

Podcasts: A Generator of Non-Formal Learning

René Holm Andersen¹ and Susanne Dau²

¹Department of Act2learn, leadership and organization, University College of Northern Denmark, Aalborg, Denmark

²Department of Nursing Education and the Unit of Reflective Practice-based Learning, University College of Northern Denmark, Aalborg, Denmark

rea@ucn.dk

sud@ucn.dk

Abstract: The present study examines the relationship between the use of podcasts (mp3 files) as a non-formal learning tool. The study's epistemological origins lie in Dewey's pragmatism and learning and reflection theory, including the learning approach at University College of Northern Denmark's (UCN) "Reflective Practice-based Learning" (RPL). This paper focuses on how podcasts can increase students' learning and reflection skills by using podcasts as a generator for non-formal learning. The study is based on two different classes that attend an extended course in digital technologies and project management at the Danish University of Applied Science (UCN). The study applies integrated mixed-method data collection: observations, a quantitative survey, and semi-structured interviews. The observations were carried out during four (project management) and seven (digital technologies) full-day lectures in two different classes. These offered an insight into the extent to which the students acquired knowledge by listening to podcasts between classes. The quantitative data consisted of a survey of 65 students, all of whom participated in the courses. The survey was performed as a part of the evaluation at the final course lectures. The semi-structured interviews (ten in all) were used to investigate how the use of podcasts affects students' reflective skills. Ten semi-structured interviews were conducted. The data in this study finds that podcasts/podcasting can have a positive effect on students' non-formal learning in higher education. Established on the findings, there is evidence indicating podcasts as a supplement in higher education can increase students' motivation toward non-formal learning. The study reveals that podcasts hold the potential to stimulate the student's non-formal learning and increase the students' reflective skills. Based on this evidence, further research is suggested e.g. studies that include an extended investigation on the benefits of students' non-formal learning by using podcasts.

Keywords: podcast, non-formal learning, higher education, reflection, learning media, extended courses

1. Introduction

The use of podcasts in Denmark has increased over the last eight years. The Danish Media Research Centre finds that in 2013 5 % and 2020 29% of the population listened to podcasts every week (Kidde & Niegel, 2021). Listening to podcasts is an activity taking place outside educational settings. A study reveals that most of the listeners listened to the podcasts in their homes or on the go (Ziengs, 2021), for instance on their way to work/school or during other activities (McGarr, 2009). Furthermore, statistics confirm that 40% of the Danish population in 2020 had listened to a podcast through the last three months (Tassy, 2020). 13% of these used podcasts for learning activities for example self-development and languages (Kidde & Niegel, 2021). The present study set out to discover the relationship between podcasts and non-formal learning in higher education, as there is minimal research on how podcasts influence non-formal learning.

Non-formal learning refers to learning through organised activities where learning assistance appears. A frequent cause of non-formal learning could be in-company education, designed online learning like open educational resources, and programmes organised by civil organizations for their members (HIPPE, 2021). Non-formal learning can be used to support formal learning and encourage students and others to develop their knowledge and increase their skills. Normally, non-formal learning is accessible through times when formal learning is not, for example, after the end of the working day and during weekends (Smith, 2022). Andersen & Dau (2021) find that existing research indicates optimism toward podcasting as a learning medium in higher education, supporting more flexible, reflective, and engaging learning environments. Furthermore, Heller (2020) describes how podcasts can offer graduate students in education an informed capability to engage emerging information that will encourage evaluation of improvements in their educative environments. This study sets out to find the relation between the use of podcasts and non-formal learning and focuses on reflection and learning skills.

Throughout this study, the definition of podcasts is produced digital episodes of audio content that are available on the Internet and can be downloaded or streamed on-demand directly on the consumers' media device (Drew, 2017). A podcast can be based on explaining or discussing a particular idea, perhaps as part of a series (Andersen

& Dau, 2021). A podcast is stored on a website, App or another internet location, like a learning management system (LMS). The user can listen to the podcast here or download the podcast to their mobile device (Palenque, 2016).

Though this paper the classification of Podcast and podcasting means an MP3 file that is distributed to the listeners who can listen to the podcast “on the go” (McGarr, 2009).

