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Applicant Tracking Systems

An Applicant Tracking System (ATS) is a single piece of software that supports the hiring process using a common database containing job and applicant information (Eckhardt, Laumer, Maier, & Weitzel, 2014). It is often offered as a stand-alone, web-based, software-as-a-service (SaaS) subscription application, or a wider-system integrated IT solution, such as a module in HRIS (HR.com, 2019). An ATS is also often referred to as an e-recruitment system (Holm, 2012), a hiring management system (HMS) (Bussler & Davis, 2002; Cappelli, 2001), a candidate management system, and a talent management or acquisition system (Reynolds & Dickter, 2017; Schweyer, 2010). The variety of labels reflects the contemporary application of the software for people resourcing, which in most cases goes beyond the administrative nature of early ATSs.

Most of the original ATS vendors have expanded their original offerings, and the term ATS is not sufficient to describe the range of their solutions (Schweyer, 2010). Contemporary systems can store job descriptions, generate job requisition analyses, automatically store all applications and résumés submitted via the internet, scan résumés, create applicant profiles, generate automatic responses to applicants, schedule and track interviews and other assessments, produce staffing statistics and cost analyses, generate mailing lists and labels, and perform many other data processing operations (Phillips & Gully, 2015, p. 393). Some vendors create talent acquisition suites that include a core ATS backbone together with the ability to carry out recruitment marketing, sourcing and onboarding, all under the same vendor roof. Many ATSs have thus become full-service recruiting platforms that enable employers to oversee the entire hiring process (Brienza, 2018) with added candidate relationship-management functions (Zielinski, 2015). Unsurprisingly, such systems are often considered an integral part of organisations' talent acquisition programmes (HR.com, 2019).

Applicant Screening

ATSs are capable of conducting basic applicant screening and background checks, which helps reduce the time spent on weeding out unsuitable applicants (Heneman III, Judge, & Kammeyer-Mueller, 2015, p. 218). Moreover, they are able to mine résumés to generate detailed profiles of candidates that include education, social background, skills, behavioural attributes, work history, and salary requirements. Typical tools for mining include keyword parsing and text search. Parsing tools automatically deconstruct the résumé and arrange relevant data into fields (e.g. education, contact information), and keyword search detects words and phrases that are

relevant for the vacancies. Recruiters can then contact high-scoring applicants and engage in more targeted communications with them. Similar applicant data can be potentially tracked from social media postings and other online activity (Reynolds & Dickter, 2017). However, one of the major drawbacks of using ATS tracking software is its limitations in matching candidates to the right job postings and missing qualified applicants (HR.com, 2019). Furthermore, the résumé format might be insufficient to reveal crucial competencies of a job-seeker. Notwithstanding, although ATS screening tools cannot replace human screeners entirely, they can be invaluable in narrowing down the number of applicants a recruiter must handle and improve the efficiency of large-scale recruiting processes. Other essential candidate characteristics can then be determined with the help of more advanced screening, assessment, and interviewing techniques (Reynolds & Dickter, 2017).

An ATS can help pre-screen applicants by carrying out online pre-screening tests or qualification questionnaires. Recruiters can use ATSs to carry out a range of assessments of job-related knowledge and relevant skills. For example, automated testing systems can include embedded audio, video, and animated graphics as part of the question stimuli and permit a wide range of response formats, such as hotspots, drag and drop, and other interactive controls (Reynolds & Dickter, 2017). ATSs can also provide managers with interview and selection guidelines and facilitate the interview process. Recruiters can store interview protocols, summary notes, and applicant ratings in the system. Some systems even offer biometric tools such as voice analysis and facial recognition to confirm interviewee identity and aid in scoring (Reynolds & Dickter, 2017). Moreover, some systems offer intuitive interfaces that can be integrated with third-party recruiting technologies, such as video interviewing, skills assessments, personality and cognitive assessments, and gaming, thus creating extended recruitment and selection ecosystems (Zielinski, 2015).

Data Analytics

ATS vendors increasingly offer cloud-based environments with enhanced user and applicant experience, and routinely integrate the most popular job boards and social networks into their ATS job advertisement, job application and applicant screening capabilities (Zielinski, 2015). For example, applicants' online presence on Web 2.0 sites can be mined for data which reflects their personality (Faliagka, Tsakalidis, & Tzimas, 2012). Using programs such as Linguistic Inquiry and Word Count (LIWC) to extract linguistic data from texts such as blogs and posts gives recruiters an indication of the author's personality traits (Oberlander & Nowson, 2006).

