environment that caters to different learning needs.

In addition to the current findings, the study's discoveries have wider implications for educational policy and practice. It promotes a comprehensive educational strategy that combines self-directed learning with organized, cooperative activities. Achieving this equilibrium is crucial for cultivating a variety of aptitudes that are indispensable in the contemporary labor market and for continuous education throughout one's life. The discussion can consider how these insights can influence policy decisions and educational reforms to foster the development of learners who are more flexible, resilient, and comprehensive.

CONCLUSION

By highlighting the complex nature of independent learning within higher education, there has been limited research on the interpretations and perceptions of the 23–28 age group when it comes to independent learning. The study revealed that most of the students are receptive to self-directed learning and have shared understandings and perspectives on the concept of independent learning. This finding is in line with the perspectives of Kesten (1987) and Entwistle (2004), who propose that a shared understanding of

independent learning across different institutions can enhance an individual's learning experience and facilitate student autonomy by eliminating barriers and, in turn, remove obstacles to student autonomous learning (Wilde & Hardaker, 1997). The study unveiled that participants were involved in a variety of activities, both collaborative and individual, which helped foster the growth of important skills such as critical thinking, problem-solving, and creativity. Methods used in higher education, such as lectures, seminars, and experiential learning, have been shown to improve important skills like communication, adaptability, and global awareness. Identifying resources as essential in motivating and empowering learners in independent learning and higher education contexts is of utmost importance. The study highlighted the significance of creating an educational atmosphere that encourages both independent and collaborative learning. The insights emphasize the importance of thorough and well-supported educational experiences that encourage independence, analytical thinking, and continuous learning.

Recognizing the constraints of the study, particularly its methodology and the narrow demographic it targeted, there is a distinct opportunity for additional investigation. Future research endeavors could enhance their outcomes by encompassing a broader range of participants and even combining quantitative methodologies to authenticate and broaden the scope of these discoveries. Including a wider range of educational contexts and a broader age range could offer a more comprehensive comprehension of the dynamics of independent learning in higher education. Furthermore, doing research on the enduring effects of self-directed learning methods on professional achievement and continuous learning could provide significant knowledge for educators and policymakers.

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