2. Clarification of the context

The present study was carried out at the University College of Northern Denmark (UCN). It involved an investigation of students enrolled on elective courses as part of a vocational pedagogy diploma and a management diploma: (1) technologies in vocational education (which included seven full-day lectures); and (2) project management (four full-day lectures). Both courses concluded with an oral examination in which students were required to present a synopsis of two pages. Both courses were offered by the UCN department of continuing education, act2learn. The students were employed in full-time jobs and joined the programmes for several reasons (e.g., job requirements, skill development, and general interest). Their educational backgrounds ranged from vocational education and practical experience to master’s and PhD degrees. Before attending class, the students were presented with a podcast (located on the LMS) to supplement their reading. The podcasts featured one or two experts discussing a specific topic (Teckchandani & Obstfeld, 2016). The present study focuses on the relationship between podcasts and non-formal learning and discusses whether the former can increase students’ learning and reflective skills. Therefore, it is important to define the term reflection as it is understood at UCN.

3. Reflective practice-based learning

The UCN learning approach is called reflective practice-based learning (RPL). Here the principle is the dialectic between theory and practice combined with reflections (Horn, 2020). At UCNs department for continuing education (act2learn), the philosophy of RPL is different from the original philosophy, because the students attending Act2learn are different from the ordinary full-time students, primarily given students’ practice experience. The philosophy behind RPL in an Act2learn context is initiated in pragmatism. Brookfield (2000) explains how adult learners distinguish themselves from younger learners by using a dialectical as well as operating on a practical logic. Furthermore, Brookfield (2000) describes how adult learners operate metacognitively and holds the ability to critical reflection. Fundamentally the adult learner addresses an inquiry point of view in relation to their field of practice. This inquiry approach signifies that the new knowledge, the adult learner obtains, is never withdrawn from their field of practice (Elkjær, 2009). As this study sets out to find the relation between the use of podcasts and non-formal with a focus on reflection and learning skills, the above description of reflection and learning will be the core of this study.

4. Podcasts – learning and reflection (state of the art)

A recent study suggests that the benefits of learning and reflection can be achieved by using podcasts (Andersen & Dau, 2021). Based on the definition of non-formal learning where students learn outside a formal learning setting as Smith (2022) describes it, podcasts could lead to learning and reflection. It has previously been observed that by using podcast the students learning ability can be increased, especially podcast with summaries which is useful in learning core content (Almeida-Aguiar, 2016). Furthermore, students can improve their listening skills and vocabulary by listening to podcasts (Gonulal, 2020). Using podcasts for revision of content studies finds that this could lead to deeper learning thus the students involve themselves in the learning process because they are listening to the podcast. In addition, it supports the students’ engagement and self-regulation skills (Gachago, et al., 2016). Some studies have suggested that podcasts have the potential to provide students with content-related language and thereby give them a vocabulary they can use in class (Riddell et al., 2020). It has previously been observed that students listening to a podcast can remember examples from the podcast much longer than simple vocabulary terms (Hatfield, 2017). Research has shown that podcasts allow the students to listen while doing activities and that listening to a podcast demands less mental energy than conventional learning layouts (Riddell, et al., 2020). Furthermore, studies of social work have shown that students acquire a deeper critical understanding of theory by listening to podcasts as a supplement to their reading and that they feel better prepared before attending class (Ferrer, 2019 & Andersen, 2018).

Andersen & Dau (2020) highlights how the podcast let students overcome their state of mind and create a language concerning a particular topic which is a crucial ability when reflecting. Accordingly, Almeida-Aguiar

(2016) has demonstrated that when listening to podcasts, students are provided with means to discuss certain subjects during class, which can also minimize doubt and hesitation and help the students understand (Andersen & Dau, 2020). Moreover, student-created podcasts help students relate to their field of practice and not be purely grade-orientated. Studies reported how the process of podcasting creation makes a shift in their thinking about their field of practice (Ferrer, 2019). Moreover, Middleton (2016) states that podcasts can introduce new forms of learning, develop and relocate existing activities, and help when reviewing class activities. Using podcasts students can be inspired to think more deeply on a specific topic (Teckchandani & Obstfeld, 2016). Additionally, Norsworthy and Herndon (2020) discovered that podcasts could be a transformative tool in management education. Researchers have shown that podcasts and podcasting are powerful strong reflective tools for developing engineering students' communication skills (Ballinas-Gonzalez et al., 2020). Furthermore, Hatfield (2017) found that a narrative podcast mixed with a conventional classroom lecture encourages students and increases their confidence. Moreover, narrative podcasts are regarded less omniscient than fact-based lectures since they include fact-based teaching and narrative illustrations (Hatfield, 2017). The flexibility of a podcast makes it possible for students to discover content in new ways and fit their schoolwork into their schedule (Martins et al., 2020). Moreover, students participation is supported by listening to a podcast, and the flexibility offers them the opportunity to relate to the content on-demand (Gachago, et al., 2016).