Apart from keeping records, an ATS can also automatically track some of the important hiring metrics, such as time-to-fill / time-to-hire (the number of days from job vacancy to hiring), yield ratio (the percentage of applicants from a particular

recruitment source), acceptance rate (the percentage of applicants who accept offered jobs), and cost of recruitment (the sum of advertising costs, agency fees, referral bonuses and other costs divided by the number of hires) (Snell, Morris, & Bohlander, 2016, pp. 186–188). In addition, ATSs can process the data and generate reports on the key performance indicators (KPIs) of the entire recruiting process. Recruiters' work can thus be monitored and, if necessary, improved (Eckhardt et al., 2014). Research has also found that by using an ATS that supports the design and evaluation of KPIs, the cycle time of the recruiting process can be shortened significantly through business process controlling and process analysis (Laumer, Maier, & Eckhardt, 2015). Data from an ATS can thus help recruiters improve hiring efficiency by speeding up the hiring process (Phillips & Gully, 2015, pp. 393–394) and fine-tuning the entire recruitment process (McCrory & Mueller, 2000).

Communication with Applicants

ATSs ease communication with candidates, especially after they apply or are rejected. For example, they provide recruiters with a pop-up e-mail form to use for rejected applicants so as not to keep them waiting unnecessarily. Many ATSs also enable the integration and management of job marketing on social network sites (SNS) so that recruiters can push jobs out to social networks, carry out content marketing, and measure how social interactions drive engagement with a candidate community (Zielinski, 2015). ATSs also offer a number of benefits to job applicants. For example, job-seekers can easily apply for jobs from their desktop or mobile device, either directly or via social media, and receive real-time updates. Some ATS providers even enable job-seekers to apply with social media profiles (Weber, 2013). Once selected for a job, applicants can, via an ATS, receive and accept or reject a job offer, retrieve information about the job, the employing organisation, the new workplace, and, in some cases, communicate with future colleagues through a dedicated tool (Laumer et al., 2015). Nonetheless, according to some industry reports, many ATSs still fail at offering candidates a personalized experience (see e.g. HR.com, 2019).

Efficiency Concerns

In practice, the reasons for using an ATS are predominately driven by the need to improve the efficiency of the talent acquisition process, with the main sought-after benefits being reduced time to hire, improved candidate screening, easier management of applications and résumés, and better talent acquisition metrics (HR.com, 2019). Despite the apparent cost-savings, however, large organisations still spend an estimated 7% of their external recruitment budgets on ATSs. An ATS alone can cost

from about €5,000 to millions of euros (Weber, 2012). Additional costs are incurred from having to train end users to properly use the systems, which is considered crucial for ATS deployment. HR personnel must possess the knowledge and skills to utilise the various functionalities in the different steps of the recruiting process. Therefore, recruiters need to learn such things as content development for career web pages, how to post job ads on online job boards, communication with applicants and hiring managers, search of applicant pool databases, etc. In addition, recruiters might need to acquire specific skills in order to use social media and data-mining in recruiting, e.g. how to perform online marketing and search-engine optimisation (Eckhardt et al., 2014). Thus, a crucial requirement for recruiters using ATSs is to be open to new technological developments in e-recruitment and keep their knowledge and skills up-to-date (Eckhardt, Brickwedde, Laumer, & Weitzel, 2011).

The additional costs of using an ATS derive from its potential vulnerability under a possible cyber-attack, as well as the safe storage and management of personally identifiable information (PII) on candidates. ATS users must therefore ensure that the systems are compliant with data privacy regulations, that they are kept up-to-date, and that software bugs are fixed as soon as they are discovered (Dorsey, Martin, Howard, & Coovert, 2017). Cybersecurity work requires a unique set of skills, and training recruiters in cybersecurity is thus also a prerequisite of employing ATSs.

Future Research Questions

Although widely implemented across hiring organisations (HR.com, 2019) research on the effect of hiring systems on the efficiency and, more importantly, the effectiveness of an ATS-enabled recruiting process is still scarce. Future research might evaluate the impact on ATSs of social media integration in the application process, and whether this creates synergies, generates more qualified candidates, or benefits employers in other ways, e.g. leading to improved employer attractiveness and higher intention to apply among qualified job-seekers. Another line of research could evaluate the value of using big data from ATSs for various stages of talent acquisition and corresponding recruitment, selection and onboarding tasks. More research effort could also be put into studying the use of mobile devices for job applications, applicant screening, candidate testing and communication via ATSs. Finally, future research contributions could investigate the transformation of the recruitment profession due to rapidly advancing complex technologies, such as Artificial Intelligence (AI), and their impact on recruiters' job profiles and competencies.

Further Readings

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