5. Methodology

The present study used a mixed-method approach to gather quantitative and qualitative data (Cheung, 2019). The mixed-method approach involves using a minimum of two methods, usually quantitative and qualitative (Johnson et al., 2007). This method allows the researcher to gain an in-depth understanding and validation of the topic. Greene (2007) describes how the mixed-method approach is particularly significant in educational research because it offers room for an understanding of the complexity of the subject. The present study includes three data collection methods; semi-structured interviews (face-to-face and online [$n = 10$] of 15 to 45 minutes duration, a survey ($N = 80$; $n = 65$), and participant observation ($N = 80$; $n = 80$).

Semi-structured interviewing revealed the student's lifeworld and obtained insights on how podcasts used as non-formal and informal learning media can improve learning and reflection skills (Kvale & Brinkmann, 2015). The interviews focused on the students' use of podcasts as a medium for non-formal learning. The participant observations were conducted in lectures and the final oral examination. They were documented by field notes taken by one of the researchers. The quantitative data were analysed to establish meaning through condensation. The results were summarised and themes were identified (Brinkmann, 2009). Three detailed schemas with the students' statements were obtained and patterns were detected according to the different data types. The analysis was inspired by the principles of thematic analysis as defined by Clarke and Braun (2013). The thematic analysis generated three main topics.

6. Findings

The findings reveal that podcasts and podcasting played a significant role in non-formal learning. Most of the students participating in the survey find that listening to podcasts results in a better understanding of the topics. Furthermore, the students find that flexibility positively affects their learning and reflection.

The results presented below are organised into the following categories: non-formal learning and learning, non-formal learning and reflection, and the transition from non-formal learning to formal learning.

7. Non-formal learning and learning

The survey found that only four participants did not finish listening to the podcasts which were provided to them. Three of the participants did not find any learning benefits from listening to the podcast and these three participants couldn't use the knowledge presented in the podcast during lectures. However, there was a positive correlation between listening to the podcast and getting learning benefits before attending lectures as approximately 90 % benefited from listening to the podcasts. When asked if they could use the knowledge gained from podcast during the lectures one participant states "yes, the relationship between what I read, listen to, and do in class is strong," while another said, "I feel well-prepared for class." This corresponds with what Andersen & Dau (2021) find in the relationship between learning and the use of podcasts. Furthermore, these statements suggest that non-formal activities like a podcast can serve as assistance to formal learning and provide an opening for the participants to develop their knowledge and increase their developmental skills (Smith, 2022). In relation to what Smith (2022) describes as non-formal learning one participant claimed that the use of

podcasts “worked as a great appetizer to the different topics and they (podcasts) helped me on track towards the class content” while another explained that “the podcasts gave me some concrete examples of practical elements which supported my transfer from lectures to my one field of practice.” These statements showed how podcasts served as a non-formal learning activity that improved the students’ learning because they supplemented the formal system (Coombs et al., 1973).

The majority of participants agreed with the statement that listening to podcasts made them feel well-prepared for lectures. Only a few of the respondents (7%) indicated that listening did not give them any advance. There was a positive correlation between listening to podcasts and feeling well-prepared. One participant said that “together with the literature, I felt well-prepared, I thought it was easy to understand what I was reading when I had listened to the podcast first.” This indicated that listening to podcasts as a non-formal learning activity can increase students’ understanding of a certain topic, as Palenque (2016) also stresses. The participant observation notes revealed that the participants used the arguments and words/vocabulary they had been exposed to in the podcasts during class. This finding is in accordance with Riddell et al (2020) finding in higher education. Riddell et al. (2020) describe the potential podcast give to provide a language and context to the students and give the students a vocabulary they can use during lessons. Just over a quarter of those who answered this question reported that podcast is an excellent supplement to ordinary literature.

A variety of perspectives were expressed when asked what podcasts provided the participants with. One participant states that the use of podcasts “gives a form of “liberty” and good conscience by sitting in the sun and listening”, Another participant pointed out that “my motivation was greater because I did not have to sit in front of my PC to learn something.” These statements align with the usefulness of making non-formal education accessible when formal education is unavailable, for instance, after college hours or at weekends (Smith, 2022). The informants also indicate a positivity in the flexibility that non-formal learning gives them which parallels to what Andersen & Dau (2021) finds in terms of optimism towards podcast as a learning media in higher education. Heller (2020) describes how podcast provides students in education an informed ability to engage emerging information and will foster evaluation of improvements to be made in their educative environments. One participant argues how podcasts in a non-formal setting gave them a better understanding of project management: “they’re a combination of theory and practice, they gave me a realistic understanding of project management; for example, before attending the class, I did not believe that stakeholder analysis was important, but after listening to the podcast I understood its relevance.” This statement indicates how podcasts can facilitate students’ understanding of particular topics in a non-formal setting.

8. Non-formal learning and reflection

Non-formal learning and reflection seems to be integrated, but how can a podcast generate reflection in a non-formal setting? As mentioned above, the students at act2learn are adult learners taking extended courses. Therefore, reflection might be encouraged by using dialectical as well as practical logic (Brookfield, 2000). The majority of participants (60%) argued that podcasts helped them reflect on their own field of practice and the core content. One participant argued that “listening to podcasts allows me to reflect more when listening than reading.” Over two-thirds of those taking the vocational course reported that they were able to reflect on how they could use podcasts in their field of practice. This view was echoed by a participant from the project management class who stated that he reflected on the fact that “project management is a matter of a common language, and project management is about communication.” Because adult learners take an inquiry-based point of view of their field of practice, new knowledge the adult learner obtains is never withdrawn from their field of practice (Elkjær, 2009). Therefore, the reflection based on the podcast will always relate to some practice. Non-formal learning provides the opportunity for the students to connect reflection to the field of practice, and it allows the individual to construct knowledge and reflection through their experience, skills, and choices (Smith, 2022), because the non-formal setting is outside the University. When the participants were asked if listening to podcasts strengthened their reflection, 90% confirmed that it did. One stated that “listening to podcasts made me a little wiser and opened a window to the world more than reading.” Another participant suggested that podcasts generate reflection because “they provoke additional thoughts and reflections when I combine it with the literature.” These statements are aligned with those Brookfield (2000) finds who describe how adult learners operate metacognitively and can be critically reflective. Non-formal learning in the form of podcasts allowed the participants to reflect outside the established formal system; one participant replied to the above question by saying “yes when I combine it with exercise in the forest.” In the final part of the survey, the participants were asked if they listened to the podcasts on the go. Forty out of the 65 participants were

listening to the podcast on the go the final part was listening in front of their computer taking notes or in a comfortable place in a non-formal setting. Of the 40 who listened on the go, 22 listened while travelling and the remainder during walks, cleaning, or exercise. These findings illustrate the flexibility and extended access to non-formal learning activities with a positive effect on students' reflective skills.

9. The transition from non-formal learning to formal learning

The current study found that a transition took place during the period when the students used podcasts in a non-formal setting. Over the period the students started to use the content from the podcasts in a formal learning setting. This study discovers two elements of transition. Firstly, the students used content from the podcast in the class activity, secondly, the students used the content from the podcast in their final reports and some cases included the podcasts in their final report. More than two-thirds of the participants confirmed that listening to podcasts provided them with a more in-depth understanding and thereby a firmer foundation for participation in-class activities such as debates. One of the participants described how he normally did not read content before class because it was only repeated in the lectures: "I wanted to listen to the podcasts before attending class because they gave me another dimension and I could use that in-class activities." Another participant explained that "the podcasts helped me to acquire theoretical knowledge and use it in class." This corresponds with Smith's (2022) findings revealing that non-formal activities can support formal learning. An interviewed participant argued that listening to podcasts provided motivation "there is a dynamic in a podcast you can't get in the literature; it motivates me to better understand the topic." This is in accordance to Andersen & Dau (2021) study confirming that podcasts encourage engagement in different learning environments and Hellers (2020) results that engagement might be improved. Out of the 41 participants joining the technologies in vocational education course, 10 wrote about podcasts in their synopsis and 23 used the podcasts as references. Ten out of the 24 project management students used the podcasts as references in their synopses. This study supports evidence from previous observations by Smith (2022) who finds that non-formal education can serve as a support to formal learning and contribute as an opening for students and other individuals to develop their knowledge and increase their developmental skills.

10. Conclusion, discussion, and future research

The present study aimed to determine the relationship between the use of podcasts and non-formal learning and focused on reflection and learning skills. The results of this investigation illustrate that there to some extent is a positive relation between podcast and non-formal learning. The most important finding from this study is that the participants used podcasts in formal learning situations such as lectures and during their final exams. The data suggest that non-formal activities such as podcast listening can support formal learning and offer an opening for the participants to develop their knowledge and increase their developmental skills at their own pace. The data also suggest that reflection can be fostered by using podcasts in a non-formal setting. Non-formal learning allows students to relate their reflection to their field of practice because it takes place outside the university and allows them to develop their reflective skills through personal experience. The findings contribute to our understanding of how podcasting in a non-formal setting can contribute to learning and reflection and how the knowledge contained therein can be transferred from what is a non-formal activity into formal contexts. A limitation of this study is the relatively small sampling in the quantitative survey which is too small to reveal any significant statistics regarding the topic of this paper. The semi-structured interviews were chosen for the opportunity to add a personalised voice to the quantitative survey and allow the participants to reflect on their experiences. However, one of the researchers was also one of the course lecturers, so there was a risk that their dual role may have influenced the data collection and analysis. However, this was minimised by the presence of another researcher who had no personal knowledge of the participants. In all, the pragmatic nature of the mixed-method approach helped the present authors to understand how podcasts generate reflection and learning in a non-formal setting. To develop a full picture of how podcasts can generate learning and reflection, additional studies is needed including a larger population and longitudinal studies to determine the reflection benefits of using a podcast as a learning media in a non-formal setting. Furthermore, studies, where podcasts function as a part of the curriculum, could be of interest to determine how and if the students benefit from a podcast as a learning media in a formal learning setting. Additionally, studies where podcasts are used in an informal learning setting outside structured and formal learning settings, could be of interest.

References

Almeida-Aguiar, C. a. C. A. A., 2016. "Exploring Podcasting in Heredity and Evolution Teaching." *Biochemistry and Molecular Biology Education* Vol. 26 No. 3, pp. 429-432.

- Andersen, R. & Dau, S., 2020. The Potential of Podcasts as a Learning Medium in Higher Education. 19th European Conference on e-Learning ECEL 2020, 28 10, pp. 16-22.
- Andersen, R. D. S. N., 2018. Podcast as a Learning Media in Higher Education. The 17th European Conference on E-Learning, 01 11, pp. 424-430.
- Andersen, R. H. & Dau, S., 2021. A Review of Podcasts as a Learning Medium in Higher Education. Proceedings of the 20th European Conference on e-Learning ECEL 2021, 28 10, pp. 34-42.
- Ballinas-Gonzalez, R., Sanchez, B., Rodriguez-Paz, M. & Nolzco-Flores, J., 2020. "How the Use of an Internet Radio Program and Podcast Helped Civil Engineering Students Engage With Local Communities in Need." ASEE Virtual Annual Conference Content Access, Virtual On line, 06.
- Brinkmann, S. K., 2009. Interview Introduktion til en håndværk. 1 red. København : Hans Reitzels Forlag, København.
- Brookfield, S., 2000. Adult cognition as a dimension of lifelong learning. I: M. L. John Field, red. Lifelong Learning Education Across the Lifespan. 1st Edition red. London: Routledge, p. 13.
- Clarke, V. &. (2013). Teaching thematic analysis: Overcoming challenges and developing strategies for effective learning. The Psychologist, 26(2), pp. 120-123.
- Cheung, C. P., 2019. Towards Holistic Supporting of Play-Based Learning Implementation in Kindergartens: A Mixed Method Study.. Early Childhood Education Journal, Springer, 47(5), 4 6, pp. 627-640.
- Coombs, P., Prosser, R. & Ahmed, M., 1973. New Paths to Learning. New, International Council for Educational Development/UNICEF.
- Drew, C., 2017. Edutaining audio: an exploration of education podcast design possibilities. Educational Media International, 15 April , pp. 48-62.
- Elkjær, B., 2009. Pragmatism: A learning theory for the future. I: K. Illeris, red. Contemporary Theories of Learning: Learning Theorists -- In Their Own Words. London: Routledge, pp. 74-89.
- Ferrer, I. L. L. a. S. J. (., 2019. Podcasting for Social Justice: Exploring the Potential of Experiential and Transformative Teaching and Learning Through Social Work Podcasts. Social Work Education, Vol. 21, No. 10, 10 10, pp. 849-865.
- Gachago, D., Livingston, C. & Ivala, E., 2016. Podcasts: A Technology for All?. British Journal of Educational Technology, Vol. 47, No. 5,, 08 07, pp. 859-872.
- Gonulal, T., 2020. "Improving Listening Skills With Extensive Listening Using Podcasts and Vodcasts." International Journal of Contemporary Educational Research, Vol. 7, No. 1, 15 06, pp. 311-320.
- Greene, J. C., 2007. The generative potential of mixed methods inquiry. International Journal of Research & Method in Education, 25 02, pp. 207-211.
- Hatfield, E., 2017. Narrative Learning Using Podcasts in Interpersonal Communication. Communication Teacher, 09 10, pp. 236-242.
- Heim, Ashley, A. & B Holt, E., 2021. Describing Informal Learning Experiences among College-age Adults. Journal of STEM Outreach 4 (1), 27 5, pp. 1-10.
- Heller, M., 2020. "Podcasts as Informal Learning Tools: Graduate Students' Experiences With Podcasts as Self-Directed Learning", Florida : Electronic Theses and Dissertations, 2020-. 362.
- HIPPE, R., 2021. SELFIE, adult learning and non-formal learning, Luxembourg: Publications Office of the European Union.
- Horn, L. H. (. W. p. o. R.-P. B. L., 2020. www.ucn.dk. [Online] Available at: <https://blad.ucn.dk/white-paper-on-rpl/#/> [Senest hentet eller vist den 10 03 2022].
- Johnson, R. B., Onwuegbuzie, A. J. & Turner, L. A., 2007. Toward a Definition of Mixed Methods Research. Journal of Mixed Methods Research, vol 1, issue 2, 1 4, pp. 112-133.
- Kidde, R. & Niegel, P., 2021. dr.dk. [Online] Available at: <https://www.dr.dk/om-dr/fakta-om-dr/medieforskning/medieudviklingen/2020/det-private-massemedie> [Senest hentet eller vist den 16 02 2022].
- Kvale, S. & Brinkmann, S., 2015. Interview: det kvalitative forskningsinterview som håndværk. 1 red. København: Hans Rietzels Forlag.
- Martins, A., Gomes, D. & Quintana, A., 2020. Factors Enabling the Acceptance and Use of a Podcast Aggregator in Accounting Education. Education and Information Technologies, Vol. 26, No. 5, pp. 5427-5449.
- McGarr, O., 2009. A review of podcasting in higher education: Its influence on the traditional lecture. Australasian Journal of Educational Technology, 309-321.
- Middleton, A., 2016. Reconsidering the Role of Recorded Audio as a Rich, Flexible and Engaging Learning Space. Research in Learning Technology, Vol. 24, No. 5, 16 12, pp. 1-13.
- Norsworthy, C. & Herndon, K., 2020. Leading by Ear: Podcasting as an Educational Leadership Tool. Journal of Leadership Education, Vol. 19, No. 3 , p. 7.
- Palenque, S. M., 2016. The Power of Podcasting: Perspectives on Pedagogy. Journal of Instructional Research, v5 , pp. 4-7.
- Riddell, J. M. et al., 2020. Independent and Interwoven: A Qualitative Exploration of Residents' Experiences With Educational Podcasts. Academic Medicine, Vol. 95, No.1, 01 01, pp. 89-96.
- Smith, A., 2022. COVID-19 and Informal Education: Considerations for Informal Learning During the Pandemic. The International Journal of Multidisciplinary Perspectives in Higher Education, 15 02, pp. 122-127.
- Tassy, A. a. N. M. B., 2020. It-anvendelse i befolkningen, København: Danmarks Statistik.
- Teckchandani, A. & Obstfeld, D., 2016. Storytelling at Its Best: Using the StartUp Podcast in the Classroom. Management Teaching Review, Vol. 2, No. 1, 12 10, pp. 26-34.
- Ziengs, E., 2021. Podcaststats.dk. [Online] Available at: <https://www.podcaststats.dk/> [Senest hentet eller vist den 15 4 2021].